

The impact of sedentary professional activity on cardiometabolic health

OUTLINE

Physical activity is associated with health benefits. It is thought that the opposite, being sedentary, induces cardiometabolic health problems. This hypothesis is supported by the finding that the amount of sedentary professional activity is increasing, just like the prevalence of cardiometabolic diseases. Therefore, we have drawn up the following research question: "What is the impact of sedentary behaviour, more specifically sedentary professional activity, on several cardiometabolic parameters in healthy adults?"

The most remarkable highlights of this literature review (n = 10) are summarised below:

1. No clear definition of (occupational) sedentary behaviour is established yet.
2. Until now, no longitudinal studies with at least six months follow-up were executed, concerning the effects of sedentary behaviour on cardiometabolic health, where sedentary behaviour is supposed to be measured objectively.
3. Due to the limited quality and/or weaknesses in the methods of the limited amount of obtained articles, all (non-significant) associations of the cardiometabolic parameters with sedentary behaviour should be interpreted with caution.
4. Most of the results, obtained for the different cardiometabolic parameters, were inconsistent. Only the relationship of the following parameters with increased sedentary time was unequivocal: the blood triglyceride concentration increased while the blood high-density lipoprotein-cholesterol concentration decreased. For blood pressure and the blood low-density lipoprotein-cholesterol concentration, no significant associations were found.
5. It is important, not only to achieve the recommended physical activity guidelines, but also to reduce the time spent sedentary during the day.

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CONTEXT OF THE MASTER THESIS

This master thesis fits in the research domain of rehabilitation in internal diseases.

Over the decades, there is an increase in patients suffering from cardiometabolic diseases, including hypertension, obesity or type 2 diabetes mellitus. Knowing that sedentarism is increasing as well, it is not known if there might be a relationship between these two factors and if sedentarism independently leads to increased cardiometabolic morbidity. It is already known that physical activity has a positive influence on cardiometabolic risk factors including blood pressure, blood lipid profiles, etc. However, it remains unclear if physical inactivity or sedentarism has the contrary and equally important impact on cardiometabolic health. It is also unclear if a person, that meets the activity recommendations, yet is inactive during the remainder of the day, is physically active enough to remain healthy. Keeping in mind that occupational sedentarism is growing, which may have an impact on cardiometabolic health, it also may be possible that this population will experience an elevated cardiometabolic risk. Therefore, the following research question was developed: *What is the impact of sedentary behaviour, more specifically sedentary professional activity, on several cardiometabolic parameters in healthy adults?*

The impact of sedentarism on cardiometabolic parameters is relevant for physiotherapists, the global population/community and all kinds of health care providers. Physiotherapists could have an important role in activating people with cardiometabolic diseases and give them the knowledge on the importance of reducing sedentary time, to lower the impact of sedentarism. They may also play an important role in preventing these diseases. For all health care providers, it may be important to know the impact of sedentarism on cardiometabolic health and the need to reduce this behaviour in all patients, whether they suffer from cardiometabolic diseases or not. For the community, it may give a more complete recommendation on physical activity instead of the reference of meeting a minimum of daily physical activity and remaining passive during the rest of the day. Everybody should be made conscious of the impact of time spent sedentary on cardiometabolic health, to prevent that the healthy population gets cardiometabolic diseases due to a modifiable behaviour. This knowledge, and spreading it, may decrease the expected expansion of the population suffering from e.g. obesity, type 2 diabetes mellitus and such. Therefore, there might also be a decrease in the global burden and mortality caused by cardiometabolic diseases, as cardiac diseases were still the leading cause of death in 2000 and 2015, found by the WHO (WHO (2017). *World Health Organization*. Accessed at the 11th of May 2017 via [<http://www.who.int/mediacentre/factsheets/fs310/en/>]).

Part one of this master thesis is done as a part of the first master year 'Rehabilitation Sciences and Physiotherapy' at the university of Hasselt in Diepenbeek (Belgium), whereas part two will be executed at research centre REVAL of the university of Hasselt in Diepenbeek. This master thesis is part of a research project. The project is called 'Healthy Physical Behaviour in Sedentary Occupations'. The coordinating head researcher is Prof. Dr. Frank Vandenabeele and Prof. Annick Timmermans at the university of Hasselt. The local head of the research at the Jessa hospital in Hasselt, Belgium, is Prof. Dr. Dominique Hansen. The goal of this study is to follow first-year students for at least 24 months with measurements at baseline and every six months afterwards. This to get a clear insight in the consequences of sedentary behaviour during occupational time and to search for recommendations of a healthy physical activity behaviour to get favourable cardiorespiratory, metabolic and musculoskeletal outcomes.

A central format was applied for this duo master thesis.

The literature search and the literature search strategy were developed by both students in co-operation with Prof. Dr. Dominique Hansen. The literature search was done by both students, independently of each other and afterwards brought together. This work strategy was followed during the whole master thesis, during the quality assessment, the data extraction and the results section. The whole process was supervised by Prof. Dr. Dominique Hansen. The abstract, the introduction, the methods, the results, the discussion and the conclusion were written by both students together.

Next year, the second part of this duo master thesis will be part of an on-going study. In co-operation with Prof. Dr. Dominique Hansen, both students made an optimization of the protocol in function of the research question. As the protocol of last year was received from the promotor, some adjustments were made and afterwards the protocol was translated from Dutch to English. We will be involved in the measurements of protocol 1 and 2, but our analysis will focus on the cardiovascular risk profile, body composition and daily physical activity as described in protocol 2. This year, we already assisted in the on-going measurements. Afterwards, both students will process the obtained data.

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PART 1: OVERVIEW OF THE LITERATURE

1. Abstract

Background: It is thought that sedentarism induces cardiometabolic risk. This hypothesis is supported by the finding that the amount of sedentary activities and the prevalence of cardiometabolic diseases are increasing. We have drawn up the following research question: “What is the impact of sedentary (occupational) behaviour, on several cardiometabolic parameters in healthy adults?”

Methods: PubMed and Web of Science were searched for the literature review. Respectively 756 and three articles were obtained from the research method. Ten studies met the selection criteria and were included (final update: 20th of May 2017).

Results: There are many inconsistencies between studies in the found associations, except for the following parameters: five studies reported that an increased sedentary time led to an increase in blood triglyceride concentrations and a decrease in blood high-density lipoprotein-cholesterol concentrations. Five studies failed to establish a relationship between the degree of sedentarism and blood pressure, blood low-density lipoprotein-cholesterol concentrations and maximal oxygen uptake.

Discussion and conclusion: Findings of increased blood triglyceride and decreased blood high-density lipoprotein-cholesterol concentrations should however be interpreted with caution as the quality and/or methods of the included studies were weak. Further investigations with an appropriate quality, method and a longitudinal design are deemed.

Purpose of the research: Investigating the impact of the degree/duration of sedentarism on cardiometabolic health.

Operationalisation: This master thesis is part of a broader on-going research project. The focus will be on associations between sedentary time, body composition and cardiovascular risk profile. The measurements will take place at the research centre REVAL (university of Hasselt in Diepenbeek).

Most important keywords: Sedentarism, physical activity, cardiometabolic health, healthy adults, body composition, blood lipid profile, blood pressure, inflammatory markers, glycaemic control

2. Introduction

Worldwide, there was an increase in the prevalence of obesity from 3,2% to 10,8% in men and from 6,4% to 14,9% in women between 1975 and 2014, while the prevalence of morbid obesity increased by 0,64% in men and 1,6% in women. If these trends continue, the prevalence of obesity is predicted to reach 18% in men and 21% in women and the prevalence of morbid obesity is estimated to increase to 6% in men and 9% in women by 2025 ("Trends in adult body-mass index in 200 countries from 1975 to 2014: a pooled analysis of 1698 population-based measurement studies with 19.2 million participants," 2016). The same trend is found in the global prevalence of peripheral artery disease. Fowkes et al. (2013) reported that 202 million people were suffering from peripheral artery disease in 2010 and there is an increase of 13,1% in high-income countries and 28,7% in low-income or middle-income countries. Besides Jaacks, Siegel, Gujral, and Narayan (2016) found that 415 million adults are suffering from type 2 diabetes mellitus. It is predicted that this prevalence will increase to 642 million adults over the next decade. In 2004, the global leading cause of death was ischaemic heart disease and the second cause was cerebrovascular disease (Mathers, Boerma, & Ma Fat, 2009). Additionally, The Global Burden of Metabolic Risk Factors for Chronic Diseases Collaboration (2014) reported that high blood pressure, BMI, the plasma glucose concentration and cholesterol concentrations were responsible for 63% of the deaths due to cardiovascular diseases, chronic kidney diseases and diabetes mellitus in 2010 with a mean of 10,8 million people, while this was 67% in 1980 with a mean of 7,1 million people.

Worldwide, 23,3% of the adults were physically inactive in 2016 (Sallis et al., 2016). In Europe, 28,6% of the adults did not meet the WHO's recommendations for physical activity and the adults in Belgium even did it worse, with 32% of the population who did not meet these recommendations in 2013 (Gerovasili, Agaku, Vardavas, & Filippidis, 2015). Castillo-Retamal and Hinckson (2011) reported that time spent sedentary during occupation is high and global physical activity is very low.

Occupational sedentary behaviour and the amount of cardiometabolic diseases are both increasing over the last years: the question is whether there is a correlation between both changes. Hamilton, Hamilton, and Zderic (2014) reported that the relative risk for the development of type 2 diabetes mellitus is 112% greater in adults with the highest compared to the lowest sedentary time. Further, there is an independent association between a large amount of sedentary behaviour and deleterious health outcomes like increased all-cause mortality and incidence of cardiovascular disease, cancer and type 2 diabetes mellitus. These associations are independent of physical activity (Biswas et al., 2015). Wilmot et al. (2012) reported the same association between sedentarism and the increased risk for development of type 2 diabetes mellitus. The risk of cardiovascular disease, cardiovascular and all-cause mortality is also increased with an increased sedentary lifestyle. Physical inactivity is responsible for many global burdens of diseases: the estimate is about 6% for coronary heart diseases and 7% for type 2 diabetes mellitus (Lee et al., 2012).

To examine the impact of sedentary behaviour on cardiometabolic health, a formal definition of this behaviour should be used. The Sedentary Behaviour Research Network (2012) suggests that sedentary behaviour should be defined as: Waking behaviours with an energy expenditure ≤ 1.5 metabolic equivalents (METs), while sitting or being in a reclining posture. In contrary, insufficient amounts of moderate to vigorous physical activity could be described as being inactive. Physical activity levels are often reported as METs. Light intensity physical activity is generally categorised as < 3 METs, moderate physical activity as 3-6 METs and vigorous intensities of physical activity are categorised as > 6 METs (Ainsworth et al., 2000). Many factors are associated with sedentary behaviour. Age, physical activity levels, BMI, socio-economic status and mood are factors

located on the individual level, while proximity of green spaces, the ability to walk in the neighbourhood, safety and weather are environmental factors that correlate with the amount of sedentary behaviour (O'Donoghue et al., 2016).

Physical (in)activity should be measured in a valid and reliable way to report a person's activity level. Questionnaires are often used to measure sedentary time. In those measuring methods, there is a large variability in validity parameters while reliability is moderate to high (Clark et al., 2009). In comparison, Westerterp (2009) reports that questionnaires have a low validity and reliability to rank activities. The heart rate technique is effective to measure physical activity at group level, but only after individual calibration. The doubly labeled water technique is the golden standard to validate other field techniques for measuring physical activity. Accelerometers are found to make reliable measurements of daily physical activity and are validated against the golden standard method.

Physiotherapists and other health care providers can play an important role in reducing sedentary behaviour. Wittink, Engelbert, and Takken (2011) state that physiotherapists should even take a primary role here. Physiotherapist are experts in movements and exercises and therefore have the ideal profile to use their knowledge of the deleterious effects of sedentary time on health to promote, guide, prescribe and manage exercises in their patients. Education and persuasion are found to be the most promising interventions to reduce sedentary behaviour (Gardner, Smith, Lorencatto, Hamer, & Biddle, 2016).

In conclusion, it is known that the prevalence of sedentary behaviour and cardiometabolic diseases is increasing.

3. Methods

3.1. Research question

The aim of this literature study was to answer the following research question: *“What is the impact of sedentary behaviour and more specifically sedentary professional activity, on several cardiometabolic parameters in healthy adults?”*

The following PICO was composed to formulate the research question adequately:

Population:	Healthy people aged 18-65 years old
Intervention:	Sedentary behaviour or sedentary professional activity
Comparison:	Normal active lifestyle
Outcome:	Cardiometabolic parameters (blood pressure, lipid profile, inflammatory markers,...)

People must be healthy at the start of the follow-up period. Healthy persons in this literature search were defined as:

- Non-smoking people
- No disorders that could restrict physical activity
- Mean systolic blood pressure \leq 140 mmHg and mean diastolic blood pressure \leq 90 mmHg and not taking antihypertensive drugs
- Total cholesterol \leq 200 mg/dl, HDL-C $>$ 40 mg/dl, and LDL-C \leq 130 mg/dl and not taking lipid lowering drugs. Triglyceride concentration $<$ 150 mg/dl were also necessary.
- Fasting blood glucose concentration \leq 110 mg/dl.
- BMI \leq 30 kg/m² and waist circumference $<$ 88 cm for women/ $<$ 102 cm for men

3.2. Literature search

Two databases were used for the literature search: PubMed and Web of Science.

For the literature search, a combination of the following terms was used:

- Sedentary Lifestyle (MeSH)
- Sedentarism
- Physical Inactivity
- Cardiovascular Physiological Phenomena (MeSH)

For searching the databases, the following search strategies were used:

PubMed: "((((("Cardiovascular Physiological Phenomena"[Mesh]) AND "Sedentary Lifestyle"[Mesh] AND Humans[Mesh] AND English[lang]))) OR (("Cardiovascular Physiological Phenomena"[Mesh]) AND Sedentarism[Title/Abstract] AND Humans[Mesh] AND English[lang])) OR (("Cardiovascular Physiological Phenomena"[Mesh]) AND Physical inactivity[Title/Abstract] AND Humans[Mesh] AND English[lang])"

Further restrictions on Humans [Mesh] and English [lang] gave a total of 756 unique hits.

Web of Science: (Sedentary Lifestyle AND Cardiovascular Physiological Phenomena) OR (Sedentarism AND Cardiovascular Physiological Phenomena) OR (Physical Inactivity AND Cardiovascular Physiological Phenomena)

Further restriction on English [lang] gave a total of 5 unique hits.

The final update of the literature search was performed the 20th of May 2017. Restrictions on article type, text availability or publication date were not used. An overview of the selected articles is given in the appendix, with the final included and excluded (table 2) studies.

3.3. Selection criteria

For further screening of the obtained articles, following inclusion criteria were used:

1. Population had to be between 18 and 65 years old.
2. Sedentarism had to be researched in the study and a clear definition had to be given.
3. Physical activity had to be measured objectively, such as by pedometers, accelerometers, heart rate monitoring,...
4. Follow-up of at least one year.
5. Researched outcome(s) had to involve one or more cardiometabolic risk factors.

Following exclusion criteria were also used:

1. A maximum of five percent of the population not being healthy was acceptable. E.g. five percent of the population in the study may have obesity, diabetes or hypertension.
2. The species examined had to be humans, not animals.

3.4. Quality assessment

Ten studies with different designs were included. Nine studies were assessed with a compilation of three Dutch Cochrane checklists:

- Quality assessment of an article concerning prognosis
- Quality assessment of a randomised controlled trial
- Quality assessment of an article concerning side-effects or aetiology

One clinical trial was assessed, using the Dutch Cochrane checklist for randomised controlled trials.

An overview of the two final checklists used to assess the quality of the studies is given in the appendix (table 3). This table also indicates which questions are derived from the three checklists used.

3.5. Data extraction

The following data were extracted from the included articles:

1. Population
2. Experimental design
3. Exposure
4. Covariates adjusted for in the analysis
5. Methods of sedentary time analysis: expression of ST, measurement device, monitoring days, accelerometer inclusion criteria, definition of sedentary time, non-sedentary time and non-wear time
6. Outcome measures
7. Significant results & associations of sedentary time with cardiometabolic health

4. Results

4.1. Results study selection

Based on the abstract, the obtained articles of PubMed (n = 756) and Web of Science (n = 3) were further screened for the in- and exclusion criteria (table 2 in the appendix). When the abstract did not contain sufficient information, the full text was used. 276 articles did not meet the age limits, 319 articles were excluded as they did not have a clear definition of sedentarism or sedentarism was not present in the study. In 292 articles, physical activity was not measured objectively. The inclusion criterion of at least one year follow-up was rejected during the study selection process. A large amount of articles did not meet this criterion (n = 601). A total of 13 reviews and one non-review were eligible for inclusion. When replacing one year of follow-up by six months of follow-up as inclusion criterion, the same amount of articles remained eligible (n = 14), also considering the other selection criteria. Therefore, the criterion of a specific follow-up period was rejected. A total of 13 reviews and ten non-reviews remained eligible and all other articles were excluded (n = 736). 95 articles did not involve cardiometabolic risk factors. At last, 300 articles were excluded as the minimum of five percent of the population not being healthy was exceeded and three articles where animals instead of humans where examined.

This selection led to an inclusion of 23 articles, with 13 reviews for background information and writing the introduction, and ten non-reviews for further analysis. All articles were obtained from PubMed. A total of 736 articles were excluded.

The included reviews were not used for further analysis, but they were used as background information in function of the research question. An overview of these reviews can be found in table 6 in the appendix. The details of the study selection process of the articles are given in figure 1 in the appendix and the reason of exclusion for each article is summarised in the appendix (table 2).

4.2. Results quality assessment

To assess the quality of the included articles, two checklists were used.

Nine articles were assessed by a compiled checklist from three Dutch Cochrane checklists (table 3.1 in the appendix). The quality assessment of these nine articles gave the following results.

Methods and design

In two studies, the compared groups were defined adequately, comparable at baseline and treated equally. In seven other studies only one well defined, equally treated group, containing no extreme deviant patient characteristics, was examined. Besides all nine studies selected a valid study population.

Only one article was truly sensitive to an attrition bias because of a limited follow-up of the population. In two other studies there was a loss-to-follow up, but there was not mentioned whether this loss was significant. In the six remaining studies, there was a sufficient proportion of complete follow-up available of all included patients. Furthermore, the follow-up was long enough to ensure that the studied outcome could appear in one study (follow-up of five years). Three other studies were cross-sectional. One last study mentioned that the stimulus, given during the intervention, was of insufficient magnitude and possibly more days of bed rest were necessary to perceive a possible change in results (Sonne et al., 2011). Four other studies did not supply enough information to answer this question.

In four studies they did not mention whether the intervention and outcomes were established independently of each other. In the five remaining studies, no intervention was imposed. Therefore, this question was not applicable.

Outcomes

In all studies the outcome measures were described explicitly and objectively. The measurements of the outcomes were valid and reliable in five studies. One study was truly sensitive to a detection bias because they mentioned not using gold standard measures. In the three remaining studies, it was unclear if a detection bias was present, because information about how the outcomes were measured was lacking. Furthermore, none of the studies had outcomes that were certainly established independently of each other. In seven studies, there were repeated measures within the subjects. In two studies, necessary information was missing to make a clear conclusion concerning the independent establishment of outcomes.

None of the studies presented a reporting bias and a selective publication of results was excluded sufficiently. In six studies, an undesirable influence of sponsoring was excluded sufficiently. Because information was lacking, the influence of sponsoring could not be excluded in the three remaining studies.

Prognostic factors

In all studies the prognostic factors were described explicitly and objectively and the measurement of the prognostic factors was executed in the same way for all patients. Five studies had valid and reliable measurements of the prognostic factors. This was not the case in three other studies due to reliance on participants to standardise their own food intake (Miyashita et al., 2013), giving an exaggerated stimulus as prognostic factor (Sonne et al., 2011) or wrong adjustments which could all cause a distortion of the results (Franks et al., 2007). In one study, there was insufficient information to make a conclusion concerning this item of the quality assessment.

The measurements of the prognostic factors were only in one study executed in a sufficient proportion of the population. In seven studies this proportion was not sufficient because of limited generalisability as they enrolled subjects from only two enterprise groups (Honda, Chen, Kishimoto, Narazaki, & Kumagai, 2014), because of a low power of the study sample due to a small sample size (Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011; Wientzek et al., 2014) or because they mentioned that there may have been some selection bias (Healy, Matthews, Dunstan, Winkler, & Owen, 2011).

We also included one clinical trial (Kop, Weinstein, Deuster, Whittaker, & Tracy, 2008). This trial was assessed using the Dutch Cochrane checklist for randomised controlled trials and the following conclusions can be made. The allocation of the patients to the intervention was randomised, the groups were comparable at baseline and there was a sufficient proportion of follow-up available of all patients included. The groups were treated equally (apart from the intervention) and selective publication of results was excluded sufficiently. However, patients and therapists were not blinded to the treatment. There was information lacking to answer the remaining questions.

An overview of the included articles and their quality can be found in table 3.1, 3.2, 3.3 and table 6 in the appendix.

4.3. Results data extraction

Table 5.1 gives a detailed overview of the population, experimental design, exposure and adjusted covariates. Table 5.2 in the appendix gives a detailed overview of the methods used for the analysis of sedentary behaviour. Table 5.3 gives a detailed overview of the outcome measures, significant results and associations of sedentary time with cardiometabolic health from the included studies. All tables can be found in the appendix.

4.3.1. Population

The majority of studies had a relative equal distribution of men and women, except four studies which only included men (Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011).

All studies had a population aged between 18 and 65 years old. Only one study did not show the mean age of the population (Chastin et al., 2015).

Mean BMI ranged between 22,5 kg/m² and 27,8 kg/m². Two studies did not show the mean BMI of the population (Healy et al., 2011; Shiraishi et al., 2003).

Two studies were executed in Japan (Honda et al., 2014; Miyashita et al., 2013), three in the U.S.A (Chastin et al., 2015; Healy et al., 2011; Kop et al., 2008), one in Germany (Wientzek et al., 2014), two in Denmark (Sonne et al., 2010; Sonne et al., 2011) and one was executed in the United Kingdom (Franks et al., 2007). Only one study did not mention where the study was executed (Shiraishi et al., 2003). Two studies consisted of three subsamples for comparison of the outcomes (Sonne et al., 2010; Sonne et al., 2011). The first subsample consisted of participants with a low birth weight and the second subsample consisted of first degree relatives of patients with type 2 diabetes mellitus. Both subsamples were suspected to be at risk for insulin resistance. The third subsample were matched controls.

Further details about the population are shown in table 5.1 (appendix).

4.3.2. Experimental design

Four studies were observational and cross-sectional (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014; Wientzek et al., 2014). The study of Franks et al. (2007) was the only observational and prospective study. Four studies were experimental and prospective (Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011). Only one clinical trial was included (Kop et al., 2008).

4.3.3. Exposure

The observational studies did not expose the population to a specific trial. Miyashita et al. (2013) exposed all participants to three trials of two days. The first trial consisted of eight hours of sitting, the second of six bouts of standing for 45 minutes and the third trial of walking for 30 minutes. All trials had a similar standardised diet and sleep pattern. Two studies exposed their participants to the same intervention (Sonne et al., 2010; Sonne et al., 2011). All participants were exposed to ten days of bed rest with a standardised diet 4 days before and during the experiment. There was only one study where the participants were randomised in two groups (Kop et al., 2008). The control group remained their habitual physical activity level and the exercise-withdrawn group had to quit their physical aerobic exercise for two weeks.

Shiraishi et al. (2003) exposed all participants to 120 days of head down bed rest with a standardised diet, sleep pattern and environment. Further details about the exposure are shown in table 5.1 (appendix).

4.3.4. Covariates adjusted for in analysis

For analysing the outcomes, five articles did not make adjustments for covariates (Kop et al., 2008; Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011). All the other included articles applied the necessary adjustments for covariates in the statistical analysis of their results. Chastin et al. (2015) categorised the covariates as sociodemographic, lifestyle or self-reported health. Healy et al. (2011) used the terms sociodemographic, behaviour and medical history for categorisation, while the classified covariates were comparable in both studies. Honda et al. (2014) and Wientzek et al. (2014) adjusted for comparable covariates, but without the use of categories. In contrast to all the other included studies, Franks et al. (2007) made adjustments for follow-up time and baseline outcome variables. Further adjustments were comparable to the other four articles. The results of every study were extracted after the adjustments for the covariates was executed. Further details about the covariates are shown in table 5.1 (appendix).

4.3.5. Methods of sedentary time analysis: expression of sedentary time, measurement device, monitoring days, accelerometer inclusion criteria, definition of sedentary time, non-sedentary time and non-wear time

Four studies expressed sedentary time in hours/day (Healy et al., 2011; Sonne et al., 2010; Sonne et al., 2011; Wientzek et al., 2014). Chastin et al. (2015) expressed sedentary time in proportions/day and Honda et al. (2014) expressed it in minutes/day. The remaining articles did not mention how sedentary time was expressed for further analysis (Franks et al., 2007; Kop et al., 2008; Miyashita et al., 2013; Shiraishi et al., 2003). Physical activity was measured by using the Actigraph 7164 in two articles (Chastin et al., 2015; Healy et al., 2011), one article used the Active Style Pro HJA 350-IT (Honda et al., 2014), three studies used the Actiheart (Sonne et al., 2010; Sonne et al., 2011; Wientzek et al., 2014), one used the Lifecoder EX (Miyashita et al., 2013), one used the Actiwatch (Kop et al., 2008), one used the Flex Heart Rate technique in combination with Polar Electro (Franks et al., 2007) and another one used a Holter ECG (Shiraishi et al., 2003).

The monitoring period ranged between three periods of two days (Miyashita et al., 2013) and 120 days (Shiraishi et al., 2003).

The inclusion criterion for valid accelerometer measurements was set on a minimum of ten h/day for minimal four days (Healy et al., 2011; Honda et al., 2014) and a minimum of ten h/day for minimal five days (Chastin et al., 2015). The other seven articles did not put up an inclusion criterion for accelerometer wearing time. Three studies defined sedentary time as activities below 100 counts per minute or expressed it as activities below 1,5 MET (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014; Wientzek et al., 2014). The other articles did not put up a specific definition of sedentary time. Only five articles defined non-sedentary activities, e.g. light intensity physical activity (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014; Miyashita et al., 2013; Wientzek et al., 2014). Non-wearing time was only defined in two articles (Healy et al., 2011; Honda et al., 2014).

Further details about the methods of the analysis of sedentary behaviour are shown in table 5.2 (appendix).

4.3.6. Outcome measures

Each study applied different outcomes. Table A below (which summarizes the information from table 5.3 in the appendix) reports the type of physical outcomes measured in the different articles.

Articles	Physical outcomes				
	BMI	WC	FM	FFM	Waist-to-hip ratio
1. Chastin et al.	X	X			
2. Franks et al.	X		X	X	
3. Healy et al.		X			
4. Honda et al.	X	X			
5. Kop et al.					
6. Miyashita et al.	X	X			
7. Shiraishi et al.					
8. Sonne et al. (2010)	X	X	X	X	X
9. Sonne et al. (2011)	X	X	X		
10. Wientzek et al.					

Abbreviations: BMI, body mass index; WC, waist circumference; FM, fat mass; FFM, fat free mass

Most of the articles measured BMI (n = 6) and WC (n = 6) as physical outcomes. Outcomes concerning body composition like fat mass (FM) (n = 3), fat free mass (FFM) (n = 2) and waist-to-hip ratio (n = 1) were less frequently measured in the included studies.

Each study applied different outcomes. Table B below (which summarizes information from table 5.3 in the appendix) reports the type of physiological outcomes measured in the different articles.

Table B								
<i>Overview of the physiological outcome measures</i>								
Articles	Physiological outcomes							
	SBP/ DBP	VO_{2max}	Heart beats/day	FBF	HR	Amplitude BP	Acrophase BP	Slope of 1/f spectrum
1. Chastin et al.								
2. Franks et al.								
3. Healy et al.	X							
4. Honda et al.	X							
5. Kop et al.								
6. Miyashita et al.	X							
7. Shiraishi et al.					X	X	X	X
8. Sonne et al. (2010)	X	X	X	X	X			
9. Sonne et al. (2011)	X	X	X	X	X			
10. Wientzek et al.		X						

Abbreviations: SBP, systolic blood pressure; DBP, diastolic blood pressure; BP; blood pressure; VO_{2max}, maximal oxygen uptake; FBF, forearm blood flow; HR, heart rate

The included studies had a wide variability in physiological outcomes. Five articles measured blood pressure, three studies measured VO_{2max} and the number of total heart beats/day. FBF was only measured in one article and HR in three articles. One study also measured the amplitude and acrophase of the blood pressure and the slope of 1/f spectrum.

Each study applied different outcomes. Table C below (which summarizes information from table 5.3 in the appendix) reports the type of blood sample outcomes measured in the different articles.

Table C

Overview of the blood sample outcome measures

Articles	Blood sample outcomes																						
	HDL-C	LDL-C	TRI	Total cholesterol	Total:HDL-C ratio	CRP	GLU	INS	HOMA-IR	HbA1c	Inactive monomeric LPL	Apo C-II & Apo C-III	NEFA	3-OHB	HOMA-%B & HOMA-%S	Homocysteine	ICAM-1	VCAM-1	vWF	C-peptide	Plasma fibrinogen	IL-6	
1. Chastin et al.	X	X	X			X	X	X	X														
2. Franks et al.							X	X															
3. Healy et al.	X		X			X	X	X							X								
4. Honda et al.	X	X	X	X	X		X			X													
5. Kop et al.						X											X					X	X
6. Miyashita et al.			X				X	X			X	X	X	X									
7. Shiraishi et al.																							
8. Sonne et al. (2010)	X	X	X	X			X	X		X												X	
9. Sonne et al. (2011)						X	X	X								X	X	X	X				
10. Wientzek et al.																							

Abbreviations: HDL-C, high-density lipoprotein-cholesterol; LDL-C, low-density lipoprotein-cholesterol; TRI, blood triglyceride; CRP, C-reactive protein; GLU, plasma glucose; INS, plasma insulin; HOMA-IR, homeostasis model assessment-insulin resistance; HbA1c, glycosylated haemoglobin; LPL, lipoprotein lipase; Apo C-II, apolipoprotein C-II; Apo C-III, apolipoprotein C-III; NEFA, non-esterified fatty acids; 3-OHB, 3-hydroxybutyrate; HOMA-%B, homeostasis model assessment-beta cell function; HOMA-%S, homeostasis model assessment-insulin sensitivity; ICAM-1, intercellular adhesion molecule 1; VCAM-1, vascular cell adhesion molecule 1; vWF, von Willebrand factor; IL6, interleukin-6

A large amount of blood sample outcomes was measured. Four articles sampled HDL-C, three sampled LDL-C, five measured blood triglyceride concentrations, two measured total blood cholesterol and only one study examined the total/HDL-C ratio. CRP was sampled in four articles, seven studies sampled GLU, six sampled INS and only one study measured HOMA-IR. Two articles measured HbA1c, only one article sampled inactive monomeric LPL protein concentrations, Apo C- II, Apo C- III, NEFA, 3-OHB, HOMA-%B & HOMA-%S and homocysteine. ICAM-1 was sampled in two articles while VCAM-1, vWF, C-peptide, IL-6 and plasma fibrinogen were only sampled in one article.

Further details about the measurement methods of each article, are shown in table 5.3 (appendix).

4.3.7. Significant associations of sedentary time with cardiometabolic health

4.3.7.1. Physical outcomes

Body mass index (BMI)

BMI was detrimentally associated with sedentary behaviour in two studies (Chastin et al., 2015; Honda et al., 2014). As sedentary behaviour increased, BMI also increased. In two other studies, 10 days of bed rest did not influence BMI (Sonne et al., 2010; Sonne et al., 2011).

In two studies, BMI was measured but a relationship with sedentary behaviour was not investigated (Franks et al., 2007; Miyashita et al., 2013).

Waist circumference

The same pattern was seen for waist circumference. Two studies mentioned a detrimental association with sedentary behaviour (Chastin et al., 2015; Healy et al., 2011). As sedentary behaviour increased, an increase of waist circumference was found. Two other studies did not find a significant relationship (Sonne et al., 2010; Sonne et al., 2011). Also for this outcome, two studies determined waist circumference, but the relationship with sedentary behaviour was not investigated (Honda et al., 2014; Miyashita et al., 2013).

Fat mass

Fat mass was not significantly associated with sedentary behaviour in two studies (Sonne et al., 2010; Sonne et al., 2011). In one study, fat mass was measured, but the relationship with sedentary behaviour was not determined (Franks et al., 2007).

Fat free mass

Fat free mass was not significantly associated with sedentary behaviour in one study (Sonne et al., 2010). In another study, fat free mass was measured, but the relationship with sedentary behaviour was not determined (Franks et al., 2007).

Waist-to-hip ratio

Only one study investigated the relationship of the waist-to-hip ratio with sedentary behaviour, and found it to be not significant (Sonne et al., 2010).

4.3.7.2. Physiological outcomes

Blood pressure

Blood pressure was not associated with sedentary behaviour in five studies (Healy et al., 2011; Honda et al., 2014; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011). In another study, blood pressure was determined, but the relationship with sedentary behaviour was not investigated (Miyashita et al., 2013).

Maximal oxygen consumption

Maximal oxygen consumption was not associated with sedentary behaviour according to two studies (Sonne et al., 2010; Sonne et al., 2011). One study found a spearman correlation coefficient of -0.30 , which mentions a fair relationship. This means that with an increased sedentary time, the maximal oxygen consumption will decrease (Wientzek et al., 2014).

Number of heart beats per day

The number of heart beats per day decreased during bed rest in two studies (Sonne et al., 2010; Sonne et al., 2011).

Heart rate

After bed rest, heart rate was increased at daytime according to one study (Shiraishi et al., 2003). Another study revealed a comparable finding, namely an increase in heart rate at a given workload after bed rest (Sonne et al., 2010). One last study measured the heart rate, but the relationship with sedentary behaviour was not mentioned (Sonne et al., 2011).

Forearm blood flow

The two studies that measured forearm blood flow distinguished between insulin-stimulated forearm blood flow and forearm blood flow not stimulated by insulin (Sonne et al., 2010; Sonne et al., 2011). In both conditions, forearm blood flow was measured with and without the addition of adenosine and acetylcholine. In both studies, there was an increase in the forearm blood flow when insulin was injected before bed rest in the control group and in the group with a low birth weight. This effect only remained significant in the control group after bed rest. One of both studies mentioned that the forearm blood flow increased systematically when adenosine and acetylcholine were added gradually in all groups before and after bed rest. When adenosine and acetylcholine were injected gradually during hyperinsulinemia, there was a dose-dependent increase before bed rest in the control group and in the group with a low birth weight compared to the increase at baseline.

Amplitude, acrophase and slope of 1/f systolic blood pressure

In one study, the amplitude of the systolic blood pressure increased following bed rest and the slope of 1/f spectrum decreased (Shiraishi et al., 2003). The same study did not reveal an association with the acrophase of the systolic blood pressure (Shiraishi et al., 2003).

4.3.7.3. Blood sample outcomes

High-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C) and total cholesterol

The blood HDL-C concentration was detrimentally associated with sedentary behaviour according to four studies (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014; Sonne et al., 2010). The blood HDL-C

concentration was decreased as sedentary behaviour increased. On the other hand, in three studies, no significant association was found between the blood LDL-C concentration and sedentary behaviour (Chastin et al., 2015; Honda et al., 2014; Sonne et al., 2010).

Total cholesterol was found to be lowered after bed rest in the 'low birth weight' group in one study (Sonne et al., 2010). Another study measured total cholesterol, but did not investigate the relationship with sedentary behaviour (Honda et al., 2014).

Total:HDL-C ratio

One study mentioned the detrimental relationship of the total:HDL-C ratio with sedentary behaviour (Honda et al., 2014). They found that when sedentary behaviour increased, total:HDL-C-ratio increased as well.

Blood triglyceride concentration

The blood triglyceride concentration was detrimentally associated with sedentary behaviour according to five studies (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014; Miyashita et al., 2013; Sonne et al., 2010). Increased sedentary behaviour led to a rise in the blood triglyceride concentration. In one of these studies, an elevated blood triglyceride concentration after bed rest was only present in the control group and the group with 'first degree relatives' of patients with diabetes but not in the third group, which were people with a 'low birth weight' (Sonne et al., 2010). Another study concluded that the postprandial blood triglyceride concentration was higher when people were supposed to sit or stand than when people were supposed to walk (Miyashita et al., 2013).

C-reactive protein (CRP)

For the relationship of the CRP concentration with sedentary behaviour, contradictory results were found. Two studies mentioned that no association was found (Chastin et al., 2015; Sonne et al., 2011), while another study found that both were detrimentally associated (Healy et al., 2011) as they found an increase in CRP as sedentary behaviour increased. Another study shows a lower CRP concentration after seven days of exercise withdrawal compared to the baseline measurement during an intervention period of 14 days (Kop et al., 2008).

Plasma glucose concentration

For the plasma glucose concentration, contradictory results were established. One study found that the postprandial plasma glucose concentration was higher when people were supposed to sit than when people were supposed to walk (Miyashita et al., 2013). The opposite was found in two other studies, where the plasma glucose concentration decreased following ten days of bed rest in two of the three examined groups (namely, the 'low birth weight' group and the group with 'first degree relatives' of patients with diabetes) (Sonne et al., 2010; Sonne et al., 2011). Three other studies have not found any significant association (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014). In one study the plasma glucose concentration was measured, but the relationship of the plasma glucose concentration with sedentary behaviour was not determined (Franks et al., 2007).

Plasma insulin concentration

In three studies, the plasma insulin concentration was linearly associated with sedentary behaviour (Chastin et al., 2015; Healy et al., 2011; Sonne et al., 2010). If sedentary behaviour increased, the plasma insulin

concentration increased as well. In one of this three studies, an increase in the plasma insulin concentration after bed rest was only established in one of the three investigated groups, namely the group with a 'low birth weight' (Sonne et al., 2010). According to two other studies, no significant relationship between the plasma insulin concentration and sedentary behaviour was found (Miyashita et al., 2013; Sonne et al., 2011). One last study measured the plasma insulin concentration, but the establishment of an association was not recorded in the results (Franks et al., 2007).

Homeostasis model assessment for insulin resistance (HOMA-IR)

HOMA-IR was detrimentally associated with sedentary behaviour according to one study (Chastin et al., 2015). More time spent in sedentary behaviour resulted in a higher HOMA-IR.

Glycosylated haemoglobin (HbA1c)

HbA1c was linearly associated with sedentary behaviour in one study (Honda et al., 2014). When sedentary behaviour increased, HbA1c increased as well. Another study did not measure this parameter for a second time after bed rest (Sonne et al., 2010). Therefore, no association could be investigated in the latter study.

Homeostasis model assessment-beta cell function (HOMA-%B) and homeostasis model assessment-insulin sensitivity (HOMA-%S)

HOMA-%B and HOMA-%S increased following bed rest according to one study (Healy et al., 2011). Thus, both were associated with sedentary behaviour.

Intercellular adhesion molecule 1 (ICAM-1)

In one study, ICAM-1 was increased following bed rest, but only in two of the three investigated groups (namely, the 'low birth weight' group and the group with 'first degree relatives' of patients with diabetes) (Sonne et al., 2011). Another study has not found an association between ICAM-1 and sedentary behaviour (Kop et al., 2008).

Vascular cell adhesion molecule 1 (VCAM-1)

VCAM-1 was higher after bed rest following one study, but only in one of the three investigated groups (namely, the group with 'first degree relatives' of patients with diabetes) (Sonne et al., 2011).

C-peptide

C-peptide was not associated with sedentary behaviour according to one study (Sonne et al., 2010).

Plasma fibrinogen

One study shows lower a plasma fibrinogen concentration after seven days of exercise withdrawal compared to the baseline measurement during an intervention period of 14 days (Kop et al., 2008).

Inactive monomeric LPL proteins, apolipoprotein C-II & C-III (Apo C-II & C-III), non-esterified fatty acids (NEFA), 3-hydroxybutyrate, homocysteine, von Willebrand factor and interleukin-6

The relationship of inactive monomeric LPL proteins, Apo C-II, Apo C-III, NEFA, 3-hydroxybutyrate, homocysteine, the von Willebrand factor and interleukin-6 with sedentary behaviour was investigated only

once in the different included studies (Kop et al., 2008; Miyashita et al., 2013; Sonne et al., 2011). None of these parameters was associated with sedentary behaviour.

5. Discussion

5.1. Reflection on the quality of the included studies

The quality assessment was done independently by two persons. This contributed to a better assessment of the quality.

When assessing the quality of the included articles, most articles had a poor quality and achieved negative assessments on important quality parameters. Due to the low number of obtained articles after the literature search and study selection, no articles were excluded after the quality assessment. There was often information lacking to answer the questions of the quality assessment. We had to keep in mind that missing information may indicate that the requirements for this quality parameter were not met. Thereby, it was important to consider all weaknesses of all studies, when interpreting the results.

Four studies had a cross-sectional design, which limits the possibility to prove a causal relationship (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014; Wientzek et al., 2014). Even when the study design was not cross-sectional, the follow-up in most studies was limited (Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011), so they could not ensure that the studied outcome had the possibility to appear.

There were five experimental studies (Kop et al., 2008; Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011), but two of these articles did not have a control group (Miyashita et al., 2013; Shiraishi et al., 2003) and only one study had a randomisation procedure (Kop et al., 2008). Not randomising may contribute to a selection bias. However, blinding therapists and patients was difficult in bed rest studies or in studies where the intervention group was supposed to be sedentary.

All studies, except one (Franks et al., 2007), were not representative for the whole population due to a small sample size or a selective sample (e.g. only men). The generalisation was therefore limited.

In most studies, the outcomes were not established independently of each other, due to repeated measures within the same subjects (Franks et al., 2007; Honda et al., 2014; Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011; Wientzek et al., 2014). Moreover, the intervention and outcomes were possibly not established independently of each other (Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011). Theoretically, it is possible to establish the measurements of the outcomes independently, but practically this is very difficult. Confounders were often measured, but not in all studies (Kop et al., 2008; Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011), and not all possible confounders were included in every study (Healy et al., 2011; Wientzek et al., 2014). E.g.: only two studies corrected for follow-up time or measurement occasion (Franks et al., 2007; Wientzek et al., 2014).

5.2. Reflection on the findings in function of the research question

In almost all studies, the generalisability was limited due to a relatively small sample size (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014; Kop et al., 2008; Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011; Wientzek et al., 2014) and/or an uneven distribution of sexes in the sample size (Franks et al., 2007; Honda et al., 2014; Kop et al., 2008; Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011). It is also difficult to compare the results of the articles due to different values for mean age and mean BMI of the population in all studies and because different protocols

were used to measure sedentary time. Besides all studies were executed in five different countries, which makes the results possibly applicable for the population of the country where the study was executed, but not for the entire world population.

It is also important to take into account that the results of the common outcome measurements of the two studies of Sonne et al. (Sonne et al., 2010; Sonne et al., 2011), are equal. So, these results are measured once and published twice as secondary outcome parameters in respectively two studies with another research question. In these cases, only one study actually (has not) found an association instead of two studies.

For almost all physical, physiological and blood sample outcomes measured in several studies, different (non-significant) associations were found. It is important to keep in mind that all studies had limitations in their design and quality. Considering this, no clear conclusions can be made about the effects of sedentary time on the examined cardiometabolic parameters. In this section, the parameters measured in at least 3 studies, will be discussed. There are some differences in the methods and the quality of the included articles that could explain these irregularities.

More non-significant associations were found in experimental prospective studies than in observational cross-sectional studies. This finding was very pronounced for the parameters BMI and waist circumference. Similar results were found with respect to the plasma insulin concentration (Chastin et al., 2015; Healy et al., 2011; Miyashita et al., 2013; Sonne et al., 2011), with the exception of a fifth experimental prospective study mentioned that an increased sedentary time was associated with an increased plasma insulin concentration (Sonne et al., 2010). It is possible that the included experimental studies could not detect an association due to a short follow-up period, thus not allowing the observed outcomes enough time for a (significant) change (Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011). In fact, follow-up was (possibly) too short in nine out of ten included studies, so the proportion of the association between sedentary time and several cardiometabolic parameters could be larger than observed now for all parameters discussed in this section (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014; Kop et al., 2008; Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011; Wientzek et al., 2014). Besides in the included experimental studies no one seemed to be blinded and no control groups were included (Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011). On the other hand, no confounders were included in the analysis of these four studies, which could have further weakened the possible association.

However, also the results of the observational cross-sectional studies are supposed to be considered with some caution (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014; Wientzek et al., 2014). Due to their study design, no causal relationship can be supposed. Two out of four studies also did not take possible confounders into account (Healy et al., 2011; Wientzek et al., 2014).

For plasma glucose concentrations, the opposite results were obtained as described for the parameters discussed previously. Three observational cross-sectional studies have not found a significant relationship (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014), while in three experimental prospective studies different associations were found (Miyashita et al., 2013; Sonne et al., 2010; Sonne et al., 2011).

The results for C-reactive protein were also inconsistent (Chastin et al., 2015; Healy et al., 2011; Kop et al., 2008; Sonne et al., 2011). Consequently, no unambiguous conclusion can be made concerning this parameter. Although, most findings were inconsistent, all five studies that examined the blood triglyceride concentration and the blood high-density lipoprotein-cholesterol concentration mentioned a detrimental association with these parameters (Chastin et al., 2015; Healy et al., 2011; Honda et al., 2014; Miyashita et al., 2013; Sonne

et al., 2010). This means that with increased sedentary time, the blood triglyceride concentration will increase as well and the blood high-density lipoprotein-cholesterol concentration will decrease. The physiological mechanism(s) that are responsible for the detrimental effects of sedentary behaviour on the blood triglyceride concentration are currently poorly understood. However, an experimental study conducted in rats mentioned a reduction in skeletal muscle lipoprotein lipase may be responsible for the adverse effects (Bey & Hamilton, 2003). Also, the physiological mechanism(s) by which sedentary behaviour adversely affects the blood high-density lipoprotein-cholesterol concentration are currently poorly understood. However, a systematic review that investigated the effect of sedentary behaviour on several cardiometabolic outcomes in adults ≥ 60 years of age, found an increased concentration of blood high-density lipoprotein-cholesterol due to sedentarism (de Rezende, Rey-Lopez, Matsudo, & do Carmo Luiz, 2014). This is consistent with our findings.

Besides all five studies that investigated the relationship of blood pressure with sedentary behaviour did not establish a significant association (Healy et al., 2011; Miyashita et al., 2013; Shiraishi et al., 2003; Sonne et al., 2010; Sonne et al., 2011). This is not what we expected because one systematic review, that investigated the role of shear stress in the effect of sedentary behaviour on endothelial dysfunction, mentioned that increased sedentary time results in reduced muscular activity of the lower extremities which decreases leg blood flow, increases blood pooling in the calf and consequently increases mean arterial pressure (Thosar, Johnson, Johnston, & Wallace, 2012). The included studies in this review were experimental and 'sitting' was the intervention. This can explain the differences found between the review of Thosar et al. (2012) and our review. The experimental model of physical inactivity was different between the two reviews (sitting vs. supine position) or the studies that we included were not experimental. The three studies that examined the relationship with the blood low-density lipoprotein-cholesterol concentration (Chastin et al., 2015; Honda et al., 2014; Sonne et al., 2010) and maximal oxygen uptake (Sonne et al., 2010; Sonne et al., 2011; Wientzek et al., 2014) have not found a significant association. Another systematic review, that investigated the cross-sectional and prospective associations of accelerometer-measured total sedentary time and breaks in sedentary time with individual cardiometabolic biomarkers in adults ≥ 18 years of age, also has not found any association of sedentary time with the blood low-density lipoprotein-cholesterol concentration (Brocklebank, Falconer, Page, Perry, & Cooper, 2015). Further research is necessary to determine the physiological mechanisms behind these conclusions. Again, it is important to consider the above-mentioned issues that should be taken into account when interpreting the results.

5.3. Reflection on the strengths and weaknesses of the literature study

Weaknesses:

- Only a small amount of the obtained articles was eligible for the literature study. Many articles ($n = 736$) did not answer the inclusion and/or exclusion criteria that were required for this study. This was an inevitable weakness.
- A too small amount of articles remained eligible after screening for the inclusion and exclusion criteria, so the inclusion criterion of one year follow-up had to be replaced by six months follow-up. This criterion was afterwards rejected for the same reason. The included studies were possibly not capable to detect a causality due to their cross-sectional design or the included studies were possibly not capable to (not) detect an association due to their short follow-up periods.

- Some of the included studies did not give a clear definition of sedentarism, but were still recorded in this review. Therefore, it was not clear what was mentioned with sedentary time and if these studies fitted the research question. Most of these studies were experimental bed rest studies and the imposed sedentary behaviour was probably extremer than the habitual sedentary behaviour of people.
- There was no specification for occupational sedentarism in this literature search. This would have resulted in an even smaller amount of eligible articles than those who were included now in this literature review. Therefore, an impact of global sedentarism on cardiometabolic parameters was investigated in the age category of the population that is expected to work.

Strengths

- Both, the literature search and the quality assessment, were executed independently by two researchers. Afterwards, the results were discussed and united.
- An extensive search led to 756 articles who were filtered on each selection criterion. The abstract was used for screening. If this did not show the required criteria, the full text was used to screen in detail.
- Two databases, Web of Science and PubMed, were used to obtain as much as possible eligible articles concerning the research question.
- Taking that maximum five percent of the population was allowed not being healthy while screening the obtained articles, led to a more representative sample for the actual working population. Given that there is a global increase in the prevalence of obesity from 3,2% in 1975 to 10,8% in 2014 and an increase from 6,4% to 14,9% in men and women respectively. If this trend will continue, the prevalence of obesity will increase up to 18% in men and 21% in women (NCD Risk Factor Collaboration, 2016). Also the prevalence of type 2 diabetes mellitus has a predicted increase from 415 million in 2016 (nine percent of the adults) to 642 million patients in the next decade who will suffer from this chronic disease (Jaacks et al., 2016). For peripheral artery disease, there is an increase of 28,7% in low- or middle-income countries and 13,1% in high-income countries found between 2000 and 2010 (Fowkes et al., 2013).
- The age margin was wide, but this range represented the whole working population. However, there is a possibility that there were differences in physical activity due to the age of participants.
- Taking cardiometabolic parameters as outcomes of this review is global. This was applied to receive a clear image of what was already studied and what remained unknown about this relative unstudied topic.

5.4. Recommendations for further research

Many recommendations can be made to improve future research to examine the impact of sedentary behaviour on several cardiometabolic parameters in healthy adults.

5.4.1. Study population

Results could only be generalised if the sample is both large enough and representative for the whole population.

Sedentary behaviour may have an impact on cardiometabolic parameters in the healthy population. Therefore, further research should examine the impact of sedentarism in the healthy population and in populations at risk for an elevated sedentary behaviour like the sedentary working population. Even if they might be active during their leisure time.

5.4.2. Study design

To examine the impact of sedentary behaviour on cardiometabolic parameters, it is necessary to look at the habitual physical activity behaviour and the corresponding activity levels. To investigate this, an observational study is the most applicable due to its minimal impact on personal habits. The follow-up should be long enough to ensure that cardiometabolic changes may occur. Therefore, a prospective observational study is recommended and there should be corrected for the follow-up time and repeated measures in the analysis.

5.4.3. Sedentary behaviour

Subjective measurements may cause a distortion of the habitual activity level due to a possible recall bias or because the study population makes an overestimation of their habitual activity level. Therefore, an objective physical activity measurement is desired. Besides a measurement device that influences habits as little as possible during occupation and leisure time is required.

A clear definition of the different activity levels should be given in the study. This is important, to know what is meant with sedentary behaviour or other intensities of physical activity in the study. After the data has been collected, it is recommended to make an analysis of the daily activity distribution in the study population.

5.4.4. Cardiometabolic outcomes

A clear description of the chosen cardiometabolic outcomes should be given to clarify the relevance of measuring these outcomes. To ensure a follow-up that is long enough, only a small amount of cardiometabolic outcomes should be investigated. Hereby it is possible to redistribute the available budget and the parameters have the possibility to change over time.

For the data analysis, investigating the impact of sedentary behaviour on cardiometabolic parameters, there should be adjusted for relevant covariates in the study, e.g. sociodemographic and lifestyle factors.

6. Conclusion

The impact of sedentarism on cardiometabolic parameters is not clear due to a limited quality of the included studies and/or study designs that were not appropriate to answer the research question. For the blood high-density lipoprotein-cholesterol concentration and the blood triglyceride concentration, detrimental associations were found. We can conclude that these concentrations will respectively decrease and increase as sedentary behaviour increases. The physiological mechanisms that are responsible for these associations are currently poorly understood. Even these relationships should be interpreted with caution due to limitations in the quality and design of the studies. For blood pressure, maximal oxygen uptake and the blood low-density lipoprotein-cholesterol concentration, no significant relationships were observed.

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Wilmot, E. G., Edwardson, C. L., Achana, F. A., Davies, M. J., Gorely, T., Gray, L. J., . . . Biddle, S. J. (2012). Sedentary time in adults and the association with diabetes, cardiovascular disease and death: systematic review and meta-analysis. *Diabetologia*, 55(11), 2895-2905. doi:10.1007/s00125-012-2677-z

Wittink, H., Engelbert, R., & Takken, T. (2011). The dangers of inactivity; exercise and inactivity physiology for the manual therapist. *Man Ther*, 16(3), 209-216. doi:10.1016/j.math.2011.01.006

(*) *Included in this literature review*

8. Appendices part I: overview of the literature

Table 1:	Overview of number of hits for different combinations of search terms
Figure 1:	Study selection process
Table 2:	Overview of the excluded studies with the reason(s) of exclusion
Table 3:	Quality assessment
Table 3.1:	Questions used in the checklist to assess the quality of nine included articles
Table 3.2:	Quality assessment of nine included articles
Table 3.3:	Quality assessment of the included clinical trial (Kop et al., 2008) using the items of the Cochrane checklist for a randomised controlled trial
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Table 5:	Data extraction
Table 5.1:	Description of the included studies
Table 5.2:	Methods, analysis and results concerning measuring sedentary time
Table 5.3:	Methods, analysis and results concerning cardiometabolic health measures, results and association of sedentary time with cardiometabolic health
Table 6:	Overview of the included reviews

Table 1			
Overview of number of hits for different combinations of search terms			
	Keywords in the search bar	# hits in PubMed (January 2017)	# hits in Web of Science (January 2017)
#1	Sedentary Lifestyle*	5105	4693
#2	Sedentarism	227	262
#3	Physical inactivity	7600	7276
#4	Cardiovascular Physiological Phenomena*	861945	403
#5	#1 AND #4	476	3
#6	#2 AND #4	7	1
#7	#3 AND #4	284	3
#8	#5 OR #6 OR #7	January '17: 724 May '17: 756	January '17: 3 May '17: 3

*Inserted in PubMed as MeSH terms

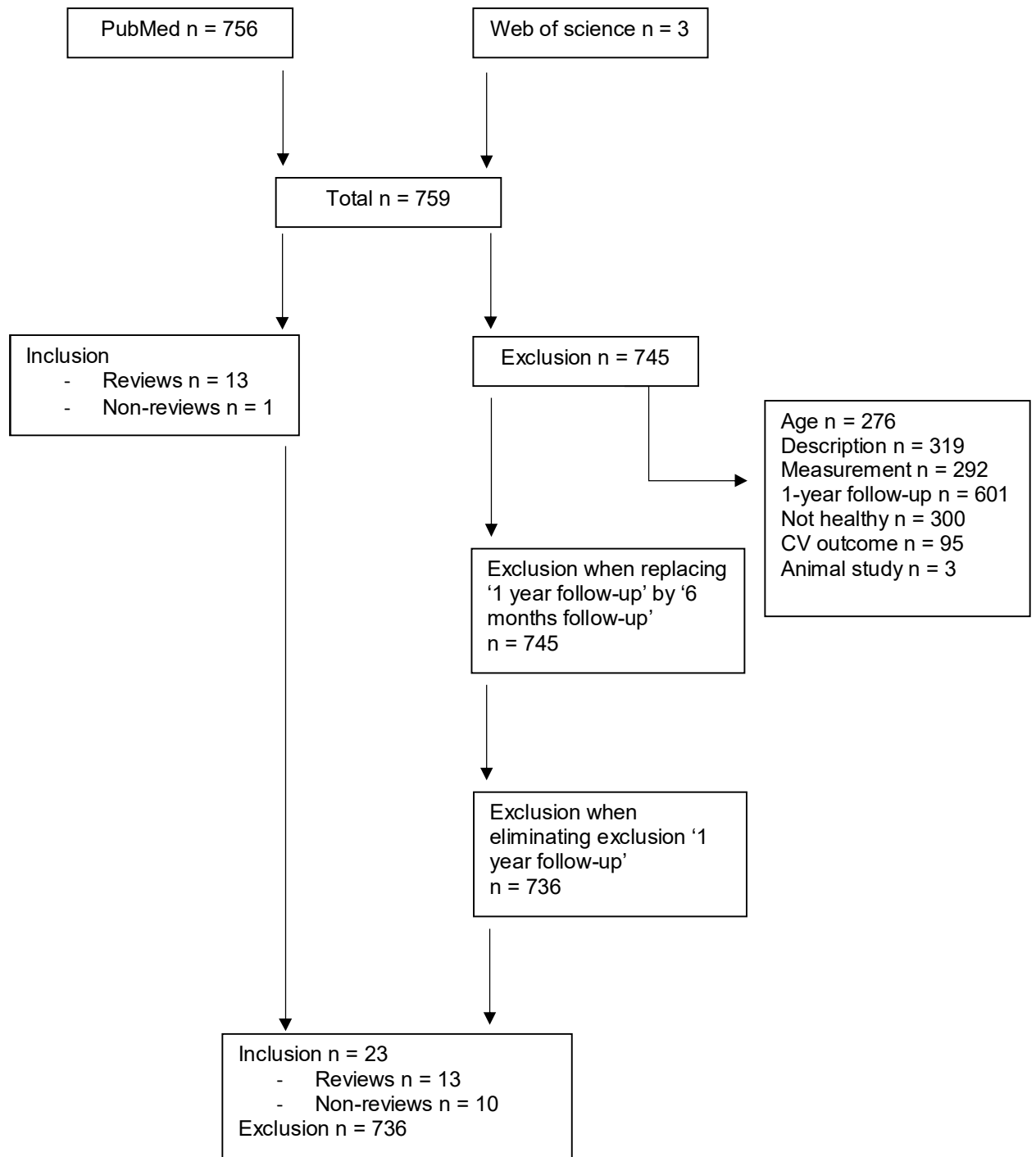


Figure 1. Study selection process
(n = number of articles)

Table 2 Overview of the excluded studies with the reason(s) of exclusion					
Reference: Peter, R., Sood, S., & Dhawan, A. (2015). Spectral Parameters of HRV In Yoga Practitioners, Athletes And Sedentary Males. <i>Indian J Physiol Pharmacol</i> , 59(4), 380-387.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wasfy, M. M., & Baggish, A. L. (2016). Exercise Dose in Clinical Practice. <i>Circulation</i> , 133(23), 2297-2313. doi:10.1161/circulationaha.116.018093					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Tyndall, A. V., Argourd, L., Sajobi, T. T., Davenport, M. H., Forbes, S. C., Gill, S. J., . . . Poulin, M. J. (2016). Cardiometabolic risk factors predict cerebrovascular health in older adults: results from the Brain in Motion study. <i>Physiol Rep</i> , 4(8). doi:10.14814/phy2.12733					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Klenk, J., Dallmeier, D., Denking, M. D., Rapp, K., Koenig, W., & Rothenbacher, D. (2016). Objectively Measured Walking Duration and Sedentary Behaviour and Four-Year Mortality in Older People. <i>PLoS One</i> , 11(4), e0153779. doi:10.1371/journal.pone.0153779					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Mahtani, K. R., Beinortas, T., Bauza, K., & Nunan, D. (2016). Device-Guided Breathing for Hypertension: a Summary Evidence Review. <i>Curr Hypertens Rep</i> , 18(4), 33. doi:10.1007/s11906-016-0631-z					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lizamore, C. A., Kathiravel, Y., Elliott, J., Hellemans, J., & Hamlin, M. J. (2016). The effect of short-term intermittent hypoxic exposure on heart rate variability in a sedentary population. <i>Acta Physiol Hung</i> , 103(1), 75-85. doi:10.1556/036.103.2016.1.7					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Jefferis, B. J., Parsons, T. J., Sartini, C., Ash, S., Lennon, L. T., Wannamethee, S. G., . . . Whincup, P. H. (2016). Does duration of physical activity bouts matter for adiposity and metabolic syndrome? A cross-sectional study of older British men. <i>Int J Behav Nutr Phys Act</i> , 13, 36. doi:10.1186/s12966-016-0361-2					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Beishuizen, C. R., Stephan, B. C., van Gool, W. A., Brayne, C., Peters, R. J., Andrieu, S., . . . Richard, E. (2016). Web-Based Interventions Targeting Cardiovascular Risk Factors in Middle-Aged and Older People: A Systematic Review and Meta-Analysis. <i>J Med Internet Res</i> , 18(3), e55. doi:10.2196/jmir.5218					
Reason for exclusion :					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Czeczelaewska, E., Czeczelaewski, J., Wasiluk, A., & Saczuk, J. (2016). Evaluation of the Usability of Selected Questionnaires Assessing Physical Activity in the Prophylaxis of Cardiovascular Diseases. <i>Adv Clin Exp Med</i> , 25(1), 59-67. doi:10.17219/acem/39157					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Diaz, K. M., Booth, J. N., 3rd, Seals, S. R., Hooker, S. P., Sims, M., Dubbert, P. M., . . . Shimbo, D. (2016). Sedentary behavior and subclinical atherosclerosis in African Americans: cross-sectional analysis of the Jackson heart study. <i>Int J Behav Nutr Phys Act</i> , 13, 31. doi:10.1186/s12966-016-0349-y					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wennberg, P., Boraxbekk, C. J., Wheeler, M., Howard, B., Dempsey, P. C., Lambert, G., . . . Dunstan, D. W. (2016). Acute effects of breaking up prolonged sitting on fatigue and cognition: a pilot study. <i>BMJ Open</i> , 6(2), e009630. doi:10.1136/bmjopen-2015-009630					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hollriegel, R., Winzer, E. B., Linke, A., Adams, V., Mangner, N., Sandri, M., . . . Erbs, S. (2016). Long-Term Exercise Training in Patients With Advanced Chronic Heart Failure: SUSTAINED BENEFITS ON LEFT VENTRICULAR PERFORMANCE AND EXERCISE CAPACITY. <i>J Cardiopulm Rehabil Prev</i> , 36(2), 117-124. doi:10.1097/hcr.0000000000000165					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Dewi, F. S., Stenlund, H., Hakimi, M., & Weinehall, L. (2015). AN INCREASE IN RISK FACTORS FOR CARDIOVASCULAR DISEASE IN YOGYAKARTA, INDONESIA: A COMPARISON OF TWO CROSS-SECTIONAL SURVEYS. <i>Southeast Asian J Trop Med Public Health</i> , 46(4), 775-785.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Spasova, L., Vittore, D., Droste, D. W., & Rosch, N. (2016). Randomised controlled trial to evaluate the efficacy and usability of a computerised phone-based lifestyle coaching system for primary and secondary prevention of stroke. <i>BMC Neurol</i> , 16, 22. doi:10.1186/s12883-016-0540-4					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Parsons, T. J., Sartini, C., Ellins, E. A., Halcox, J. P., Smith, K. E., Ash, S., . . . Jefferis, B. J. (2016). Objectively measured physical activity and sedentary behaviour and ankle brachial index: Cross-sectional and longitudinal associations in older men. <i>Atherosclerosis</i> , 247, 28-34. doi:10.1016/j.atherosclerosis.2016.01.038					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the	Sedentarism is not measured objectively	No longitudinal study with a	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	study/no definition of sedentarism		follow-up of min. 1 year		
Reference: Bianchim, M. S., Sperandio, E. F., Martinhao, G. S., Matheus, A. C., Lauria, V. T., da Silva, R. P., . . . Dourado, V. Z. (2016). Correlation between heart rate variability and pulmonary function adjusted by confounding factors in healthy adults. <i>Braz J Med Biol Res</i> , 49(3). doi:10.1590/1414-431x20154435					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Xiao, J., Shen, C., Chu, M. J., Gao, Y. X., Xu, G. F., Huang, J. P., . . . Cai, H. (2016). Physical Activity and Sedentary Behavior Associated with Components of Metabolic Syndrome among People in Rural China. <i>PLoS One</i> , 11(1), e0147062. doi:10.1371/journal.pone.0147062					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Borjesson, M., Onerup, A., Lundqvist, S., & Dahlof, B. (2016). Physical activity and exercise lower blood pressure in individuals with hypertension: narrative review of 27 RCTs. <i>Br J Sports Med</i> , 50(6), 356-361. doi:10.1136/bjsports-2015-095786					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Matsuzaki, M., Sullivan, R., Ekelund, U., Krishna, K. V., Kulkarni, B., Collier, T., . . . Kuper, H. (2016). Development and evaluation of the Andhra Pradesh Children and Parent Study Physical Activity Questionnaire (APCAPS-PAQ): a cross-sectional study. <i>BMC Public Health</i> , 16, 48. doi:10.1186/s12889-016-2706-9					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Chaddha, A., Kline-Rogers, E., Braverman, A. C., Erickson, S. R., Jackson, E. A., Franklin, B. A., . . . Eagle, K. A. (2015). Survivors of Aortic Dissection: Activity, Mental Health, and Sexual Function. <i>Clin Cardiol</i> , 38(11), 652-659. doi:10.1002/clc.22418					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Krishnan, M. N., Zachariah, G., Venugopal, K., Mohanan, P. P., Hari Krishnan, S., Sanjay, G., . . . Thankappan, K. R. (2016). Prevalence of coronary artery disease and its risk factors in Kerala, South India: a community-based cross-sectional study. <i>BMC Cardiovasc Disord</i> , 16, 12. doi:10.1186/s12872-016-0189-3					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Restaino, R. M., Walsh, L. K., Morishima, T., Vranish, J. R., Martinez-Lemus, L. A., Fadel, P. J., & Padilla, J. (2016). Endothelial dysfunction following prolonged sitting is mediated by a reduction in shear stress. <i>Am J Physiol Heart Circ Physiol</i> , 310(5), H648-653. doi:10.1152/ajpheart.00943.2015					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gerage, A. M., Benedetti, T. R., Farah, B. Q., Santana Fda, S., Ohara, D., Andersen, L. B., & Ritti-Dias, R. M. (2015). Sedentary Behavior and Light Physical Activity Are Associated with Brachial and Central Blood Pressure in Hypertensive Patients. <i>PLoS One</i> , 10(12), e0146078. doi:10.1371/journal.pone.0146078					

Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kim, S., Ko, Y., & Yi, G. (2016). Role of social determinants and lifestyle on women's metabolic risk during the perimenopausal transition: results from a cohort study. <i>Menopause</i> , 23(4), 403-409. doi:10.1097/gme.0000000000000544					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Rubinstein, A., Miranda, J. J., Beratarrechea, A., Diez-Canseco, F., Kanter, R., Gutierrez, L., . . . Ramirez-Zea, M. (2016). Effectiveness of an mHealth intervention to improve the cardiometabolic profile of people with prehypertension in low-resource urban settings in Latin America: a randomised controlled trial. <i>Lancet Diabetes Endocrinol</i> , 4(1), 52-63. doi:10.1016/s2213-8587(15)00381-2					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Engdahl, B., Aarhus, L., Lie, A., & Tambs, K. (2015). Cardiovascular risk factors and hearing loss: The HUNT study. <i>Int J Audiol</i> , 54(12), 958-966. doi:10.3109/14992027.2015.1090631					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hallman, D. M., Sato, T., Kristiansen, J., Gupta, N., Skotte, J., & Holtermann, A. (2015). Prolonged Sitting is Associated with Attenuated Heart Rate Variability during Sleep in Blue-Collar Workers. <i>Int J Environ Res Public Health</i> , 12(11), 14811-14827. doi:10.3390/ijerph121114811					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: L, E. F. G., R, C. M., Shepherd, S. O., Cabot, J., & Hopkins, N. D. (2015). Evaluation of sit-stand workstations in an office setting: a randomised controlled trial. <i>BMC Public Health</i> , 15, 1145. doi:10.1186/s12889-015-2469-8					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Jardim, T. V., Sousa, A. L., Povoia, T. I., Barroso, W. K., Chinem, B., Jardim, L., . . . Jardim, P. C. (2015). The natural history of cardiovascular risk factors in health professionals: 20-year follow-up. <i>BMC Public Health</i> , 15, 1111. doi:10.1186/s12889-015-2477-8					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Greenwood, E. A., Noel, M. W., Kao, C. N., Shinkai, K., Pasch, L. A., Cedars, M. I., & Huddlestone, H. G. (2016). Vigorous exercise is associated with superior metabolic profiles in polycystic ovary syndrome independent of total exercise expenditure. <i>Fertil Steril</i> , 105(2), 486-493. doi:10.1016/j.fertnstert.2015.10.020					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Garcia-Hermoso, A., Notario-Pacheco, B., Recio-Rodriguez, J. I., Martinez-Vizcaino, V., Rodrigo de Pablo, E., Magdalena Belio, J. F., . . . Garcia-Ortiz, L. (2015). Sedentary behaviour patterns and arterial stiffness in a Spanish adult population - The EVIDENT trial. <i>Atherosclerosis</i> , 243(2), 516-522. doi:10.1016/j.atherosclerosis.2015.10.004					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Alkhatib, A. (2015). High prevalence of sedentary risk factors amongst university employees and potential health benefits of campus workplace exercise intervention. <i>Work</i> , 52(3), 589-595. doi:10.3233/wor-152182					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lamb, M. J., Westgate, K., Brage, S., Ekelund, U., Long, G. H., Griffin, S. J., . . . Cooper, A. J. (2016). Prospective associations between sedentary time, physical activity, fitness and cardiometabolic risk factors in people with type 2 diabetes. <i>Diabetologia</i> , 59(1), 110-120. doi:10.1007/s00125-015-3756-8					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Steding-Ehrenborg, K., Arvidsson, P. M., Toger, J., Rydberg, M., Heiberg, E., Carlsson, M., & Arheden, H. (2016). Determinants of kinetic energy of blood flow in the four-chambered heart in athletes and sedentary controls. <i>Am J Physiol Heart Circ Physiol</i> , 310(1), H113-122. doi:10.1152/ajpheart.00544.2015					
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Reference: Ascenso, A., Palmeira, A., Pedro, L. M., Martins, S., & Fonseca, H. (2016). Physical activity and cardiorespiratory fitness, but not sedentary behavior, are associated with carotid intima-media thickness in obese adolescents. <i>Eur J Pediatr</i> , 175(3), 391-398. doi:10.1007/s00431-015-2654-x					
<i>Reason for exclusion :</i>					
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Reference: Holwerda, S. W., Reynolds, L. J., Restaino, R. M., Credeur, D. P., Leidy, H. J., Thyfault, J. P., & Fadel, P. J. (2015). The influence of reduced insulin sensitivity via short-term reductions in physical activity on cardiac baroreflex sensitivity during acute hyperglycemia. <i>J Appl Physiol (1985)</i> , 119(12), 1383-1392. doi:10.1152/jappphysiol.00584.2015					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kobayashi, R., Yoshida, S., & Okamoto, T. (2015). Arterial stiffness after glucose ingestion in exercise-trained versus untrained men. <i>Appl Physiol Nutr Metab</i> , 40(11), 1151-1156. doi:10.1139/apnm-2015-0131					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Thosar, S. S., Wiggins, C. C., Shea, S. A., & Wallace, J. P. (2015). Brachial artery endothelial function is stable across the morning in young men. <i>Cardiovasc Ultrasound</i> , 13, 42. doi:10.1186/s12947-015-0036-1					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Carr, L. J., Swift, M., Ferrer, A., & Benzo, R. (2016). Cross-sectional Examination of Long-term Access to Sit-Stand Desks in a Professional Office Setting. <i>Am J Prev Med</i> , 50(1), 96-100. doi:10.1016/j.amepre.2015.07.013					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Garcia-Hermoso, A., Martinez-Vizcaino, V., Sanchez-Lopez, M., Recio-Rodriguez, J. I., Gomez-Marcos, M. A., & Garcia-Ortiz, L. (2015). Moderate-to-vigorous physical activity as a mediator between sedentary behavior and cardiometabolic risk in Spanish healthy adults: a mediation analysis. <i>Int J Behav Nutr Phys Act</i> , 12, 78. doi:10.1186/s12966-015-0244-y					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sa, J. C., Costa, E. C., da Silva, E., Tamburus, N. Y., Porta, A., Medeiros, L. F., . . . Azevedo, G. D. (2016). Aerobic exercise improves cardiac autonomic modulation in women with polycystic ovary syndrome. <i>Int J Cardiol</i> , 202, 356-361. doi:10.1016/j.ijcard.2015.09.031					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Shepherd, S. O., Wilson, O. J., Taylor, A. S., Thogersen-Ntoumani, C., Adlan, A. M., Wagenmakers, A. J., & Shaw, C. S. (2015). Low-Volume High-Intensity Interval Training in a Gym Setting Improves Cardio-Metabolic and Psychological Health. <i>PLoS One</i> , 10(9), e0139056. doi:10.1371/journal.pone.0139056					
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Reference: Leischik, R., Foshag, P., Strauss, M., Garg, P., Dworak, B., Littwitz, H., . . . Horlitz, M. (2015). Physical activity, cardiorespiratory fitness and carotid intima thickness: sedentary occupation as risk factor for atherosclerosis and obesity. <i>Eur Rev Med Pharmacol Sci</i> , 19(17), 3157-3168.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sievi, N. A., Franzen, D., Kohler, M., & Clarenbach, C. F. (2015). Physical inactivity and arterial stiffness in COPD. <i>Int J Chron Obstruct Pulmon Dis</i> , 10, 1891-1897. doi:10.2147/copd.s90943					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Horta, B. L., Schaan, B. D., Bieleman, R. M., Vianna, C. A., Gigante, D. P., Barros, F. C., . . . Hallal, P. C. (2015). Objectively measured physical activity and sedentary-time are associated with arterial stiffness in Brazilian young adults. <i>Atherosclerosis</i> , 243(1), 148-154. doi:10.1016/j.atherosclerosis.2015.09.005					
Reason for exclusion :					

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Reference: Sawyer, B. J., Tucker, W. J., Bhammar, D. M., & Gaesser, G. A. (2015). Using a Verification Test for Determination of V[Combining Dot Above]O2max in Sedentary Adults With Obesity. <i>J Strength Cond Res</i> , 29(12), 3432-3438. doi:10.1519/jsc.0000000000001199					
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Reference: Jablonski, K. L., Donato, A. J., Fleenor, B. S., Nowlan, M. J., Walker, A. E., Kaplon, R. E., . . . Seals, D. R. (2015). Reduced large elastic artery stiffness with regular aerobic exercise in middle-aged and older adults: potential role of suppressed nuclear factor kappa B signalling. <i>J Hypertens</i> , 33(12), 2477-2482. doi:10.1097/hjh.0000000000000742					
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Reference: Al Thani, M., Al Thani, A. A., Al-Chetachi, W., Al Malki, B., Khalifa, S. A., Bakri, A. H., . . . Naja, F. (2015). Lifestyle Patterns Are Associated with Elevated Blood Pressure among Qatari Women of Reproductive Age: A Cross-Sectional National Study. <i>Nutrients</i> , 7(9), 7593-7615. doi:10.3390/nu7095355					
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Reference: McManus, A. M., Ainslie, P. N., Green, D. J., Simair, R. G., Smith, K., & Lewis, N. (2015). Impact of prolonged sitting on vascular function in young girls. <i>Exp Physiol</i> , 100(11), 1379-1387. doi:10.1113/ep085355					
Reason for exclusion :					
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Reference: Silva, F. T., Rego, J. T., Raulino, F. R., Silva, M. R., Reynaud, F., Egito, E. S., & Dantas, P. M. (2015). Transcranial direct current stimulation on the autonomic modulation and exercise time in individuals with spinal cord injury. A case report. <i>Auton Neurosci</i> , 193, 152-155. doi:10.1016/j.autneu.2015.08.007					
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Reference: Mazzuco, A., Medeiros, W. M., Sperling, M. P., de Souza, A. S., Alencar, M. C., Arbex, F. F., . . . Borghi-Silva, A. (2015). Relationship between linear and nonlinear dynamics of heart rate and impairment of lung function in COPD patients. <i>Int J Chron Obstruct Pulmon Dis</i> , 10, 1651-1661. doi:10.2147/copd.s81736					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Endrighi, R., Steptoe, A., & Hamer, M. (2016). The effect of experimentally induced sedentariness on mood and psychobiological responses to mental stress. <i>Br J Psychiatry</i> , 208(3), 245-251. doi:10.1192/bjp.bp.114.150755					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wang, Z., Ning, H., Ji, Y., Hou, J., & He, Y. (2015). Human thermal physiological and psychological responses under different heating environments. <i>J Therm Biol</i> , 52, 177-186. doi:10.1016/j.jtherbio.2015.06.008					
<i>Reason for exclusion :</i>					
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Reference: Suarez-Ortegon, M. F., Arbelaez, A., Mosquera, M., Moreno-Navarrete, J. M., Aguilar-Plata, C., & Fernandez-Real, J. M. (2015). Circulating hepcidin is independently associated with systolic blood pressure in apparently healthy individuals. <i>Arch Med Res</i> , 46(6), 507-513. doi:10.1016/j.arcmed.2015.07.007					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sayburn, A. (2015). Standing for two hours a day may benefit heart health, study finds. <i>Bmj</i> , 351, h4160. doi:10.1136/bmj.h4160					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Panda, K., & Krishna, P. (2014). Physical exercise and cardiac autonomic activity in healthy adult men. <i>Indian J Physiol Pharmacol</i> , 58(4), 365-370.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Skrkar, S., Mikalacki, M., Cokorilo, N., & Eric, M. (2015). ANALYSIS OF DIFFERENCES IN BLOOD PRESSURE OF WOMEN BELONGING TO DIFFERENT AGE GROUPS. <i>Med Pregl</i> , 68(3-4), 93-97.					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
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	definition of sedentarism				
Reference: Hull, C. M., & Harris, J. A. (2015). Venous Thromboembolism in Physically Active People: Considerations for Risk Assessment, Mainstream Awareness and Future Research. <i>Sports Med</i> , 45(10), 1365-1372. doi:10.1007/s40279-015-0360-5					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Nang, E. E., van Dam, R. M., Tan, C. S., Mueller-Riemenschneider, F., Lim, Y. T., Ong, K. Z., . . . Tai, E. S. (2015). Association of Television Viewing Time with Body Composition and Calcified Subclinical Atherosclerosis in Singapore Chinese. <i>PLoS One</i> , 10(7), e0132161. doi:10.1371/journal.pone.0132161					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Nasario-Junior, O., Benchimol-Barbosa, P. R., Pedrosa, R. C., & Nadal, J. (2015). Assessment of Autonomic Function by Phase Rectification of RRInterval Histogram Analysis in Chagas Disease. <i>Arq Bras Cardiol</i> , 104(6), 450-455. doi:10.5935/abc.20150032					
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Reference: Buford, T. W., Anton, S. D., Bavry, A. A., Carter, C. S., Daniels, M. J., & Pahor, M. (2015). Multi-modal intervention to reduce cardiovascular risk among hypertensive older adults: Design of a randomized clinical trial. <i>Contemp Clin Trials</i> , 43, 237-242. doi:10.1016/j.cct.2015.06.019					
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Reference: Islam, F. M., Bhuiyan, A., Chakrabarti, R., Rahman, M. A., Kanagasingam, Y., & Hiller, J. E. (2016). Undiagnosed hypertension in a rural district in Bangladesh: The Bangladesh Population-based Diabetes and Eye Study (BPDES). <i>J Hum Hypertens</i> , 30(4), 252-259. doi:10.1038/jhh.2015.65					
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Reference: Farah, B. Q., Christofaro, D. G., Balagopal, P. B., Cavalcante, B. R., de Barros, M. V., & Ritti-Dias, R. M. (2015). Association between resting heart rate and cardiovascular risk factors in adolescents. <i>Eur J Pediatr</i> , 174(12), 1621-1628. doi:10.1007/s00431-015-2580-y					
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Reference: Nyberg, M., & Hellsten, Y. (2016). Reduced blood flow to contracting skeletal muscle in ageing humans: is it all an effect of sand through the hourglass? <i>J Physiol</i> , 594(8), 2297-2305. doi:10.1113/jp270594					

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Reference: Tarumi, T., Gonzales, M. M., Fallow, B., Nualnim, N., Lee, J., Pyron, M., . . . Haley, A. P. (2015). Cerebral/Peripheral Vascular Reactivity and Neurocognition in Middle-Age Athletes. <i>Med Sci Sports Exerc</i> , 47(12), 2595-2603. doi:10.1249/mss.0000000000000717					
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Reference: Altini, M., Casale, P., Penders, J., & Amft, O. (2015). Personalized cardiorespiratory fitness and energy expenditure estimation using hierarchical Bayesian models. <i>J Biomed Inform</i> , 56, 195-204. doi:10.1016/j.jbi.2015.06.008					
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Reference: Lessiani, G., Santilli, F., Boccataonda, A., Iodice, P., Liani, R., Tripaldi, R., . . . Davi, G. (2016). Arterial stiffness and sedentary lifestyle: Role of oxidative stress. <i>Vascul Pharmacol</i> , 79, 1-5. doi:10.1016/j.vph.2015.05.017					
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Reference: Sisante, J. F., Matilage, A. E., Arena, R., Rippee, M. A., & Billinger, S. A. (2015). Decreased tidal volume may limit cardiopulmonary performance during exercise in subacute stroke. <i>J Cardiopulm Rehabil Prev</i> , 35(5), 334-341. doi:10.1097/hcr.000000000000119					
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Reference: Dias, T., & Polito, M. (2015). Acute Cardiovascular Response during Resistance Exercise with Whole-body Vibration in Sedentary Subjects: A Randomized Cross-over Trial. <i>Res Sports Med</i> , 23(3), 253-264. doi:10.1080/15438627.2015.1040921					
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Reference: Lima, M. C., Romaldini, C. C., & Romaldini, J. H. (2015). Frequency of obesity and related risk factors among school children and adolescents in a low-income community. A cross-sectional study. <i>Sao Paulo Med J</i> , 133(2), 125-130. doi:10.1590/1516-3180.2014.8960412					
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Reference: Abbasi, A., Saleem, A., Rather, A., Arooj, S., Habib, N., & Aziz, W. (2015). Statistical study of the risk factors of myocardial infarction in the patients of district Muzaffarabad capital of Azad Jammu and Kashmir. <i>Pak J Pharm Sci</i> , 28(3), 921-926.					
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Reference:					

Jelinek, H. F., Karmakar, C., Kiviniemi, A. M., Hautala, A. J., Tulppo, M. P., Makikallio, T. H., . . . Palaniswami, M. (2015). Temporal dynamics of the circadian heart rate following low and high volume exercise training in sedentary male subjects. <i>Eur J Appl Physiol</i> , 115(10), 2069-2080. doi:10.1007/s00421-015-3185-x					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Guimaraes Filho, G. C., Sousa, A. L., Jardim Tde, S., Souza, W. S., & Jardim, P. C. (2015). Progression of blood pressure and cardiovascular outcomes in hypertensive patients in a reference center. <i>Arq Bras Cardiol</i> , 104(4), 292-298. doi:10.5935/abc.20150001					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Burrows, R., Correa-Burrows, P., Reyes, M., Blanco, E., Albala, C., & Gahagan, S. (2016). High cardiometabolic risk in healthy Chilean adolescents: associations with anthropometric, biological and lifestyle factors. <i>Public Health Nutr</i> , 19(3), 486-493. doi:10.1017/s1368980015001585					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Suboc, T. B., Knabel, D., Strath, S. J., Dharmashankar, K., Coulliard, A., Malik, M., . . . Widlansky, M. E. (2016). Associations of Reducing Sedentary Time With Vascular Function and Insulin Sensitivity in Older Sedentary Adults. <i>Am J Hypertens</i> , 29(1), 46-53. doi:10.1093/ajh/hpv063					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Laverty, A. A., Palladino, R., Lee, J. T., & Millett, C. (2015). Associations between active travel and weight, blood pressure and diabetes in six middle income countries: a cross-sectional study in older adults. <i>Int J Behav Nutr Phys Act</i> , 12, 65. doi:10.1186/s12966-015-0223-3					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Pandey, A., Darden, D., & Berry, J. D. (2015). Low Fitness in Midlife: A Novel Therapeutic Target for Heart Failure with Preserved Ejection Fraction Prevention. <i>Prog Cardiovasc Dis</i> , 58(1), 87-93. doi:10.1016/j.pcad.2015.05.007					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Yuan, M., Alameddine, A., Coupe, M., Navasiolava, N. M., Li, Y., Gauquelin-Koch, G., . . . Custaud, M. A. (2015). Effect of Chinese herbal medicine on vascular functions during 60-day head-down bed rest. <i>Eur J Appl Physiol</i> , 115(9), 1975-1983. doi:10.1007/s00421-015-3176-y					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Alomari, M. A., Khabour, O. F., Alzoubi, K. H., Shqair, D. M., & Stoner, L. (2015). Acute vascular effects of waterpipe smoking: Importance of physical activity and fitness status. <i>Atherosclerosis</i> , 240(2), 472-476. doi:10.1016/j.atherosclerosis.2015.02.047					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hetherington, S. A., Borodzicz, J. A., & Shing, C. M. (2015). Assessing the real world effectiveness of the Healthy Eating Activity and Lifestyle (HEAL) program. <i>Health Promot J Austr</i> , 26(2), 93-98. doi:10.1071/he14031					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Martinez-Vizcaino, V., Mota, J., Solera-Martinez, M., Notario-Pacheco, B., Arias-Palencia, N., Garcia-Prieto, J. C., . . . Sanchez-Lopez, M. (2015). Rationale and methods of a randomised cross-over cluster trial to assess the effectiveness of MOVI-KIDS on preventing obesity in pre-schoolers. <i>BMC Public Health</i> , 15, 176. doi:10.1186/s12889-015-1512-0					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Franklin, N. C., Robinson, A. T., Bian, J. T., Ali, M. M., Norkeviciute, E., McGinty, P., & Phillips, S. A. (2015). Circuit resistance training attenuates acute exertion-induced reductions in arterial function but not inflammation in obese women. <i>Metab Syndr Relat Disord</i> , 13(5), 227-234. doi:10.1089/met.2014.0135					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ryan, J. M., Hensey, O., McLoughlin, B., Lyons, A., & Gormley, J. (2015). Associations of sedentary behaviour, physical activity, blood pressure and anthropometric measures with cardiorespiratory fitness in children with cerebral palsy. <i>PLoS One</i> , 10(4), e0123267. doi:10.1371/journal.pone.0123267					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Doulougou, B., Gomez, F., Alvarado, B., Guerra, R. O., Ylli, A., Guralnik, J., & Zunzunegui, M. V. (2016). Factors associated with hypertension prevalence, awareness, treatment and control among participants in the International Mobility in Aging Study (IMIAS). <i>J Hum Hypertens</i> , 30(2), 112-119. doi:10.1038/jhh.2015.30					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Puig-Ribera, A., Bort-Roig, J., Gonzalez-Suarez, A. M., Martinez-Lemos, I., Gine-Garriga, M., Fortuno, J., . . . Gilson, N. D. (2015). Patterns of impact resulting from a 'sit less, move more' web-based program in sedentary office employees. <i>PLoS One</i> , 10(4), e0122474. doi:10.1371/journal.pone.0122474					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Carter, S. E., Jones, M., & Gladwell, V. F. (2015). Energy expenditure and heart rate response to breaking up sedentary time with three different physical activity interventions. <i>Nutr Metab Cardiovasc Dis</i> , 25(5), 503-509. doi:10.1016/j.numecd.2015.02.006					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Lee, E., Choi, J., Ahn, A., Oh, E., Kweon, H., & Cho, D. (2015). Acceptable macronutrient distribution ranges and hypertension. <i>Clin Exp Hypertens</i> , 37(6), 463-467. doi:10.3109/10641963.2015.1013116					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Koufaki, P., Greenwood, S., Painter, P., & Mercer, T. (2015). The BASES expert statement on exercise therapy for people with chronic kidney disease. <i>J Sports Sci</i> , 33(18), 1902-1907. doi:10.1080/02640414.2015.1017733					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Healy, G. N., Winkler, E. A., Brakenridge, C. L., Reeves, M. M., & Eakin, E. G. (2015). Accelerometer-derived sedentary and physical activity time in overweight/obese adults with type 2 diabetes: cross-sectional associations with cardiometabolic biomarkers. <i>PLoS One</i> , 10(3), e0119140. doi:10.1371/journal.pone.0119140					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ohlander, J., Keskin, M. C., Stork, J., & Radon, K. (2015). Shift work and hypertension: Prevalence and analysis of disease pathways in a German car manufacturing company. <i>Am J Ind Med</i> , 58(5), 549-560. doi:10.1002/ajim.22437					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Duran-Salgado, M. B., & Rubio-Guerra, A. F. (2015). Lifestyle changes and surgical treatment for hypertension in the elderly. <i>Cardiovasc Hematol Agents Med Chem</i> , 12(3), 174-186.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lee, P. H., & Wong, F. K. (2015). The association between time spent in sedentary behaviors and blood pressure: a systematic review and meta-analysis. <i>Sports Med</i> , 45(6), 867-880. doi:10.1007/s40279-015-0322-y					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Mac Ananey, O., McLoughlin, B., Leonard, A., Maher, L., Gaffney, P., Boran, G., & Maher, V. (2015). Inverse Relationship Between Physical Activity, Adiposity, and Arterial Stiffness in Healthy Middle-Aged Subjects. <i>J Phys Act Health</i> , 12(12), 1576-1581. doi:10.1123/jpah.2014-0395					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Garcia-Hermoso, A., Martinez-Vizcaino, V., Recio-Rodriguez, J. I., Sanchez-Lopez, M., Gomez-Marcos, M. A., & Garcia-Ortiz, L. (2015). Sedentary behaviour patterns and carotid intima-media thickness in Spanish healthy adult population. <i>Atherosclerosis</i> , 239(2), 571-576. doi:10.1016/j.atherosclerosis.2015.02.028					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Silveira, M. G., Sousa, A. C., Santos, M. A., Tavares Ida, S., Andrade, S. M., Melo, L. D., . . . Oliveira, J. L. (2015). Assessment of Myocardial Ischemia in Obese Individuals Undergoing Physical Stress Echocardiography (PSE). <i>Arq Bras Cardiol</i> , 104(5), 394-400. doi:10.5935/abc.20150006					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sarfo, F. S., Acheampong, J. W., Appiah, L. T., Oparebea, E., Akpalu, A., & Bedu-Addo, G. (2014). The profile of risk factors and in-patient outcomes of stroke in Kumasi, Ghana. <i>Ghana Med J</i> , 48(3), 127-134.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Yucesir, I., Sahin Yildiz, B., Coskun, O., Yakal, S., Bayraktar, B., Metin, G., . . . Yildiz, M. (2016). Assessment of P wave duration and P wave dispersion in high level football referees. <i>J Sports Med Phys Fitness</i> , 56(1-2), 120-124.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lim, E., Lee, H. K., Myoung, H. S., & Lee, K. J. (2015). Development of a noncontact heart rate monitoring system for sedentary behavior based on an accelerometer attached to a chair. <i>Physiol Meas</i> , 36(3), N61-70. doi:10.1088/0967-3334/36/3/n61					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Roopchand-Martin, S., Nelson, G., Gordon, C., & Sing, S. Y. (2015). A pilot study using the XBOX Kinect for exercise conditioning in sedentary female university students. <i>Technol Health Care</i> , 23(3), 275-283. doi:10.3233/thc-150899					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cayres, S. U., de Lira, F. S., Machado-Rodrigues, A. M., Freitas Junior, I. F., Barbosa, M. F., & Fernandes, R. A. (2015). The mediating role of physical inactivity on the relationship between inflammation and artery thickness in prepubertal adolescents. <i>J Pediatr</i> , 166(4), 924-929. doi:10.1016/j.jpeds.2014.12.057					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Tian, Q., Glynn, N. W., Erickson, K. I., Aizenstein, H. J., Simonsick, E. M., Yaffe, K., . . . Rosano, C. (2015). Objective measures of physical activity, white matter integrity and cognitive status in adults over age 80. <i>Behav Brain Res</i> , 284, 51-57. doi:10.1016/j.bbr.2015.01.045					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Laursen, A. S., Hansen, A. L., Wiinberg, N., Brage, S., Sandbaek, A., Lauritzen, T., . . . Johansen, N. B. (2015). Higher physical activity is associated with lower aortic stiffness but not with central blood pressure: the ADDITION-Pro Study. <i>Medicine (Baltimore)</i> , 94(5), e485. doi:10.1097/md.0000000000000485					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ayala, C., Fang, J., & Yuan, K. (2015). Prevalence of taking actions to control blood pressure among adults with self-reported hypertension in 18 states and the District of Columbia, 2009. <i>J Clin Hypertens (Greenwich)</i> , 17(3), 172-182. doi:10.1111/jch.12476					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: D'Ascenzi, F., Pelliccia, A., Natali, B. M., Cameli, M., Andrei, V., Incampo, E., . . . Mondillo, S. (2015). Increased left atrial size is associated with reduced atrial stiffness and preserved reservoir function in athlete's heart. <i>Int J Cardiovasc Imaging</i> , 31(4), 699-705. doi:10.1007/s10554-015-0600-7					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cebolla i Marti, A., Alvarez-Pitti, J. C., Guixeres Provinciale, J., Lison, J. F., & Banos Rivera, R. (2014). Alternative options for prescribing physical activity among obese children and adolescents: brisk walking supported by an exergaming platform. <i>Nutr Hosp</i> , 31(2), 841-848. doi:10.3305/nh.2015.31.2.7929					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Liu, H. B., Yuan, W. X., Qin, K. R., & Hou, J. (2015). Acute effect of cycling intervention on carotid arterial hemodynamics: basketball athletes versus sedentary controls. <i>Biomed Eng Online</i> , 14 Suppl 1, S17. doi:10.1186/1475-925x-14-s1-s17					
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Reference: Malmgren, A., Dencker, M., Stagmo, M., & Gudmundsson, P. (2015). Cardiac dimensions and function in female handball players. <i>J Sports Med Phys Fitness</i> , 55(4), 320-328.					
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Reference: Alavi, S. S., Makarem, J., Mehrdad, R., & Abbasi, M. (2015). Metabolic syndrome: a common problem among office workers. <i>Int J Occup Environ Med</i> , 6(1), 34-40.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Egbi, O. G., Rotifa, S., & Jumbo, J. (2015). Prevalence of hypertension and its correlates among employees of a tertiary hospital in Yenagoa, Nigeria. <i>Ann Afr Med</i> , 14(1), 8-17. doi:10.4103/1596-3519.148709					
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Reference:					

Ramirez-Marrero, F. A., Santana-Bagur, J. L., Joyner, M. J., Rodriguez-Zayas, J., & Frontera, W. (2014). Metabolic syndrome in relation to cardiorespiratory fitness, active and sedentary behavior in HIV+ Hispanics with and without lipodystrophy. <i>P R Health Sci J</i> , 33(4), 163-169.					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Altenburg, T. M., de Niet, M., Verloigne, M., De Bourdeaudhuij, I., Androustos, O., Manios, Y., . . . Chinapaw, M. J. (2015). Occurrence and duration of various operational definitions of sedentary bouts and cross-sectional associations with cardiometabolic health indicators: the ENERGY-project. <i>Prev Med</i> , 71, 101-106. doi:10.1016/j.ypmed.2014.12.015					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Phillips, S. A., Mahmoud, A. M., Brown, M. D., & Haus, J. M. (2015). Exercise interventions and peripheral arterial function: implications for cardio-metabolic disease. <i>Prog Cardiovasc Dis</i> , 57(5), 521-534. doi:10.1016/j.pcad.2014.12.005					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Young, D. R., Coleman, K. J., Ngor, E., Reynolds, K., Sidell, M., & Sallis, R. E. (2014). Associations between physical activity and cardiometabolic risk factors assessed in a Southern California health care system, 2010-2012. <i>Prev Chronic Dis</i> , 11, E219. doi:10.5888/pcd11.140196					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Madsen, C., Mogensen, P., Thomas, N., Christensen, D. L., Bygbjerg, I. C., Mohan, V., . . . Grunnet, L. G. (2015). Effects of an outdoor bicycle-based intervention in healthy rural Indian men with normal and low birth weight. <i>J Dev Orig Health Dis</i> , 6(1), 27-37. doi:10.1017/s2040174414000609					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Devi, S., Saxena, J., Rastogi, D., Goel, A., & Saha, S. (2014). Effect of short-term physical exercise on serum total testosterone levels in young adults. <i>Indian J Physiol Pharmacol</i> , 58(2), 178-181					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Aoike, D. T., Baria, F., Kamimura, M. A., Ammirati, A., de Mello, M. T., & Cuppari, L. (2015). Impact of home-based aerobic exercise on the physical capacity of overweight patients with chronic kidney disease. <i>Int Urol Nephrol</i> , 47(2), 359-367. doi:10.1007/s11255-014-0894-8					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hiemstra-van Mastrigt, S., Kamp, I., van Veen, S. A., Vink, P., & Bosch, T. (2015). The influence of active seating on car passengers' perceived comfort and activity levels. <i>Appl Ergon</i> , 47, 211-219. doi:10.1016/j.apergo.2014.10.004					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

Reference: de Moraes, A. C., Carvalho, H. B., Siani, A., Barba, G., Veidebaum, T., Tornaritis, M., . . . Moreno, L. A. (2015). Incidence of high blood pressure in children - effects of physical activity and sedentary behaviors: the IDEFICS study: High blood pressure, lifestyle and children. <i>Int J Cardiol</i> , 180, 165-170. doi:10.1016/j.ijcard.2014.11.175					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: MacEwen, B. T., MacDonald, D. J., & Burr, J. F. (2015). A systematic review of standing and treadmill desks in the workplace. <i>Prev Med</i> , 70, 50-58. doi:10.1016/j.ypmed.2014.11.011					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Mendham, A. E., Duffield, R., Marino, F., & Coutts, A. J. (2015). Differences in the acute inflammatory and glucose regulatory responses between small-sided games and cycling in sedentary, middle-aged men. <i>J Sci Med Sport</i> , 18(6), 714-719. doi:10.1016/j.jsams.2014.09.008					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cooper, A. J., Westgate, K., Brage, S., Prevost, A. T., Griffin, S. J., & Simmons, R. K. (2015). Sleep duration and cardiometabolic risk factors among individuals with type 2 diabetes. <i>Sleep Med</i> , 16(1), 119-125. doi:10.1016/j.sleep.2014.10.006					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Stathokostas, L., Dogra, S., & Paterson, D. H. (2015). The independent roles of cardiorespiratory fitness and sedentary time on chronic conditions and Body Mass Index in older adults. <i>J Sports Med Phys Fitness</i> , 55(10), 1200-1206.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cortes-Telles, A., Torre-Bouscoulet, L., Mejia-Alfaro, R., Silva-Ceron, M., Wilkie, S. S., & Guenette, J. A. (2015). Cardiorespiratory and sensory responses to exercise in well-controlled asthmatics. <i>J Asthma</i> , 52(6), 576-582. doi:10.3109/02770903.2014.988223					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Li, C. S., Liu, C. C., Tsai, M. K., Tai, Y. P., Wai, J. P., Tsao, C. K., & Wen, C. P. (2015). Motivating patients to exercise: translating high blood pressure into equivalent risk of inactivity. <i>J Hypertens</i> , 33(2), 287-293. doi:10.1097/hjh.0000000000000392					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Umbreen, S., Khan, N., & Khan, G. (2014). Association between carotid intima-media thickness and physical activity scores in middle aged Pakistani adults--a hospital based study. <i>J Ayub Med Coll Abbottabad</i> , 26(1), 26-28.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

Reference: Cardenas-Cardenas, L. M., Burguete-Garcia, A. I., Estrada-Velasco, B. I., Lopez-Islas, C., Peralta-Romero, J., Cruz, M., & Galvan-Portillo, M. (2015). Leisure-time physical activity and cardiometabolic risk among children and adolescents. <i>J Pediatr (Rio J)</i> , 91(2), 136-142. doi:10.1016/j.jpmed.2014.06.005					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Guimaraes, F. C., Amorim, P. R., Reis, F. F., Bonoto, R. T., Oliveira, W. C., Moura, T. A., . . . Lima, L. M. (2015). Physical activity and better medication compliance improve mini-mental state examination scores in the elderly. <i>Dement Geriatr Cogn Disord</i> , 39(1-2), 25-31. doi:10.1159/000366413					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Holme, I., & Tonstad, S. (2014). Increased predictive ability of BMI but not other risk factors with time in men: 39-year follow-up of total mortality in the Oslo Study. <i>Obes Facts</i> , 7(5), 311-321. doi:10.1159/000368567					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Knight, E., Stuckey, M. I., & Petrella, R. J. (2014). Prescribing physical activity through primary care: does activity intensity matter? <i>Phys Sportsmed</i> , 42(3), 78-89. doi:10.3810/psm.2014.09.2079					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Brugniaux, J. V., Marley, C. J., Hodson, D. A., New, K. J., & Bailey, D. M. (2014). Acute exercise stress reveals cerebrovascular benefits associated with moderate gains in cardiorespiratory fitness. <i>J Cereb Blood Flow Metab</i> , 34(12), 1873-1876. doi:10.1038/jcbfm.2014.142					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: McMinn, D., & Allan, J. L. (2014). The SNAPSHOT study protocol: SNACKing, Physical activity, Self-regulation, and Heart rate Over Time. <i>BMC Public Health</i> , 14, 1006. doi:10.1186/1471-2458-14-1006					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Meyer, U., Schindler, C., Bloesch, T., Schmocker, E., Zahner, L., Puder, J. J., & Kriemler, S. (2014). Combined impact of negative lifestyle factors on cardiovascular risk in children: a randomized prospective study. <i>J Adolesc Health</i> , 55(6), 790-795. doi:10.1016/j.jadohealth.2014.07.007					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lew, W. Y. (2014). Exercise: commitment to a young heart. <i>J Am Coll Cardiol</i> , 64(12), 1267-1269. doi:10.1016/j.jacc.2014.04.082					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

Reference: Bhella, P. S., Hastings, J. L., Fujimoto, N., Shibata, S., Carrick-Ranson, G., Palmer, M. D., . . . Levine, B. D. (2014). Impact of lifelong exercise "dose" on left ventricular compliance and distensibility. <i>J Am Coll Cardiol</i> , <i>64</i> (12), 1257-1266. doi:10.1016/j.jacc.2014.03.062					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Melin, E. O., Thunander, M., Landin-Olsson, M., Hillman, M., & Thulesius, H. O. (2014). Depression, smoking, physical inactivity and season independently associated with midnight salivary cortisol in type 1 diabetes. <i>BMC Endocr Disord</i> , <i>14</i> , 75. doi:10.1186/1472-6823-14-75					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Oudegeest-Sander, M. H., Thijssen, D. H., Smits, P., van Dijk, A. P., Olde Rikkert, M. G., & Hopman, M. T. (2015). Association of Fitness Level With Cardiovascular Risk and Vascular Function in Older Nonexercising Individuals. <i>J Aging Phys Act</i> , <i>23</i> (3), 417-424. doi:10.1123/japa.2013-0139					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Moker, E. A., Bateman, L. A., Kraus, W. E., & Pescatello, L. S. (2014). The relationship between the blood pressure responses to exercise following training and detraining periods. <i>PLoS One</i> , <i>9</i> (9), e105755. doi:10.1371/journal.pone.0105755					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gradidge, P. J., Crowther, N. J., Chirwa, E. D., Norris, S. A., & Micklesfield, L. K. (2014). Patterns, levels and correlates of self-reported physical activity in urban black Soweto women. <i>BMC Public Health</i> , <i>14</i> , 934. doi:10.1186/1471-2458-14-934					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Chinapaw, M. J., Altenburg, T. M., van Eijsden, M., Gemke, R. J., & Vrijotte, T. G. (2014). Screen time and cardiometabolic function in Dutch 5-6 year olds: cross-sectional analysis of the ABCD-study. <i>BMC Public Health</i> , <i>14</i> , 933. doi:10.1186/1471-2458-14-933					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hickner, R. C. (2014). Take flight to reduce cardiovascular disease risk in youth. <i>Exerc Sport Sci Rev</i> , <i>42</i> (4), 143-144. doi:10.1249/jes.0000000000000028					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ali, M., Yusuf, H. I., Stahmer, J., & Rahlenbeck, S. I. (2015). Cardiovascular risk factors and physical activity among university students in Somaliland. <i>J Community Health</i> , <i>40</i> (2), 326-330. doi:10.1007/s10900-014-9938-3					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

Reference: Doulougou, B., Kouanda, S., Rossier, C., Soura, A., & Zunzunegui, M. V. (2014). Differences in hypertension between informal and formal areas of Ouagadougou, a sub-Saharan African city. <i>BMC Public Health</i> , 14, 893. doi:10.1186/1471-2458-14-893					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gojanovic, B., Feihl, F., Gremion, G., & Waeber, B. (2014). Physiological response to whole-body vibration in athletes and sedentary subjects. <i>Physiol Res</i> , 63(6), 779-792.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: McCartney, D. M., Byrne, D. G., & Turner, M. J. (2015). Dietary contributors to hypertension in adults reviewed. <i>Ir J Med Sci</i> , 184(1), 81-90. doi:10.1007/s11845-014-1181-5					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: McAnulty, L. S., Collier, S. R., Landram, M. J., Whittaker, D. S., Isaacs, S. E., Klemka, J. M., . . . McAnulty, S. R. (2014). Six weeks daily ingestion of whole blueberry powder increases natural killer cell counts and reduces arterial stiffness in sedentary males and females. <i>Nutr Res</i> , 34(7), 577-584. doi:10.1016/j.nutres.2014.07.002					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Thosar, S. S., Bielko, S. L., Mather, K. J., Johnston, J. D., & Wallace, J. P. (2015). Effect of prolonged sitting and breaks in sitting time on endothelial function. <i>Med Sci Sports Exerc</i> , 47(4), 843-849. doi:10.1249/mss.0000000000000479					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Zeigler, Z. S., Swan, P. D., Bhammar, D. M., & Gaesser, G. A. (2015). Walking Workstation Use Reduces Ambulatory Blood Pressure in Adults With Prehypertension. <i>J Phys Act Health</i> , 12 Suppl 1, S119-127. doi:10.1123/jpah.2013-0487					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kim, Y. S., Song, B. K., Oh, J. S., & Woo, S. S. (2014). Aerobic exercise improves gastrointestinal motility in psychiatric inpatients. <i>World J Gastroenterol</i> , 20(30), 10577-10584. doi:10.3748/wjg.v20.i30.10577					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Farah, B. Q., Christofaro, D. G., Balagopal, P. B., Cavalcante, B. R., de Barros, M. V., & Ritti-Dias, R. M. (2015). Association between resting heart rate and cardiovascular risk factors in adolescents. <i>Eur J Pediatr</i> , 174(12), 1621-1628. doi:10.1007/s00431-015-2580-y					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no	Sedentarism is not measured objectively	No longitudinal study with a	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	definition of sedentarism		follow-up of min. 1 year		
Reference: Klonizakis, M., Alkhatib, A., & Middleton, G. (2014). Long-term effects of an exercise and Mediterranean diet intervention in the vascular function of an older, healthy population. <i>Microvasc Res</i> , 95, 103-107. doi:10.1016/j.mvr.2014.07.015					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Rheaume, C., Arsenault, B. J., Despres, J. P., Faha, Boekholdt, S. M., Wareham, N. J., . . . Chir, M. (2014). Impact of abdominal obesity and systemic hypertension on risk of coronary heart disease in men and women: the EPIC-Norfolk Population Study. <i>J Hypertens</i> , 32(11), 2224-2230; discussion 2230. doi:10.1097/hjh.0000000000000307					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Brito, L. C., Queiroz, A. C., & Forjaz, C. L. (2014). Influence of population and exercise protocol characteristics on hemodynamic determinants of post-aerobic exercise hypotension. <i>Braz J Med Biol Res</i> , 47(8), 626-636.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Roemmich, J. N., Lambiase, M. J., Balantekin, K. N., Feda, D. M., & Dorn, J. (2014). Stress, behavior, and biology: risk factors for cardiovascular diseases in youth. <i>Exerc Sport Sci Rev</i> , 42(4), 145-152. doi:10.1249/jes.0000000000000027					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Nusdwinringtyas, N., Widjajalaksmi, Yunus, F., & Alwi, I. (2014). Reference equation for prediction of a total distance during six-minute walk test using Indonesian anthropometrics. <i>Acta Med Indones</i> , 46(2), 90-96.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Mendham, A. E., Duffield, R., Marino, F., & Coutts, A. J. (2014). Small-sided games training reduces CRP, IL-6 and leptin in sedentary, middle-aged men. <i>Eur J Appl Physiol</i> , 114(11), 2289-2297. doi:10.1007/s00421-014-2953-3					
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Reference: Sohn, M. W., Manheim, L. M., Chang, R. W., Greenland, P., Hochberg, M. C., Nevitt, M. C., . . . Dunlop, D. D. (2014). Sedentary behavior and blood pressure control among osteoarthritis initiative participants. <i>Osteoarthritis Cartilage</i> , 22(9), 1234-1240. doi:10.1016/j.joca.2014.07.007					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Khader, A., Farajallah, L., Shahin, Y., Hababeh, M., Abu-Zayed, I., Zachariah, R., . . . Seit, A. (2014). Hypertension and treatment outcomes in Palestine refugees in United Nations Relief and Works Agency primary health care clinics in Jordan. <i>Trop Med Int Health</i> , 19(10), 1276-1283. doi:10.1111/tmi.12356					
Reason for exclusion :					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Shuval, K., Finley, C. E., Barlow, C. E., Gabriel, K. P., Leonard, D., & Kohl, H. W., 3rd. (2014). Sedentary behavior, cardiorespiratory fitness, physical activity, and cardiometabolic risk in men: the cooper center longitudinal study. <i>Mayo Clin Proc</i> , 89(8), 1052-1062. doi:10.1016/j.mayocp.2014.04.026					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ruscello, B., D'Ottavio, S., Padua, E., Tonelli, C., & Pantanella, L. (2014). The influence of music on exercise in a group of sedentary elderly women: an important tool to help the elderly to stay active. <i>J Sports Med Phys Fitness</i> , 54(4), 536-544.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Altenburg, T. M., Lakerveld, J., Bot, S. D., Nijpels, G., & Chinapaw, M. J. (2014). The prospective relationship between sedentary time and cardiometabolic health in adults at increased cardiometabolic risk - the Hoorn Prevention Study. <i>Int J Behav Nutr Phys Act</i> , 11, 90. doi:10.1186/s12966-014-0090-3					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Guhanarayan, G., Jablonski, J., & Witkowski, S. (2014). Circulating angiogenic cell population responses to 10 days of reduced physical activity. <i>J Appl Physiol</i> (1985), 117(5), 500-506. doi:10.1152/jappphysiol.00087.2014					
Reason for exclusion :					
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Reference: Kanburoglu, M. K., Ozdemir, F. M., Ozkan, S., & Tunaoglu, F. S. (2014). Reference values of the 6-minute walk test in healthy Turkish children and adolescents between 11 and 18 years of age. <i>Respir Care</i> , 59(9), 1369-1375. doi:10.4187/respcare.02891					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lizamore, C. A., Stoner, L., Lucas, S. J., Lucero, A., & Hamlin, M. J. (2015). Does arterial health affect VO2peak and muscle oxygenation in a sedentary cohort? <i>Med Sci Sports Exerc</i> , 47(2), 272-279. doi:10.1249/mss.0000000000000414					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Glynn, L. G., Hayes, P. S., Casey, M., Glynn, F., Alvarez-Iglesias, A., Newell, J., . . . Murphy, A. W. (2014). Effectiveness of a smartphone application to promote physical activity in primary care: the SMART MOVE randomised controlled trial. <i>Br J Gen Pract</i> , 64(624), e384-391. doi:10.3399/bjgp14X680461					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Diaw, M., Diop, S., Soubaiga, F. Y., Seck, M., Faye, B. F., Niang, M. N., . . . Connes, P. (2015). Blood viscosity is lower in trained than in sedentary sickle cell trait carriers. <i>Clin Hemorheol Microcirc</i> , 61(1), 23-29. doi:10.3233/ch-141852					

Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Saidj, M., Jorgensen, T., Jacobsen, R. K., Linneberg, A., & Aadahl, M. (2014). Differential cross-sectional associations of work- and leisure-time sitting, with cardiorespiratory and muscular fitness among working adults. <i>Scand J Work Environ Health</i> , 40(5), 531-538. doi:10.5271/sjweh.3443					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Walker, A. E., Kaplon, R. E., Pierce, G. L., Nowlan, M. J., & Seals, D. R. (2014). Prevention of age-related endothelial dysfunction by habitual aerobic exercise in healthy humans: possible role of nuclear factor kappaB. <i>Clin Sci (Lond)</i> , 127(11), 645-654. doi:10.1042/cs20140030					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Salawi, H. A., Ambler, K. A., Padwal, R. S., Mager, D. R., Chan, C. B., & Ball, G. D. (2014). Characterizing severe obesity in children and youth referred for weight management. <i>BMC Pediatr</i> , 14, 154. doi:10.1186/1471-2431-14-154					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Boodai, S. A., McColl, J. H., & Reilly, J. J. (2014). National Adolescent Treatment Trial for Obesity in Kuwait (NATTO): project design and results of a randomised controlled trial of a good practice approach to treatment of adolescent obesity in Kuwait. <i>Trials</i> , 15, 234. doi:10.1186/1745-6215-15-234					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Crichton, G. E., & Alkerwi, A. (2014). Association of sedentary behavior time with ideal cardiovascular health: the ORISCAV-LUX study. <i>PLoS One</i> , 9(6), e99829. doi:10.1371/journal.pone.0099829					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Araneta, M. R., & Tanori, D. (2015). Benefits of Zumba Fitness(R) among sedentary adults with components of the metabolic syndrome: a pilot study. <i>J Sports Med Phys Fitness</i> , 55(10), 1227-1233.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Matsuo, T., Saotome, K., Seino, S., Eto, M., Shimojo, N., Matsushita, A., . . . Mukai, C. (2014). Low-volume, high-intensity, aerobic interval exercise for sedentary adults: VO(2)max, cardiac mass, and heart rate recovery. <i>Eur J Appl Physiol</i> , 114(9), 1963-1972. doi:10.1007/s00421-014-2917-7					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Kirsten, V. R., & Wagner, M. B. (2014). Salt taste sensitivity thresholds in adolescents: are there any relationships with body composition and blood pressure levels? <i>Appetite</i> , 81, 89-92. doi:10.1016/j.appet.2014.06.001					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Melo, X., Santa-Clara, H., Pimenta, N. M., Martins, S. S., Minderico, C. S., Fernhall, B., & Sardinha, L. B. (2015). Intima-Media Thickness in 11- to 13-Year-Old Children: Variation Attributed to Sedentary Behavior, Physical Activity, Cardiorespiratory Fitness, and Waist Circumference. <i>J Phys Act Health</i> , 12(5), 610-617. doi:10.1123/jpah.2013-0501					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Golubic, R., Martin, K. R., Ekelund, U., Hardy, R., Kuh, D., Wareham, N., . . . Brage, S. (2014). Levels of physical activity among a nationally representative sample of people in early old age: results of objective and self-reported assessments. <i>Int J Behav Nutr Phys Act</i> , 11, 58. doi:10.1186/1479-5868-11-58					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Via-Sosa, M. A., Toro, C., Trave, P., & March, M. A. (2014). Screening pre-morbid metabolic syndrome in community pharmacies: a cross-sectional descriptive study. <i>BMC Public Health</i> , 14, 487. doi:10.1186/1471-2458-14-487					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hellgren, M. I., Daka, B., Jansson, P. A., Lindblad, U., & Larsson, C. A. (2015). Insulin resistance predicts early cardiovascular morbidity in men without diabetes mellitus, with effect modification by physical activity. <i>Eur J Prev Cardiol</i> , 22(7), 940-949. doi:10.1177/2047487314537917					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Larsen, R. N., Kingwell, B. A., Sethi, P., Cerin, E., Owen, N., & Dunstan, D. W. (2014). Breaking up prolonged sitting reduces resting blood pressure in overweight/obese adults. <i>Nutr Metab Cardiovasc Dis</i> , 24(9), 976-982. doi:10.1016/j.numecd.2014.04.011					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ryan, J. M., Crowley, V. E., Hensey, O., Broderick, J. M., McGahey, A., & Gormley, J. (2014). Habitual physical activity and cardiometabolic risk factors in adults with cerebral palsy. <i>Res Dev Disabil</i> , 35(9), 1995-2002. doi:10.1016/j.ridd.2014.03.051					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Jagers, J. R., Prasad, V. K., Dudgeon, W. D., Blair, S. N., Sui, X., Burgess, S., & Hand, G. A. (2014). Associations between physical activity and sedentary time on components of metabolic syndrome among adults with HIV. <i>AIDS Care</i> , 26(11), 1387-1392. doi:10.1080/09540121.2014.920075					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

Reference: Kinsey, A. W., Eddy, W. R., Madzima, T. A., Panton, L. B., Arciero, P. J., Kim, J. S., & Ormsbee, M. J. (2014). Influence of night-time protein and carbohydrate intake on appetite and cardiometabolic risk in sedentary overweight and obese women. <i>Br J Nutr</i> , 112(3), 320-327. doi:10.1017/s0007114514001068					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Mota, J., Silva-Santos, S., Barros, M., Farias Junior, J. C., & Vale, S. (2014). Influence of different behavioural factors and obesity status on systolic blood pressure among pre-school children. <i>Ann Hum Biol</i> , 41(6), 506-510. doi:10.3109/03014460.2014.909884					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Faselis, C., Doulmas, M., Pittaras, A., Narayan, P., Myers, J., Tsimploulis, A., & Kokkinos, P. (2014). Exercise capacity and all-cause mortality in male veterans with hypertension aged ≥70 years. <i>Hypertension</i> , 64(1), 30-35. doi:10.1161/hypertensionaha.114.03510					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cliff, D. P., Jones, R. A., Burrows, T. L., Morgan, P. J., Collins, C. E., Baur, L. A., & Okely, A. D. (2014). Volumes and bouts of sedentary behavior and physical activity: associations with cardiometabolic health in obese children. <i>Obesity (Silver Spring)</i> , 22(5), E112-118. doi:10.1002/oby.20698					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ibrahim, N. K., Mahnashi, M., Al-Dhaheeri, A., Al-Zahrani, B., Al-Wadie, E., Aljabri, M., . . . Bashawri, J. (2014). Risk factors of coronary heart disease among medical students in King Abdulaziz University, Jeddah, Saudi Arabia. <i>BMC Public Health</i> , 14, 411. doi:10.1186/1471-2458-14-411					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Vaisto, J., Eloranta, A. M., Viitasalo, A., Tompuri, T., Lintu, N., Karjalainen, P., . . . Lakka, T. A. (2014). Physical activity and sedentary behaviour in relation to cardiometabolic risk in children: cross-sectional findings from the Physical Activity and Nutrition in Children (PANIC) Study. <i>Int J Behav Nutr Phys Act</i> , 11, 55. doi:10.1186/1479-5868-11-55					
Reason for exclusion :					
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Reference: Brennan, A. M., Lam, M., Stotz, P., Hudson, R., & Ross, R. (2014). Exercise-induced improvement in insulin sensitivity is not mediated by change in cardiorespiratory fitness. <i>Diabetes Care</i> , 37(5), e95-97. doi:10.2337/dc13-1791					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hsu, T. Y., Weng, Y. M., Chiu, Y. H., Li, W. C., Chen, P. Y., Wang, S. H., . . . Chen, J. C. (2015). Rate of ascent and acute mountain sickness at high altitude. <i>Clin J Sport Med</i> , 25(2), 95-104. doi:10.1097/jsm.0000000000000098					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no	Sedentarism is not measured objectively	No longitudinal study with a	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	definition of sedentarism		follow-up of min. 1 year		
Reference: Gomez-Marcos, M. A., Recio-Rodriguez, J. I., Patino-Alonso, M. C., Agudo-Conde, C., Lasasosa-Medina, L., Rodriguez-Sanchez, E., . . . Garcia-Ortiz, L. (2014). Relationship between objectively measured physical activity and vascular structure and function in adults. <i>Atherosclerosis</i> , 234(2), 366-372. doi:10.1016/j.atherosclerosis.2014.02.028					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wang, J., Zhang, L., Wang, F., Liu, L., & Wang, H. (2014). Prevalence, awareness, treatment, and control of hypertension in China: results from a national survey. <i>Am J Hypertens</i> , 27(11), 1355-1361. doi:10.1093/ajh/hpu053					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Fujie, S., Sato, K., Miyamoto-Mikami, E., Hasegawa, N., Fujita, S., Sanada, K., . . . Iemitsu, M. (2014). Reduction of arterial stiffness by exercise training is associated with increasing plasma apelin level in middle-aged and older adults. <i>PLoS One</i> , 9(4), e93545. doi:10.1371/journal.pone.0093545					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Chase, J. M., Lockhart, C. K., Ashe, M. C., & Madden, K. M. (2014). Accelerometer-based measures of sedentary behavior and cardio-metabolic risk in active older adults. <i>Clin Invest Med</i> , 37(2), E108-116.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Zlatař, Z. Z., Wierenga, C. E., Bangen, K. J., Liu, T. T., & Jak, A. J. (2014). Increased hippocampal blood flow in sedentary older adults at genetic risk for Alzheimer's disease. <i>J Alzheimers Dis</i> , 41(3), 809-817. doi:10.3233/jad-132252					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Elmer, S. J., & Martin, J. C. (2014). A cycling workstation to facilitate physical activity in office settings. <i>Appl Ergon</i> , 45(4), 1240-1246. doi:10.1016/j.apergo.2014.03.001					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Nosova, E. V., Yen, P., Chong, K. C., Alley, H. F., Stock, E. O., Quinn, A., . . . Grenon, S. M. (2014). Short-term physical inactivity impairs vascular function. <i>J Surg Res</i> , 190(2), 672-682. doi:10.1016/j.jss.2014.02.001					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Huynh, Q. L., Blizzard, C. L., Sharman, J. E., Magnussen, C. G., Dwyer, T., & Venn, A. J. (2014). The cross-sectional association of sitting time with carotid artery stiffness in young adults. <i>BMJ Open</i> , 4(3), e004384. doi:10.1136/bmjopen-2013-004384					
<i>Reason for exclusion :</i>					
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Reference: Crichton, G. E., Elias, M. F., Davey, A., & Alkerwi, A. (2014). Cardiovascular health and cognitive function: the Maine-Syracuse Longitudinal Study. <i>PLoS One</i> , 9(3), e89317. doi:10.1371/journal.pone.0089317					
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Reference: Ghosh, A., & Bhagat, M. (2014). Association of television viewing time with central obesity status in rural Asian Indian women: Santiniketan women study. <i>Am J Hum Biol</i> , 26(3), 427-430. doi:10.1002/ajhb.22536					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Alosco, M. L., Spitznagel, M. B., Cohen, R., Raz, N., Sweet, L. H., Josephson, R., . . . Gunstad, J. (2014). Decreased physical activity predicts cognitive dysfunction and reduced cerebral blood flow in heart failure. <i>J Neurol Sci</i> , 339(1-2), 169-175. doi:10.1016/j.jns.2014.02.008					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Suboc, T. B., Strath, S. J., Dharmashankar, K., Coulliard, A., Miller, N., Wang, J., . . . Widlansky, M. E. (2014). Relative importance of step count, intensity, and duration on physical activity's impact on vascular structure and function in previously sedentary older adults. <i>J Am Heart Assoc</i> , 3(1), e000702. doi:10.1161/jaha.113.000702					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Collings, P. J., Wijndaele, K., Corder, K., Westgate, K., Ridgway, C. L., Dunn, V., . . . Brage, S. (2014). Levels and patterns of objectively-measured physical activity volume and intensity distribution in UK adolescents: the ROOTS study. <i>Int J Behav Nutr Phys Act</i> , 11, 23. doi:10.1186/1479-5868-11-23					
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Reference: Kearney, T. M., Murphy, M. H., Davison, G. W., O'Kane, M. J., & Gallagher, A. M. (2014). Accumulated brisk walking reduces arterial stiffness in overweight adults: evidence from a randomized control trial. <i>J Am Soc Hypertens</i> , 8(2), 117-126. doi:10.1016/j.jash.2013.10.001					
<i>Reason for exclusion :</i>					
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Reference: Power, C., Pinto Pereira, S. M., Law, C., & Ki, M. (2014). Obesity and risk factors for cardiovascular disease and type 2 diabetes: investigating the role of physical activity and sedentary behaviour in mid-life in the 1958 British cohort. <i>Atherosclerosis</i> , 233(2), 363-369. doi:10.1016/j.atherosclerosis.2014.01.032					
<i>Reason for exclusion :</i>					
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Reference: Tudor-Locke, C., Swift, D. L., Schuna, J. M., Jr., Dragg, A. T., Davis, A. B., Martin, C. K., . . . Church, T. S. (2014). WalkMore: a randomized controlled trial of pedometer-based interventions differing on intensity messages. <i>BMC Public Health</i> , 14, 168. doi:10.1186/1471-2458-14-168					
<i>Reason for exclusion :</i>					
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	study/no definition of sedentarism		follow-up of min. 1 year		
Reference: España-Romero, V., Golubic, R., Martin, K. R., Hardy, R., Ekelund, U., Kuh, D., . . . Brage, S. (2014). Comparison of the EPIC Physical Activity Questionnaire with combined heart rate and movement sensing in a nationally representative sample of older British adults. <i>PLoS One</i> , 9(2), e87085. doi:10.1371/journal.pone.0087085					
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Reference: Wijndaele, K., I, D. E. B., Godino, J. G., Lynch, B. M., Griffin, S. J., Westgate, K., & Brage, S. (2014). Reliability and validity of a domain-specific last 7-d sedentary time questionnaire. <i>Med Sci Sports Exerc</i> , 46(6), 1248-1260. doi:10.1249/mss.0000000000000214					
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Reference: Carrick-Ranson, G., Hastings, J. L., Bhella, P. S., Fujimoto, N., Shibata, S., Palmer, M. D., . . . Levine, B. D. (2014). The effect of lifelong exercise dose on cardiovascular function during exercise. <i>J Appl Physiol</i> (1985), 116(7), 736-745. doi:10.1152/jappphysiol.00342.2013					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Maher, C., Olds, T., Mire, E., & Katzmarzyk, P. T. (2014). Reconsidering the sedentary behaviour paradigm. <i>PLoS One</i> , 9(1), e86403. doi:10.1371/journal.pone.0086403					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Katulanda, P., Ranasinghe, P., Jayawardena, R., Constantine, G. R., Rezvi Sheriff, M. H., & Matthews, D. R. (2014). The prevalence, predictors and associations of hypertension in Sri Lanka: a cross-sectional population based national survey. <i>Clin Exp Hypertens</i> , 36(7), 484-491. doi:10.3109/10641963.2013.863321					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Oudegeest-Sander, M. H., Olde Rikkert, M. G., Smits, P., Thijssen, D. H., van Dijk, A. P., Levine, B. D., & Hopman, M. T. (2013). The effect of an advanced glycation end-product crosslink breaker and exercise training on vascular function in older individuals: a randomized factorial design trial. <i>Exp Gerontol</i> , 48(12), 1509-1517. doi:10.1016/j.exger.2013.10.009					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Barnes, J. N., Nualnim, N., Dhindsa, M., Renzi, C. P., & Tanaka, H. (2014). Macro- and microvascular function in habitually exercising systemic lupus erythematosus patients. <i>Scand J Rheumatol</i> , 43(3), 209-216. doi:10.3109/03009742.2013.846408					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Peterson, M. D., Al Snih, S., Stoddard, J., McClain, J., & Lee, I. M. (2014). Adiposity and insufficient MVPA predict cardiometabolic abnormalities in adults. <i>Med Sci Sports Exerc</i> , 46(6), 1133-1139. doi:10.1249/mss.0000000000000212					

<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Loprinzi, P. D., & Kohli, M. (2014). Health characteristics and sedentary behavior impact on prostate-specific antigen levels in a national U.S. sample. <i>J Phys Act Health</i> , 11(8), 1587-1592. doi:10.1123/jpah.2013-0073					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Marqueze, E. C., Ulhoa, M. A., & Moreno, C. R. (2013). Effects of irregular-shift work and physical activity on cardiovascular risk factors in truck drivers. <i>Rev Saude Publica</i> , 47(3), 497-505.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Adair, L. S., Gordon-Larsen, P., Du, S. F., Zhang, B., & Popkin, B. M. (2014). The emergence of cardiometabolic disease risk in Chinese children and adults: consequences of changes in diet, physical activity and obesity. <i>Obes Rev</i> , 15 Suppl 1, 49-59. doi:10.1111/obr.12123					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Reichkender, M. H., Rosenkilde, M., Auerbach, P. L., Agerschou, J., Nielsen, M. B., Kjaer, A., . . . Stallknecht, B. (2014). Only minor additional metabolic health benefits of high as opposed to moderate dose physical exercise in young, moderately overweight men. <i>Obesity (Silver Spring)</i> , 22(5), 1220-1232. doi:10.1002/oby.20226					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lamboglia, C. M., da Silva, V. T., de Vasconcelos Filho, J. E., Pinheiro, M. H., Munguba, M. C., Silva Junior, F. V., . . . da Silva, C. A. (2013). Exergaming as a strategic tool in the fight against childhood obesity: a systematic review. <i>J Obes</i> , 2013, 438364. doi:10.1155/2013/438364					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Buman, M. P., Winkler, E. A., Kurka, J. M., Hekler, E. B., Baldwin, C. M., Owen, N., . . . Gardiner, P. A. (2014). Reallocating time to sleep, sedentary behaviors, or active behaviors: associations with cardiovascular disease risk biomarkers, NHANES 2005-2006. <i>Am J Epidemiol</i> , 179(3), 323-334. doi:10.1093/aje/kwt292					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Figuroa, A., Wong, A., Kinsey, A., Kalfon, R., Eddy, W., & Ormsbee, M. J. (2014). Effects of milk proteins and combined exercise training on aortic hemodynamics and arterial stiffness in young obese women with high blood pressure. <i>Am J Hypertens</i> , 27(3), 338-344. doi:10.1093/ajh/hpt224					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Swift, D. L., Weltman, J. Y., Patrie, J. T., Saliba, S. A., Gaesser, G. A., Barrett, E. J., & Weltman, A. (2014). Predictors of improvement in endothelial function after exercise training in a diverse sample of postmenopausal women. <i>J Womens Health (Larchmt)</i> , 23(3), 260-266. doi:10.1089/jwh.2013.4420					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Bandyopadhyay, A. (2013). Prediction of maximum oxygen uptake by using the heart rate ratio method in Indian university students. <i>J Hum Ergol (Tokyo)</i> , 42(1-2), 55-63.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wang, J. S., Lee, M. Y., Lien, H. Y., & Weng, T. P. (2014). Hypoxic exercise training improves cardiac/muscular hemodynamics and is associated with modulated circulating progenitor cells in sedentary men. <i>Int J Cardiol</i> , 170(3), 315-323. doi:10.1016/j.ijcard.2013.11.005					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Pagonas, N., Dimeo, F., Bauer, F., Seibert, F., Kiziler, F., Zidek, W., & Westhoff, T. H. (2014). The impact of aerobic exercise on blood pressure variability. <i>J Hum Hypertens</i> , 28(6), 367-371. doi:10.1038/jhh.2013.121					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Parker, L., McGuckin, T. A., & Leicht, A. S. (2014). Influence of exercise intensity on systemic oxidative stress and antioxidant capacity. <i>Clin Physiol Funct Imaging</i> , 34(5), 377-383. doi:10.1111/cpf.12108					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Horne, D., Kehler, D. S., Kaoukis, G., Hiebert, B., Garcia, E., Chapman, S., . . . Arora, R. C. (2013). Impact of physical activity on depression after cardiac surgery. <i>Can J Cardiol</i> , 29(12), 1649-1656. doi:10.1016/j.cjca.2013.09.015					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Paim, L. R., Schreiber, R., Matos-Souza, J. R., Silva, A. A., Campos, L. F., Azevedo, E. R., . . . Nadruz, W., Jr. (2013). Oxidized low-density lipoprotein, matrix-metalloproteinase-8 and carotid atherosclerosis in spinal cord injured subjects. <i>Atherosclerosis</i> , 231(2), 341-345. doi:10.1016/j.atherosclerosis.2013.10.005					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Tarumi, T., Gonzales, M. M., Fallow, B., Nualnim, N., Pyron, M., Tanaka, H., & Haley, A. P. (2013). Central artery stiffness, neuropsychological function, and cerebral perfusion in sedentary and endurance-trained middle-aged adults. <i>J Hypertens</i> , 31(12), 2400-2409. doi:10.1097/HJH.0b013e328364decc					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Izzard, A. S. (2013). Aortic stiffening, cerebral resistance vessel function and structure, and cerebral perfusion. <i>J Hypertens</i> , 31(12), 2337-2338. doi:10.1097/hjh.000000000000004					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Chiolero, A., Paradis, G., & Kaufman, J. S. (2014). Assessing the possible direct effect of birth weight on childhood blood pressure: a sensitivity analysis. <i>Am J Epidemiol</i> , 179(1), 4-11. doi:10.1093/aje/kwt228					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Andrade, L. B., Silva, D. A., Salgado, T. L., Figueroa, J. N., Lucena-Silva, N., & Britto, M. C. (2014). Comparison of six-minute walk test in children with moderate/severe asthma with reference values for healthy children. <i>J Pediatr (Rio J)</i> , 90(3), 250-257. doi:10.1016/j.jpmed.2013.08.006					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Millar, P. J., McGowan, C. L., Cornelissen, V. A., Araujo, C. G., & Swaine, I. L. (2014). Evidence for the role of isometric exercise training in reducing blood pressure: potential mechanisms and future directions. <i>Sports Med</i> , 44(3), 345-356. doi:10.1007/s40279-013-0118-x					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Intarakamhang, P., & Wangjongmeechaikul, P. (2013). The assessment of dyspnea during the vigorous intensity exercise by three Dyspnea Rating Scales in inactive medical personnel. <i>Glob J Health Sci</i> , 5(6), 19-29. doi:10.5539/gjhs.v5n6p19					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Park, S. K., & Larson, J. L. (2014). The relationship between physical activity and metabolic syndrome in people with chronic obstructive pulmonary disease. <i>J Cardiovasc Nurs</i> , 29(6), 499-507. doi:10.1097/jcn.0000000000000096					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Satin, J. R., Linden, W., & Millman, R. D. (2014). Yoga and psychophysiological determinants of cardiovascular health: comparing yoga practitioners, runners, and sedentary individuals. <i>Ann Behav Med</i> , 47(2), 231-241. doi:10.1007/s12160-013-9542-2					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Colombo, C. M., de Macedo, R. M., Fernandes-Silva, M. M., Caporal, A. M., Stinghen, A. E., Costantini, C. R., . . . Faria-Neto, J. R. (2013). Short-term effects of moderate intensity physical activity in patients with metabolic syndrome. <i>Einstein (Sao Paulo)</i> , 11(3), 324-330.					
Reason for exclusion :					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Eberhard, J., Stiesch, M., Kerling, A., Bara, C., Eulert, C., Hilfiker-Kleiner, D., . . . Tegtbur, U. (2014). Moderate and severe periodontitis are independent risk factors associated with low cardiorespiratory fitness in sedentary non-smoking men aged between 45 and 65 years. <i>J Clin Periodontol</i> , 41(1), 31-37. doi:10.1111/jcpe.12183					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Petry, N. M., Andrade, L. F., Barry, D., & Byrne, S. (2013). A randomized study of reinforcing ambulatory exercise in older adults. <i>Psychol Aging</i> , 28(4), 1164-1173. doi:10.1037/a0032563					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: G, D. E. R., Matos-Souza, J. R., Costa, E. S. A. D., Campos, L. F., Santos, L. G., Azevedo, E. R., . . . Nadruz, W., Jr. (2014). Physical activity and improved diastolic function in spinal cord-injured subjects. <i>Med Sci Sports Exerc</i> , 46(5), 887-892. doi:10.1249/mss.0000000000000187					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Bourke, L., Gilbert, S., Hooper, R., Steed, L. A., Joshi, M., Catto, J. W., . . . Rosario, D. J. (2014). Lifestyle changes for improving disease-specific quality of life in sedentary men on long-term androgen-deprivation therapy for advanced prostate cancer: a randomised controlled trial. <i>Eur Urol</i> , 65(5), 865-872. doi:10.1016/j.eururo.2013.09.040					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Aravindalochanan, V., Kumpatla, S., Rengarajan, M., Rajan, R., & Viswanathan, V. (2014). Risk of diabetes in subjects with sedentary profession and the synergistic effect of positive family history of diabetes. <i>Diabetes Technol Ther</i> , 16(1), 26-32. doi:10.1089/dia.2013.0140					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Camhi, S. M., Waring, M. E., Sisson, S. B., Hayman, L. L., & Must, A. (2013). Physical activity and screen time in metabolically healthy obese phenotypes in adolescents and adults. <i>J Obes</i> , 2013, 984613. doi:10.1155/2013/984613					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: van de Laar, R. J., Stehouwer, C. D., Prins, M. H., van Mechelen, W., Twisk, J. W., & Ferreira, I. (2014). Self-reported time spent watching television is associated with arterial stiffness in young adults: the Amsterdam Growth and Health Longitudinal Study. <i>Br J Sports Med</i> , 48(3), 256-264. doi:10.1136/bjsports-2013-092555					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hinderliter, A. L., Sherwood, A., Craighead, L. W., Lin, P. H., Watkins, L., Babyak, M. A., & Blumenthal, J. A. (2014). The long-term effects of lifestyle change on blood pressure: One-year follow-up of the ENCORE study. <i>Am J Hypertens</i> , 27(5), 734-741. doi:10.1093/ajh/hpt183					

Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Knoepfli-Lenzin, C., Haeggli, B., & Boutellier, U. (2014). Optimised heart rate formulae to monitor endurance training in sedentary individuals. <i>J Sports Sci</i> , 32(6), 557-562. doi:10.1080/02640414.2013.843015					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Boyle, L. J., Credeur, D. P., Jenkins, N. T., Padilla, J., Leidy, H. J., Thyfault, J. P., & Fadel, P. J. (2013). Impact of reduced daily physical activity on conduit artery flow-mediated dilation and circulating endothelial microparticles. <i>J Appl Physiol</i> (1985), 115(10), 1519-1525. doi:10.1152/jappphysiol.00837.2013					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hayes, L. D., Grace, F. M., Sculthorpe, N., Herbert, P., Kilduff, L. P., & Baker, J. S. (2013). Does chronic exercise attenuate age-related physiological decline in males? <i>Res Sports Med</i> , 21(4), 343-354. doi:10.1080/15438627.2013.825799					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gopinath, B., Hardy, L. L., Kifley, A., Baur, L. A., & Mitchell, P. (2014). Activity behaviors in schoolchildren and subsequent 5-yr change in blood pressure. <i>Med Sci Sports Exerc</i> , 46(4), 724-729. doi:10.1249/mss.0000000000000166					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Okpechi, I. G., Chukwuonye, II, Tiffin, N., Madukwe, O. O., Onyeonoro, U. U., Umeizudike, T. I., & Ogah, O. S. (2013). Blood pressure gradients and cardiovascular risk factors in urban and rural populations in Abia State South Eastern Nigeria using the WHO STEPwise approach. <i>PLoS One</i> , 8(9), e73403. doi:10.1371/journal.pone.0073403					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Stewart, A. D., Rolland, C., Gryka, A., Findlay, S., Smith, S., Jones, J., & Davidson, I. M. (2014). Morphological and health-related changes associated with a 12-week self-guided exercise programme in overweight adults: a pilot study. <i>J Sports Sci</i> , 32(2), 164-171. doi:10.1080/02640414.2013.812791					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Croymans, D. M., Krell, S. L., Oh, C. S., Katiraie, M., Lam, C. Y., Harris, R. A., & Roberts, C. K. (2014). Effects of resistance training on central blood pressure in obese young men. <i>J Hum Hypertens</i> , 28(3), 157-164. doi:10.1038/jhh.2013.81					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Iovino, P., Chiarioni, G., Bilancio, G., Cirillo, M., Mekjavic, I. B., Pisot, R., & Ciacci, C. (2013). New onset of constipation during long-term physical inactivity: a proof-of-concept study on the immobility-induced bowel changes. <i>PLoS One</i> , 8(8), e72608. doi:10.1371/journal.pone.0072608					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Loprinzi, P. D., Fitzgerald, E. M., Woekel, E., & Cardinal, B. J. (2013). Association of physical activity and sedentary behavior with biological markers among U.S. pregnant women. <i>J Womens Health (Larchmt)</i> , 22(11), 953-958. doi:10.1089/jwh.2013.4394					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Govindan, M., Gurm, R., Mohan, S., Kline-Rogers, E., Corriveau, N., Goldberg, C., . . . Jackson, E. A. (2013). Gender differences in physiologic markers and health behaviors associated with childhood obesity. <i>Pediatrics</i> , 132(3), 468-474. doi:10.1542/peds.2012-2994					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Scholes, S., Bajekal, M., Norman, P., O'Flaherty, M., Hawkins, N., Kivimaki, M., . . . Raine, R. (2013). Quantifying policy options for reducing future coronary heart disease mortality in England: a modelling study. <i>PLoS One</i> , 8(7), e69935. doi:10.1371/journal.pone.0069935					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Stickland, M. K., Vogan, N., Petersen, S. R., Wong, E. Y., & Bhutani, M. (2013). Physical activity and arterial stiffness in chronic obstructive pulmonary disease. <i>Respir Physiol Neurobiol</i> , 189(1), 188-194. doi:10.1016/j.resp.2013.08.001					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Aroor, A. R., McKarns, S., Demarco, V. G., Jia, G., & Sowers, J. R. (2013). Maladaptive immune and inflammatory pathways lead to cardiovascular insulin resistance. <i>Metabolism</i> , 62(11), 1543-1552. doi:10.1016/j.metabol.2013.07.001					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Magnussen, C. G., Smith, K. J., & Juonala, M. (2013). When to prevent cardiovascular disease? As early as possible: lessons from prospective cohorts beginning in childhood. <i>Curr Opin Cardiol</i> , 28(5), 561-568. doi:10.1097/HCO.0b013e32836428f4					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Pecanha, T., Prodel, E., Bartels, R., Nasario-Junior, O., Paula, R. B., Silva, L. P., . . . Lima, J. R. (2014). 24-h cardiac autonomic profile after exercise in sedentary subjects. <i>Int J Sports Med</i> , 35(3), 245-252. doi:10.1055/s-0033-1349873					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Garcia, C. B., Perandini, L. A., Seguro, L. P., Gualano, B., Roschel, H., Bonfa, E., . . . Sa-Pinto, A. L. (2013). Impaired aerobic exercise capacity and cardiac autonomic control in primary antiphospholipid syndrome. <i>Lupus</i> , 22(9), 928-931. doi:10.1177/0961203313497415					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Oppewal, A., Hilgenkamp, T. I., van Wijck, R., & Evenhuis, H. M. (2013). Cardiorespiratory fitness in individuals with intellectual disabilities--a review. <i>Res Dev Disabil</i> , 34(10), 3301-3316. doi:10.1016/j.ridd.2013.07.005					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Guerra, Z. F., Pecanha, T., Moreira, D. N., Silva, L. P., Laterza, M. C., Nakamura, F. Y., & Lima, J. R. (2014). Effects of load and type of physical training on resting and postexercise cardiac autonomic control. <i>Clin Physiol Funct Imaging</i> , 34(2), 114-120. doi:10.1111/cpf.12072					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ariza-Garcia, A., Galiano-Castillo, N., Cantarero-Villanueva, I., Fernandez-Lao, C., Diaz-Rodriguez, L., & Arroyo-Morales, M. (2013). Influence of physical inactivity in psychophysiological state of breast cancer survivors. <i>Eur J Cancer Care (Engl)</i> , 22(6), 738-745. doi:10.1111/ecc.12101					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Muldoon, M. F., Erickson, K. I., Goodpaster, B. H., Jakicic, J. M., Conklin, S. M., Sekikawa, A., . . . Manuck, S. B. (2013). Concurrent physical activity modifies the association between n3 long-chain fatty acids and cardiometabolic risk in midlife adults. <i>J Nutr</i> , 143(9), 1414-1420. doi:10.3945/jn.113.174078					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Garnier, S., Gaubert, I., Joffroy, S., Auneau, G., & Mauriege, P. (2013). Impact of brisk walking on perceived health evaluated by a novel short questionnaire in sedentary and moderately obese postmenopausal women. <i>Menopause</i> , 20(8), 804-812. doi:10.1097/GME.0b013e31827deebb					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Morishima, T., Kurihara, T., Hamaoka, T., & Goto, K. (2014). Whole body, regional fat accumulation, and appetite-related hormonal response after hypoxic training. <i>Clin Physiol Funct Imaging</i> , 34(2), 90-97. doi:10.1111/cpf.12069					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sotiriou, P., Kouidi, E., Samaras, T., & Deligiannis, A. (2013). Linear and non-linear analysis of heart rate variability in master athletes and healthy middle-aged non-athletes. <i>Med Eng Phys</i> , 35(11), 1676-1681. doi:10.1016/j.medengphy.2013.06.003					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gibbs, B. B., Reis, J. P., Schelbert, E. B., Craft, L. L., Sidney, S., Lima, J., & Lewis, C. E. (2014). Sedentary screen time and left ventricular structure and function: the CARDIA study. <i>Med Sci Sports Exerc</i> , 46(2), 276-283. doi:10.1249/MSS.0b013e3182a4df33					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Soriguer, F., Rojo-Martinez, G., Goday, A., Bosch-Comas, A., Bordiu, E., Caballero-Diaz, F., . . . Vendrell, J. (2013). Olive oil has a beneficial effect on impaired glucose regulation and other cardiometabolic risk factors. Di@bet.es study. <i>Eur J Clin Nutr</i> , 67(9), 911-916. doi:10.1038/ejcn.2013.130					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Yilmaz, D. C., Buyukakilli, B., Gurgul, S., & Rencuzogullari, I. (2013). Adaptation of heart to training: a comparative study using echocardiography & impedance cardiography in male & female athletes. <i>Indian J Med Res</i> , 137(6), 1111-1120.					
Reason for exclusion :					
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Reference: Matsuo, T., Saotome, K., Seino, S., Shimojo, N., Matsushita, A., Iemitsu, M., . . . Mukai, C. (2014). Effects of a low-volume aerobic-type interval exercise on VO2max and cardiac mass. <i>Med Sci Sports Exerc</i> , 46(1), 42-50. doi:10.1249/MSS.0b013e3182a38da8					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sim, A. Y., Wallman, K. E., Fairchild, T. J., & Guelfi, K. J. (2014). High-intensity intermittent exercise attenuates ad-libitum energy intake. <i>Int J Obes (Lond)</i> , 38(3), 417-422. doi:10.1038/ijo.2013.102					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Rodrigues, F., Araujo, A. A., Mostarda, C. T., Ferreira, J., de Barros Silva, M. C., Nascimento, A. M., . . . Rodrigues, B. (2013). Autonomic changes in young smokers: acute effects of inspiratory exercise. <i>Clin Auton Res</i> , 23(4), 201-207. doi:10.1007/s10286-013-0202-1					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hunter, S. D., Tarumi, T., Dhindsa, M. S., Nualnim, N., & Tanaka, H. (2013). Hatha yoga and vascular function: results from cross-sectional and interventional studies. <i>J Bodyw Mov Ther</i> , 17(3), 322-327. doi:10.1016/j.jbmt.2012.10.009					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Schrader, P., Panek, L. M., & Temple, J. L. (2013). Acute and chronic caffeine administration increases physical activity in sedentary adults. <i>Nutr Res</i> , 33(6), 457-463. doi:10.1016/j.nutres.2013.04.003					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Akilli, H., Kayrak, M., Aribas, A., Tekinalp, M., Ayhan, S. S., Gunduz, M., . . . Yazici, M. (2014). The relationship between exercise capacity and masked hypertension in sedentary patients with diabetes mellitus. <i>Clin Exp Hypertens</i> , 36(1), 9-16. doi:10.3109/10641963.2013.783047					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Zhang, M., Zhao, Q., Mills, K. T., Chen, J., Li, J., Cao, J., . . . He, J. (2013). Factors associated with blood pressure response to the cold pressor test: the GenSalt Study. <i>Am J Hypertens</i> , 26(9), 1132-1139. doi:10.1093/ajh/hpt075					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Nang, E. E., Salim, A., Wu, Y., Tai, E. S., Lee, J., & Van Dam, R. M. (2013). Television screen time, but not computer use and reading time, is associated with cardio-metabolic biomarkers in a multiethnic Asian population: a cross-sectional study. <i>Int J Behav Nutr Phys Act</i> , 10, 70. doi:10.1186/1479-5868-10-70					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Glynn, L. G., Hayes, P. S., Casey, M., Glynn, F., Alvarez-Iglesias, A., Newell, J., . . . Murphy, A. W. (2013). SMART MOVE - a smartphone-based intervention to promote physical activity in primary care: study protocol for a randomized controlled trial. <i>Trials</i> , 14, 157. doi:10.1186/1745-6215-14-157					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hazizi, A. S., Aina, M. B., Mohd, N. M., Zaitun, Y., Hamid, J. J., & Tabata, I. (2012). Accelerometer-determined physical activity level among government employees in Penang, Malaysia. <i>Malays J Nutr</i> , 18(1), 57-66.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kim, Y. J., Goh, C. W., Byun, Y. S., Lee, Y. H., Lee, J. B., & Shin, Y. O. (2013). Left ventricular hypertrophy, diastolic dysfunction, pulse pressure, and plasma ET-1 in marathon runners with exaggerated blood pressure response. <i>Int Heart J</i> , 54(2), 82-87.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Blomster, J. I., Chow, C. K., Zoungas, S., Woodward, M., Patel, A., Poulter, N. R., . . . Hillis, G. S. (2013). The influence of physical activity on vascular complications and mortality in patients with type 2 diabetes mellitus. <i>Diabetes Obes Metab</i> , 15(11), 1008-1012. doi:10.1111/dom.12122					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Sherpa, M. T., Shrestha, R., & Pramanik, T. (2012). Prediction of individuals prone to suffer from early onset of hypertension. <i>Nepal Med Coll J</i> , 14(2), 96-99.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Schmidt, J. F., Andersen, T. R., Horton, J., Brix, J., Tarnow, L., Krstrup, P., . . . Hansen, P. R. (2013). Soccer training improves cardiac function in men with type 2 diabetes. <i>Med Sci Sports Exerc</i> , 45(12), 2223-2233. doi:10.1249/MSS.0b013e31829ab43c					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Bouchard, D. R., Langlois, M. F., Boisvert-Vigneault, K., Farand, P., Paulin, M., & Baillargeon, J. P. (2013). Pilot study: can older inactive adults learn how to reach the required intensity of physical activity guideline? <i>Clin Interv Aging</i> , 8, 501-508. doi:10.2147/cia.s42224					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Saidi, O., Ben Mansour, N., O'Flaherty, M., Capewell, S., Critchley, J. A., & Ben Romdhane, H. (2013). Analyzing recent coron ary heart disease mortality trends in Tunisia between 1997 and 2009. <i>PLoS One</i> , 8(5), e63202. doi:10.1371/journal.pone.0063202					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: de Moraes, A. C., Carvalho, H. B., Rey-Lopez, J. P., Gracia-Marco, L., Beghin, L., Kafatos, A., . . . Moreno, L. A. (2013). Independent and combined effects of physical activity and sedentary behavior on blood pressure in adolescents: gender differences in two cross-sectional studies. <i>PLoS One</i> , 8(5), e62006. doi:10.1371/journal.pone.0062006					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Berendes, A., Meyer, T., Hulpke-Wette, M., & Herrmann-Lingen, C. (2013). Association of elevated blood pressure with low distress and good quality of life: results from the nationwide representative German Health Interview and Examination Survey for Children and Adolescents. <i>Psychosom Med</i> , 75(4), 422-428. doi:10.1097/PSY.0b013e31828ef0c2					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Diehl, K. J., Templeton, D. L., Ma, J., Weil, B. R., Greiner, J. J., Stauffer, B. L., & DeSouza, C. A. (2013). Impaired fasting blood glucose is associated with increased endothelin-1 vasoconstrictor tone. <i>Atherosclerosis</i> , 229(1), 130-133. doi:10.1016/j.atherosclerosis.2013.04.006					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Bel-Serrat, S., Mouratidou, T., Santaliestra-Pasias, A. M., Iacoviello, L., Kourides, Y. A., Marild, S., . . . Moreno, L. A. (2013). Clustering of multiple lifestyle behaviours and its association to cardiovascular risk factors in children: the IDEFICS study. <i>Eur J Clin Nutr</i> , 67(8), 848-854. doi:10.1038/ejcn.2013.84					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

Reference: Alex, C., Lindgren, M., Shapiro, P. A., McKinley, P. S., Brondolo, E. N., Myers, M. M., . . . Sloan, R. P. (2013). Aerobic exercise and strength training effects on cardiovascular sympathetic function in healthy adults: a randomized controlled trial. <i>Psychosom Med</i> , 75(4), 375-381. doi:10.1097/PSY.0b013e3182906810					
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Reference: O'Donovan, C., Roche, E. F., & Hussey, J. (2014). The energy cost of playing active video games in children with obesity and children of a healthy weight. <i>Pediatr Obes</i> , 9(4), 310-317. doi:10.1111/j.2047-6310.2013.00172.x					
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Reference: Lamprecht, M., Moussalli, H., Ledinski, G., Leschnick, B., Schlagenhauf, A., Koestenberger, M., . . . Cvirn, G. (2013). Effects of a single bout of walking exercise on blood coagulation parameters in obese women. <i>J Appl Physiol (1985)</i> , 115(1), 57-63. doi:10.1152/jappphysiol.00187.2013					
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Reference: Heffernan, K. S., Tarzia, B. J., Kasprovicz, A. G., Lefferts, W. K., Hatanaka, M., & Jae, S. Y. (2013). Self-reported sitting time is associated with higher pressure from wave reflections independent of physical activity levels in healthy young adults. <i>Am J Hypertens</i> , 26(8), 1017-1023. doi:10.1093/ajh/hpt053					
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Reference: Dorobantu, M., Darabont, R., Ghiorghe, S., Babes, K., Pop, D., Toma, D., . . . Tautu, O. (2012). Profile of the Romanian hypertensive patient data from SEPHAR II study. <i>Rom J Intern Med</i> , 50(4), 285-296.					
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Reference: DeMarzo, A. P. (2013). Using impedance cardiography to detect asymptomatic cardiovascular disease in prehypertensive adults with risk factors. <i>High Blood Press Cardiovasc Prev</i> , 20(2), 61-67. doi:10.1007/s40292-013-0009-0					
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Reference: Hankinson, A. L., Daviglius, M. L., Van Horn, L., Chan, Q., Brown, I., Holmes, E., . . . Stamler, J. (2013). Diet composition and activity level of at risk and metabolically healthy obese American adults. <i>Obesity (Silver Spring)</i> , 21(3), 637-643. doi:10.1002/oby.20257					
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Reference: Zhu, Y. S., Tarumi, T., Tseng, B. Y., Palmer, D. M., Levine, B. D., & Zhang, R. (2013). Cerebral vasomotor reactivity during hypo- and hypercapnia in sedentary elderly and Masters athletes. <i>J Cereb Blood Flow Metab</i> , 33(8), 1190-1196. doi:10.1038/jcbfm.2013.66					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Nasim, S., Nadeem, N., Zahidie, A., & Sharif, T. (2013). Relationship between exercise induced dyspnea and functional capacity with doppler-derived diastolic function'. <i>BMC Res Notes</i> , 6, 150. doi:10.1186/1756-0500-6-150					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Morales-Asencio, J. M., Mancera-Romero, J., Bernal-Lopez, R., Martos-Cerezuela, I., Baca-Osorio, A. J., Moyano-Paris, M. T., . . . Gomez-Huelgas, R. (2013). Educational inequalities and cardiovascular risk factors. A cross-sectional population-based study in southern Spain. <i>Public Health Nurs</i> , 30(3), 202-212. doi:10.1111/phn.12008					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Robert, M., Ballaz, L., Hart, R., & Lemay, M. (2013). Exercise intensity levels in children with cerebral palsy while playing with an active video game console. <i>Phys Ther</i> , 93(8), 1084-1091. doi:10.2522/ptj.20120204					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Bandyopadhyay, A., & Dalui, R. (2012). Endurance capacity and cardiorespiratory responses in sedentary females during different phases of menstrual cycle. <i>Kathmandu Univ Med J (KUMJ)</i> , 10(40), 25-29.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Schuler, G., Adams, V., & Goto, Y. (2013). Role of exercise in the prevention of cardiovascular disease: results, mechanisms, and new perspectives. <i>Eur Heart J</i> , 34(24), 1790-1799. doi:10.1093/eurheartj/eh111					
Reason for exclusion :					
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Reference: Sossa, C., Delisle, H., Agueh, V., Sodjinou, R., Ntandou, G., & Makoutode, M. (2013). Lifestyle and dietary factors associated with the evolution of cardiometabolic risk over four years in West-African adults: the Benin study. <i>J Obes</i> , 2013, 298024. doi:10.1155/2013/298024					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Huang, G., Shi, X., Gibson, C. A., Huang, S. C., Coudret, N. A., & Ehlman, M. C. (2013). Controlled aerobic exercise training reduces resting blood pressure in sedentary older adults. <i>Blood Press</i> , 22(6), 386-394. doi:10.3109/08037051.2013.778003					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Hawkins, M. S., Gabriel, K. P., Conroy, M. B., Cooper, J., & Sutton-Tyrrell, K. (2013). Physical activity intensity and cardiovascular risk by ankle-brachial index. <i>Vasc Med</i> , 18(2), 79-84. doi:10.1177/1358863x13480552					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Yardley, J. E., Stapleton, J. M., Sigal, R. J., & Kenny, G. P. (2013). Do heat events pose a greater health risk for individuals with type 2 diabetes? <i>Diabetes Technol Ther</i> , 15(6), 520-529. doi:10.1089/dia.2012.0324					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Thomas, B. P., Yezhuvath, U. S., Tseng, B. Y., Liu, P., Levine, B. D., Zhang, R., & Lu, H. (2013). Life-long aerobic exercise preserved baseline cerebral blood flow but reduced vascular reactivity to CO ₂ . <i>J Magn Reson Imaging</i> , 38(5), 1177-1183. doi:10.1002/jmri.24090					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Klasnja, A. V., Jakovljevic, D. G., Barak, O. F., Popadic Gacesa, J. Z., Lukac, D. D., & Grujic, N. G. (2013). Cardiac power output and its response to exercise in athletes and non-athletes. <i>Clin Physiol Funct Imaging</i> , 33(3), 201-205. doi:10.1111/cpf.12013					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Christensen, P., Frederiksen, R., Bliddal, H., Riecke, B. F., Bartels, E. M., Henriksen, M., . . . Christensen, R. (2013). Comparison of three weight maintenance programs on cardiovascular risk, bone and vitamins in sedentary older adults. <i>Obesity (Silver Spring)</i> , 21(10), 1982-1990. doi:10.1002/oby.20413					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Colley, R. C., Garriguet, D., Janssen, I., Wong, S. L., Saunders, T. J., Carson, V., & Tremblay, M. S. (2013). The association between accelerometer-measured patterns of sedentary time and health risk in children and youth: results from the Canadian Health Measures Survey. <i>BMC Public Health</i> , 13, 200. doi:10.1186/1471-2458-13-200					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Alkhatib, A. (2013). Sedentary risk factors across genders and job roles within a university campus workplace: preliminary study. <i>J Occup Health</i> , 55(3), 218-224.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Simsek, Z., Tas, M. H., Gunay, E., & Degirmenci, H. (2013). Speckle-tracking echocardiographic imaging of the right ventricular systolic and diastolic parameters in chronic exercise. <i>Int J Cardiovasc Imaging</i> , 29(6), 1265-1271. doi:10.1007/s10554-013-0204-z					
<i>Reason for exclusion :</i>					
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Reference:					

Galetta, F., Franzoni, F., Tocchini, L., Camici, M., Milanese, D., Belatti, F., . . . Santoro, G. (2013). Effect of physical activity on heart rate variability and carotid intima-media thickness in older people. <i>Intern Emerg Med</i> , 8 Suppl 1, S27-29. doi:10.1007/s11739-013-0919-9					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Tang, A., Eng, J. J., Brasher, P. M., Madden, K. M., Mohammadi, A., Krassioukov, A. V., & Tsang, T. S. (2014). Physical activity correlates with arterial stiffness in community-dwelling individuals with stroke. <i>J Stroke Cerebrovasc Dis</i> , 23(2), 259-266. doi:10.1016/j.jstrokecerebrovasdis.2013.01.020					
<i>Reason for exclusion :</i>					
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Reference: Wuerzner, G., Bochud, M., Zwiackner, C., Tremblay, S., Puijijm, M., & Burnier, M. (2013). Step count is associated with lower nighttime systolic blood pressure and increased dipping. <i>Am J Hypertens</i> , 26(4), 527-534. doi:10.1093/ajh/hps094					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Recio-Rodriguez, J. I., Gomez-Marcos, M. A., Patino-Alonso, M. C., Romaguera-Bosch, M., Grandes, G., Menendez-Suarez, M., . . . Garcia-Ortiz, L. (2013). Association of television viewing time with central hemodynamic parameters and the radial augmentation index in adults. <i>Am J Hypertens</i> , 26(4), 488-494. doi:10.1093/ajh/hps071					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Tyndall, A. V., Davenport, M. H., Wilson, B. J., Burek, G. M., Arsenaull-Lapierre, G., Haley, E., . . . Poulin, M. J. (2013). The brain-in-motion study: effect of a 6-month aerobic exercise intervention on cerebrovascular regulation and cognitive function in older adults. <i>BMC Geriatr</i> , 13, 21. doi:10.1186/1471-2318-13-21					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Varlet-Marie, E., Guiraudou, M., Fedou, C., Raynaud de Mauverger, E., Durand, F., & Brun, J. F. (2013). Nutritional and metabolic determinants of blood rheology differ between trained and sedentary individuals. <i>Clin Hemorheol Microcirc</i> , 55(1), 39-54. doi:10.3233/ch-131688					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Howard, B. J., Fraser, S. F., Sethi, P., Cerin, E., Hamilton, M. T., Owen, N., . . . Kingwell, B. A. (2013). Impact on hemostatic parameters of interrupting sitting with intermittent activity. <i>Med Sci Sports Exerc</i> , 45(7), 1285-1291. doi:10.1249/MSS.0b013e318285f57e					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kraigher-Krainer, E., Lyass, A., Massaro, J. M., Lee, D. S., Ho, J. E., Levy, D., . . . Vasan, R. S. (2013). Association of physical activity and heart failure with preserved vs. reduced ejection fraction in the elderly: the Framingham Heart Study. <i>Eur J Heart Fail</i> , 15(7), 742-746. doi:10.1093/eurjhf/hft025					
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Reference: Millen, A. M., Norton, G. R., Avidon, I., & Woodiwiss, A. J. (2013). Effects of short-term exercise-training on aortic systolic pressure augmentation in overweight and obese individuals. <i>Eur J Appl Physiol</i> , 113(7), 1793-1803. doi:10.1007/s00421-013-2610-2					
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Reference: Koepp, G. A., Manohar, C. U., McCrady-Spitzer, S. K., Ben-Ner, A., Hamann, D. J., Runge, C. F., & Levine, J. A. (2013). Treadmill desks: A 1-year prospective trial. <i>Obesity (Silver Spring)</i> , 21(4), 705-711. doi:10.1002/oby.20121					
Reason for exclusion :					
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Reference: Santos, R., Mota, J., Okely, A. D., Pratt, M., Moreira, C., Coelho-e-Silva, M. J., . . . Sardinha, L. B. (2014). The independent associations of sedentary behaviour and physical activity on cardiorespiratory fitness. <i>Br J Sports Med</i> , 48(20), 1508-1512. doi:10.1136/bjsports-2012-091610					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kokiwar, P. R., Gupta, S. S., & Durge, P. M. (2012). Prevalence of hypertension in a rural community of central India. <i>J Assoc Physicians India</i> , 60, 26-29.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Freak-Poli, R., Wolfe, R., Brand, M., de Courten, M., & Peeters, A. (2013). Eight-month postprogram completion: change in risk factors for chronic disease amongst participants in a 4-month pedometer-based workplace health program. <i>Obesity (Silver Spring)</i> , 21(9), E360-368. doi:10.1002/oby.20342					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Drenowatz, C., Wartha, O., Klenk, J., Brandstetter, S., Wabitsch, M., & Steinacker, J. (2013). Differences in health behavior, physical fitness, and cardiovascular risk in early, average, and late mature children. <i>Pediatr Exerc Sci</i> , 25(1), 69-83.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Martin-Valero, R., Cuesta-Vargas, A. I., & Labajos-Manzanares, M. T. (2013). Effectiveness of the physical activity promotion programme on the quality of life and the cardiopulmonary function for inactive people: randomized controlled trial. <i>BMC Public Health</i> , 13, 127. doi:10.1186/1471-2458-13-127					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Tibana, R. A., Teixeira, T. G., Farias, D. L., Silva Ade, O., Madrid, B., Vieira, A., . . . Prestes, J. (2012). Relation of neck circumference and relative muscle strength and cardiovascular risk factors in sedentary women. <i>Einstein (Sao Paulo)</i> , 10(3), 329-334.					
Reason for exclusion :					

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Reference: Kulshreshtha, P., & Deepak, K. K. (2013). Autonomic nervous system profile in fibromyalgia patients and its modulation by exercise: a mini review. <i>Clin Physiol Funct Imaging</i> , 33(2), 83-91. doi:10.1111/cpf.12000					
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Reference: Curven, M., Jaeggi, A. V., Kaplan, H., & Cummings, D. (2013). Physical activity and modernization among Bolivian Amerindians. <i>PLoS One</i> , 8(1), e55679. doi:10.1371/journal.pone.0055679					
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Reference: Rowe, D. A., McMinn, D., Peacock, L., Buis, A. W., Sutherland, R., Henderson, E., & Hewitt, A. (2014). Cadence, energy expenditure, and gait symmetry during music-prompted and self-regulated walking in adults with unilateral transtibial amputation. <i>J Phys Act Health</i> , 11(2), 320-329. doi:10.1123/jpah.2012-0056					
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Reference: Grace, J., & Semple, S. (2012). The prevalence of cardiovascular disease risk factors in normotensive, pre-hypertensive and hypertensive South African colliery executives. <i>Int J Occup Med Environ Health</i> , 25(4), 375-382. doi:10.2478/s13382-012-0045-3					
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Reference: Carvalho, R. F., Uehara, S. K., & Rosa, G. (2012). Microencapsulated conjugated linoleic acid associated with hypocaloric diet reduces body fat in sedentary women with metabolic syndrome. <i>Vasc Health Risk Manag</i> , 8, 661-667. doi:10.2147/vhrm.s37385					
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Reference: Hujova, Z., & Rostakova, K. (2013). Several anthropometric predictors of cardiovascular disease in central Slovakian adults: socioeconomic and educational differences. <i>Bratisl Lek Listy</i> , 114(1), 31-35.					
Reason for exclusion :					

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Reference: Read, E. (2014). Feasibility of the Diabetes and Technology for Increased Activity (DaTA) Study: a pilot intervention in high-risk rural adults. <i>J Phys Act Health</i> , 11(1), 118-126. doi:10.1123/jpah.2011-0381					
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Reference: Hjorth, M. F., Kloster, S., Girma, T., Faurholt-Jepsen, D., Andersen, G., Kaestel, P., . . . Friis, H. (2012). Level and intensity of objectively assessed physical activity among pregnant women from urban Ethiopia. <i>BMC Pregnancy Childbirth</i> , 12, 154. doi:10.1186/1471-2393-12-154					
Reason for exclusion :					
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Reference: Lee, R. E., Mama, S. K., & Adamus-Leach, H. J. (2012). Neighborhood street scale elements, sedentary time and cardiometabolic risk factors in inactive ethnic minority women. <i>PLoS One</i> , 7(12), e51081. doi:10.1371/journal.pone.0051081					
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Reference: White, L. H., & Bradley, T. D. (2013). Role of nocturnal rostral fluid shift in the pathogenesis of obstructive and central sleep apnoea. <i>J Physiol</i> , 591(5), 1179-1193. doi:10.1113/jphysiol.2012.245159					
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Reference: Nyberg, M., Mortensen, S. P., & Hellsten, Y. (2013). Physical activity opposes the age-related increase in skeletal muscle and plasma endothelin-1 levels and normalizes plasma endothelin-1 levels in individuals with essential hypertension. <i>Acta Physiol (Oxf)</i> , 207(3), 524-535. doi:10.1111/apha.12048					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Heydari, M., Boutcher, Y. N., & Boutcher, S. H. (2013). The effects of high-intensity intermittent exercise training on cardiovascular response to mental and physical challenge. <i>Int J Psychophysiol</i> , 87(2), 141-146. doi:10.1016/j.ijpsycho.2012.11.013					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Rimmer, J. H. (2012). Getting beyond the plateau: bridging the gap between rehabilitation and community-based exercise. <i>Pm r</i> , 4(11), 857-861. doi:10.1016/j.pmrj.2012.08.008					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cooney, M., Reiner, Z., Sheu, W., Ryden, L., Sutter, J., De Bacquer, D., . . . Graham, I. (2014). SURF - SURvey of Risk Factor management: first report of an international audit. <i>Eur J Prev Cardiol</i> , 21(7), 813-822. doi:10.1177/2047487312467870					
Reason for exclusion :					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Reihmane, D., Hansen, A. V., Gram, M., Kuhlman, A. B., Norregaard, J., Pedersen, H. P., . . . Dela, F. (2013). Immobilization increases interleukin-6, but not tumour necrosis factor-alpha, release from the leg during exercise in humans. <i>Exp Physiol</i> , 98(3), 778-783. doi:10.1113/expphysiol.2012.069211					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Jaffiol, C., Thomas, F., Bean, K., Jego, B., & Danchin, N. (2013). Impact of socioeconomic status on diabetes and cardiovascular risk factors: results of a large French survey. <i>Diabetes Metab</i> , 39(1), 56-62. doi:10.1016/j.diabet.2012.09.002					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Aengevaeren, V. L., Claassen, J. A., Levine, B. D., & Zhang, R. (2013). Cardiac baroreflex function and dynamic cerebral autoregulation in elderly Masters athletes. <i>J Appl Physiol</i> (1985), 114(2), 195-202. doi:10.1152/jappphysiol.00402.2012					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Barros, M. V., Ritti-Dias, R. M., Honda Barros, S. S., Mota, J., & Andersen, L. B. (2013). Does self-reported physical activity associate with high blood pressure in adolescents when adiposity is adjusted for? <i>J Sports Sci</i> , 31(4), 387-395. doi:10.1080/02640414.2012.734631					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Matos-Souza, J. R., Silva, A. A., Campos, L. F., Goulart, D., Schreiber, R., de Rossi, G., . . . Nadruz, W., Jr. (2013). Physical activity is associated with improved subclinical atherosclerosis in spinal cord injury subjects independent of variation in traditional risk factors. <i>Int J Cardiol</i> , 167(2), 592-593. doi:10.1016/j.ijcard.2012.09.222					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Zamuner, A. R., Silva, E., Teodori, R. M., Catai, A. M., & Moreno, M. A. (2013). Autonomic modulation of heart rate in paraplegic wheelchair basketball players: Linear and nonlinear analysis. <i>J Sports Sci</i> , 31(4), 396-404. doi:10.1080/02640414.2012.734917					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Countryman, A. J., Saab, P. G., Llabre, M. M., Penedo, F. J., McCalla, J. R., & Schneiderman, N. (2013). Cardiometabolic risk in adolescents: associations with physical activity, fitness, and sleep. <i>Ann Behav Med</i> , 45(1), 121-131. doi:10.1007/s12160-012-9428-8					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Yako, Y. Y., Hassan, M. S., Erasmus, R. T., van der Merwe, L., Janse van Rensburg, S., & Matsha, T. E. (2013). Associations of MC3R polymorphisms with physical activity in South African adolescents. <i>J Phys Act Health</i> , 10(6), 813-825.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Xiang, G., Xiang, L., Xiang, L., Wang, H., & Dong, J. (2012). Change of plasma osteoprotegerin and its association with endothelial dysfunction before and after exercise in Hashimoto's thyroiditis with euthyroidism. <i>Exp Clin Endocrinol Diabetes</i> , 120(9), 529-534. doi:10.1055/s-0032-1323806					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lammers, G., van Duijnhoven, N. T., Hoenderop, J. G., Horstman, A. M., de Haan, A., Janssen, T. W., . . . Hopman, M. T. (2013). The identification of genetic pathways involved in vascular adaptations after physical deconditioning versus exercise training in humans. <i>Exp Physiol</i> , 98(3), 710-721. doi:10.1113/expphysiol.2012.068726					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Birk, G. K., Dawson, E. A., Timothy Cable, N., Green, D. J., & Thijssen, D. H. (2013). Effect of unilateral forearm inactivity on endothelium-dependent vasodilator function in humans. <i>Eur J Appl Physiol</i> , 113(4), 933-940. doi:10.1007/s00421-012-2505-7					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Rumble, C., & Pevalin, D. J. (2013). Widening inequalities in the risk factors for cardiovascular disease amongst men in England between 1998 and 2006. <i>Public Health</i> , 127(1), 27-31. doi:10.1016/j.puhe.2012.09.003					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Rosenberger Hale, E., Goff, D. C., Isom, S., Blackwell, C., Whitt-Glover, M. C., & Katula, J. A. (2013). Relationship of weekly activity minutes to metabolic syndrome in prediabetes: the healthy living partnerships to prevent diabetes. <i>J Phys Act Health</i> , 10(5), 690-698.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Villars, C., Bergouignan, A., Dugas, J., Antoun, E., Schoeller, D. A., Roth, H., . . . Simon, C. (2012). Validity of combining heart rate and uniaxial acceleration to measure free-living physical activity energy expenditure in young men. <i>J Appl Physiol (1985)</i> , 113(11), 1763-1771. doi:10.1152/jappphysiol.01413.2011					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Nam, S., Dobrosielski, D. A., & Stewart, K. J. (2012). Predictors of exercise intervention dropout in sedentary individuals with type 2 diabetes. <i>J Cardiopulm Rehabil Prev</i> , 32(6), 370-378. doi:10.1097/HCR.0b013e31826be485					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no	Sedentarism is not measured objectively	No longitudinal study with a	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	definition of sedentarism		follow-up of min. 1 year		
Reference: Ojiambo, R., Konstabel, K., Veidebaum, T., Reilly, J., Verbestel, V., Huybrechts, I., . . . Pitsiladis, Y. P. (2012). Validity of hip-mounted uniaxial accelerometry with heart-rate monitoring vs. triaxial accelerometry in the assessment of free-living energy expenditure in young children: the IDEFICS Validation Study. <i>J Appl Physiol</i> (1985), 113(10), 1530-1536. doi:10.1152/jappphysiol.01290.2011					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Edgell, H., Grinberg, A., Gagne, N., Beavers, K. R., & Hughson, R. L. (2012). Cardiovascular responses to lower body negative pressure before and after 4 h of head-down bed rest and seated control in men and women. <i>J Appl Physiol</i> (1985), 113(10), 1604-1612. doi:10.1152/jappphysiol.00670.2012					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Bellefeuille, P., Robillard, M. E., Ringuet, M. E., Aubertin-Leheudre, M., & Karelis, A. D. (2013). Comparison between several muscle strength and cardiorespiratory fitness indices with body composition and energy expenditure in obese postmenopausal women. <i>Int J Sports Med</i> , 34(3), 258-262. doi:10.1055/s-0032-1321802					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Guglin, M., Kolli, S., & Chen, R. (2012). Determinants of pulmonary hypertension in young adults. <i>Int J Clin Pract Suppl</i> (177), 13-19. doi:10.1111/ijcp.12008					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wang, V. N., Ahmed, M., Ciofani, A., Sasson, Z., Granton, J. T., & Mak, S. (2012). The effect of endogenous estrogen on Doppler-estimated right ventricular systolic pressure during exercise. <i>Can J Physiol Pharmacol</i> , 90(10), 1364-1371. doi:10.1139/y2012-100					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cocks, M., Shaw, C. S., Shepherd, S. O., Fisher, J. P., Ranasinghe, A. M., Barker, T. A., . . . Wagenmakers, A. J. (2013). Sprint interval and endurance training are equally effective in increasing muscle microvascular density and eNOS content in sedentary males. <i>J Physiol</i> , 591(3), 641-656. doi:10.1113/jphysiol.2012.239566					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kerkhoff, A. C., Moreira, L. B., Fuchs, F. D., & Fuchs, S. C. (2012). Association between hypertension and musculoskeletal complaints: a population-based study. <i>J Hypertens</i> , 30(11), 2112-2117. doi:10.1097/HJH.0b013e3283588268					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no	Sedentarism is not measured objectively	No longitudinal study with a	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	definition of sedentarism		follow-up of min. 1 year		
Reference: Koura, M. R., Al-Dabal, B. K., Rasheed, P., Al-Sowielem, L. S., & Makki, S. M. (2012). Prehypertension among young adult females in Dammam, Saudi Arabia. <i>East Mediterr Health J</i> , 18(7), 728-734.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sundberg, F., Forsander, G., Fasth, A., & Ekelund, U. (2012). Children younger than 7 years with type 1 diabetes are less physically active than healthy controls. <i>Acta Paediatr</i> , 101(11), 1164-1169. doi:10.1111/j.1651-2227.2012.02803.x					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Khoshdel, A. R., Carney, S. L., & Gillies, A. (2012). Circulatory syndrome: an evolution of the metabolic syndrome concept! <i>Curr Cardiol Rev</i> , 8(1), 68-76.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gojanovic, B., & Henchoz, Y. (2012). Whole-body vibration training: metabolic cost of synchronous, side-alternating or no vibrations. <i>J Sports Sci</i> , 30(13), 1397-1403. doi:10.1080/02640414.2012.710756					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Crilly, M. A., & Wallace, A. (2013). Physical inactivity and arterial dysfunction in patients with rheumatoid arthritis. <i>Scand J Rheumatol</i> , 42(1), 27-33. doi:10.3109/03009742.2012.697915					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Baragou, S., Djibril, M., Atta, B., Damorou, F., Pio, M., & Balogou, A. (2012). Prevalence of cardiovascular risk factors in an urban area of Togo: a WHO STEPS-wise approach in Lome, Togo. <i>Cardiovasc J Afr</i> , 23(6), 309-312. doi:10.5830/cvja-2011-071					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Nguyen, Q. N., Pham, S. T., Nguyen, V. L., Weinehall, L., Wall, S., Bonita, R., & Byass, P. (2012). Effectiveness of community-based comprehensive healthy lifestyle promotion on cardiovascular disease risk factors in a rural Vietnamese population: a quasi-experimental study. <i>BMC Cardiovasc Disord</i> , 12, 56. doi:10.1186/1471-2261-12-56					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Pahkala, K., Hernelahti, M., Heinonen, O. J., Raittinen, P., Hakanen, M., Lagstrom, H., . . . Simell, O. (2013). Body mass in dex, fitness and physical activity from childhood through adolescence. <i>Br J Sports Med</i> , 47(2), 71-77. doi:10.1136/bjsports-2011-090704					
Reason for exclusion :					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Yin, Z., Moore, J. B., Johnson, M. H., Vernon, M. M., & Gutin, B. (2012). The impact of a 3-year after-school obesity prevention program in elementary school children. <i>Child Obes</i> , 8(1), 60-70. doi:10.1089/chi.2011.0085					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gouzi, F., Prefaut, C., Abdellaoui, A., Roudier, E., de Rigal, P., Molinari, N., . . . Hayot, M. (2013). Blunted muscle angiogenic training-response in COPD patients versus sedentary controls. <i>Eur Respir J</i> , 41(4), 806-814. doi:10.1183/09031936.00053512					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Grontved, A., Ried-Larsen, M., Moller, N. C., Kristensen, P. L., Wedderkopp, N., Froberg, K., . . . Andersen, L. B. (2014). Youth screen-time behaviour is associated with cardiovascular risk in young adulthood: the European Youth Heart Study. <i>Eur J Prev Cardiol</i> , 21(1), 49-56. doi:10.1177/2047487312454760					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Schuelter-Trevisol, F., Wolff, F. H., Alencastro, P. R., Grigoletti, S., Ikeda, M. L., Brandao, A. B., . . . Fuchs, S. C. (2012). Physical activity: do patients infected with HIV practice? How much? A systematic review. <i>Curr HIV Res</i> , 10(6), 487-497.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Mohan, V., & Das, S. (2012). Cardiorespiratory parameters before and after acupuncture: observations in a healthy and diseased state. <i>Clinics (Sao Paulo)</i> , 67(6), 673-674.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Martinez-Gomez, D., Gomez-Martinez, S., Ruiz, J. R., Ortega, F. B., Marcos, A., & Veiga, O. L. (2012). Video game playing time and cardiometabolic risk in adolescents: the AFINOS study. <i>Med Clin (Barc)</i> , 139(7), 290-292. doi:10.1016/j.medcli.2012.04.017					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Vincent, L., Oyono-Enguelle, S., Feasson, L., Banimbek, V., Dohbobga, M., Martin, C., . . . Messonnier, L. (2012). Effects of regular physical activity on skeletal muscle structural, energetic, and microvascular properties in carriers of sickle cell trait. <i>J Appl Physiol (1985)</i> , 113(4), 549-556. doi:10.1152/jappphysiol.01573.2011					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Nettlefold, L., McKay, H. A., Naylor, P. J., Bredin, S. S., & Warburton, D. E. (2012). The relationship between objectively measured physical activity, sedentary time, and vascular health in children. <i>Am J Hypertens</i> , 25(8), 914-919. doi:10.1038/ajh.2012.68					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Tringler, M., Rodriguez, E. M., Aguera, D., Molina, J. D., Canziani, G. A., & Diaz, A. (2012). High blood pressure, overweight and obesity among rural scholars from the Vela Project: a population-based study from South America. <i>High Blood Press Cardiovasc Prev</i> , 19(1), 41-46. doi:10.2165/11632090-000000000-00000					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Truong, U. T., Maahs, D. M., & Daniels, S. R. (2012). Cardiovascular disease in children and adolescents with diabetes: where are we, and where are we going? <i>Diabetes Technol Ther</i> , 14 Suppl 1, S11-21. doi:10.1089/dia.2012.0018					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kim, J. H., Ko, J. H., Lee, D. C., Lim, I., & Bang, H. (2012). Habitual physical exercise has beneficial effects on telomere length in postmenopausal women. <i>Menopause</i> , 19(10), 1109-1115. doi:10.1097/gme.0b013e3182503e97					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Parfitt, G., Alrumh, A., & Rowlands, A. V. (2012). Affect-regulated exercise intensity: does training at an intensity that feels 'good' improve physical health? <i>J Sci Med Sport</i> , 15(6), 548-553. doi:10.1016/j.jsams.2012.01.005					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Bayer, O., Jarczok, M., Fischer, J., von Kries, R., & De Bock, F. (2012). Validation and extension of a simple questionnaire to assess physical activity in pre-school children. <i>Public Health Nutr</i> , 15(9), 1611-1619. doi:10.1017/s1368980012001243					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Laurence, G., Wallman, K., & Guelfi, K. (2012). Effects of caffeine on time trial performance in sedentary men. <i>J Sports Sci</i> , 30(12), 1235-1240. doi:10.1080/02640414.2012.693620					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Stamatakis, E., Hamer, M., Tilling, K., & Lawlor, D. A. (2012). Sedentary time in relation to cardio-metabolic risk factors: differential associations for self-report vs accelerometry in working age adults. <i>Int J Epidemiol</i> , 41(5), 1328-1337. doi:10.1093/ije/dys077					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	study/no definition of sedentarism		follow-up of min. 1 year		
Reference: Knox, S., Welsh, P., Bezlyak, V., McConnachie, A., Boulton, E., Deans, K. A., . . . Sattar, N. (2012). 25-Hydroxyvitamin D is lower in deprived groups, but is not associated with carotid intima media thickness or plaques: results from pSoBid. <i>Atherosclerosis</i> , 223(2), 437-441. doi:10.1016/j.atherosclerosis.2012.05.001					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Annesi, J. J. (2013). Association of multimodal treatment-induced improvements in stress, exercise volume, nutrition, and weight with improved blood pressure in severely obese women. <i>Int J Behav Med</i> , 20(3), 397-402. doi:10.1007/s12529-012-9240-7					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Shook, R. P., Lee, D. C., Sui, X., Prasad, V., Hooker, S. P., Church, T. S., & Blair, S. N. (2012). Cardiorespiratory fitness reduces the risk of incident hypertension associated with a parental history of hypertension. <i>Hypertension</i> , 59(6), 1220-1224. doi:10.1161/hypertensionaha.112.191676					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Neves, F. J., Carvalho, A. C., Rocha, N. G., Silva, B. M., Sales, A. R., de Castro, R. R., . . . Nobrega, A. C. (2012). Hemodynamic mechanisms of the attenuated blood pressure response to mental stress after a single bout of maximal dynamic exercise in healthy subjects. <i>Braz J Med Biol Res</i> , 45(7), 610-616.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Timmerman, K. L., Dhanani, S., Glynn, E. L., Fry, C. S., Drummond, M. J., Jennings, K., . . . Volpi, E. (2012). A moderate acute increase in physical activity enhances nutritive flow and the muscle protein anabolic response to mixed nutrient intake in older adults. <i>Am J Clin Nutr</i> , 95(6), 1403-1412. doi:10.3945/ajcn.111.020800					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Chitra, U., Reddy, N. K., & Balakrishna, N. (2012). Role of lifestyle variables on the lipid profile of selected South Indian subjects. <i>Indian Heart J</i> , 64(1), 28-34. doi:10.1016/s0019-4832(12)60007-8					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Palatini, P. (2012). Cardiovascular effects of exercise in young hypertensives. <i>Int J Sports Med</i> , 33(9), 683-690. doi:10.1055/s-0032-1304633					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

<p>Aggio, D., Ogunleye, A. A., Voss, C., & Sandercock, G. R. (2012). Temporal relationships between screen-time and physical activity with cardiorespiratory fitness in English schoolchildren: a 2-year longitudinal study. <i>Prev Med</i>, 55(1), 37-39. doi:10.1016/j.ypmed.2012.04.012</p>					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
<p>Reference: Dziuda, L., Skibniewski, F. W., Krej, M., & Lewandowski, J. (2012). Monitoring respiration and cardiac activity using fiber Bragg grating-based sensor. <i>IEEE Trans Biomed Eng</i>, 59(7), 1934-1942. doi:10.1109/tbme.2012.2194145</p>					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
<p>Reference: Lamina, S., & Okoye, G. C. (2012). Therapeutic effect of a moderate intensity interval training program on the lipid profile in men with hypertension: a randomized controlled trial. <i>Niger J Clin Pract</i>, 15(1), 42-47. doi:10.4103/1119-3077.94096</p>					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
<p>Reference: Odugbemi, T. O., Onajole, A. T., & Osibogun, A. O. (2012). Prevalence of cardiovascular risk factors amongst traders in an urban market in Lagos, Nigeria. <i>Niger Postgrad Med J</i>, 19(1), 1-6.</p>					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
<p>Reference: Carrel, A. L., Bowser, J., White, D., Moberg, D. P., Weaver, B., Hisgen, J., . . . Allen, D. B. (2012). Standardized childhood fitness percentiles derived from school-based testing. <i>J Pediatr</i>, 161(1), 120-124. doi:10.1016/j.jpeds.2012.01.036</p>					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
<p>Reference: Machado-Rodrigues, A. M., Coelho-e-Silva, M. J., Mota, J., Padez, C., Ronque, E., Cumming, S. P., & Malina, R. M. (2012). Cardiorespiratory fitness, weight status and objectively measured sedentary behaviour and physical activity in rural and urban Portuguese adolescents. <i>J Child Health Care</i>, 16(2), 166-177. doi:10.1177/1367493511430676</p>					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
<p>Reference: Mkhonto, S. S., Labadarios, D., & Mabaso, M. L. (2012). Association of body weight and physical activity with blood pressure in a rural population in the Dikgale village of Limpopo Province in South Africa. <i>BMC Res Notes</i>, 5, 118. doi:10.1186/1756-0500-5-118</p>					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
<p>Reference: Nascimento, R. C., Hossri, C. A., Berwanger, O., & Carvalho, V. O. (2012). Acupuncture and exercise capacity: a case report. <i>Clinics (Sao Paulo)</i>, 67(2), 193-194.</p>					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	definition of sedentarism				
Reference: Ekelund, U., Luan, J., Sherar, L. B., Esliger, D. W., Griew, P., & Cooper, A. (2012). Moderate to vigorous physical activity and sedentary time and cardiometabolic risk factors in children and adolescents. <i>Jama</i> , 307(7), 704-712. doi:10.1001/jama.2012.156					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sullivan, R., Kinra, S., Ekelund, U., Bharathi, A. V., Vaz, M., Kurpad, A., . . . Kuper, H. (2012). Evaluation of the Indian Migration Study Physical Activity Questionnaire (IMS-PAQ): a cross-sectional study. <i>Int J Behav Nutr Phys Act</i> , 9, 13. doi:10.1186/1479-5868-9-13					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Molmen, H. E., Wisloff, U., Aamot, I. L., Stoylen, A., & Ingul, C. B. (2012). Aerobic interval training compensates age related decline in cardiac function. <i>Scand Cardiovasc J</i> , 46(3), 163-171. doi:10.3109/14017431.2012.660192					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Peterman, J. E., Kram, R., & Byrnes, W. C. (2012). Factors affecting the increased energy expenditure during passive cycling. <i>Eur J Appl Physiol</i> , 112(9), 3341-3348. doi:10.1007/s00421-012-2325-9					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Foulds, H. J., Bredin, S. S., & Warburton, D. E. (2012). An evaluation of the physical activity and health status of British Columbian Aboriginal populations. <i>Appl Physiol Nutr Metab</i> , 37(1), 127-137. doi:10.1139/h11-138					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Shibata, S., & Levine, B. D. (2012). Effect of exercise training on biologic vascular age in healthy seniors. <i>Am J Physiol Heart Circ Physiol</i> , 302(6), H1340-1346. doi:10.1152/ajpheart.00511.2011					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hanssen, H., Siegrist, M., Neidig, M., Renner, A., Birzele, P., Siclován, A., . . . Halle, M. (2012). Retinal vessel diameter, obesity and metabolic risk factors in school children (JuventUM 3). <i>Atherosclerosis</i> , 221(1), 242-248. doi:10.1016/j.atherosclerosis.2011.12.029					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Dennison, B. A. (2012). Bright futures and NHLBI integrated pediatric cardiovascular health guidelines. <i>Pediatr Ann</i> , 41(1), e31-36. doi:10.3928/00904481-20111209-10					
Reason for exclusion :					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Brun, J. F., Varlet-Marie, E., Fedou, C., & Raynaud de Mauverger, E. (2011). Body composition and exercise performance as determinants of blood rheology in middle-aged patients exhibiting the metabolic syndrome. <i>Clin Hemorheol Microcirc</i> , 49(1-4), 215-223. doi:10.3233/ch-2011-1471					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Brun, J. F., Varlet-Marie, E., Romain, A. J., & Raynaud de Mauverger, E. (2011). Interrelationships among body composition, blood rheology and exercise performance. <i>Clin Hemorheol Microcirc</i> , 49(1-4), 183-197. doi:10.3233/ch-2011-1468					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Pouliou, T., Ki, M., Law, C., Li, L., & Power, C. (2012). Physical activity and sedentary behaviour at different life stages and adult blood pressure in the 1958 British cohort. <i>J Hypertens</i> , 30(2), 275-283. doi:10.1097/HJH.0b013e32834f1915					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Chien, C. L., Wu, Y. W., Yang, W. S., Yang, P. C., Su, H. M., & Wu, Y. T. (2011). Myocardial perfusion image in asymptomatic postmenopausal women with physical inactivity and overweight. <i>Obes Facts</i> , 4(5), 372-378. doi:10.1159/000333439					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Delisle, H., Ntandou-Bouzitou, G., Agueh, V., Sodjinou, R., & Fayomi, B. (2012). Urbanisation, nutrition transition and cardiometabolic risk: the Benin study. <i>Br J Nutr</i> , 107(10), 1534-1544. doi:10.1017/s0007114511004661					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Freyssin, C., Jr., Blanc, P., Verkindt, C., Maunier, S., & Prieur, F. (2011). Effect of long-term physical activity practice after cardiac rehabilitation on some risk factors. <i>Int J Rehabil Res</i> , 34(4), 357-359. doi:10.1097/MRR.0b013e3283498b0e					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Asferg, C., Mogelvang, R., Flyvbjerg, A., Frystyk, J., Jensen, J. S., Marott, J. L., . . . Jeppesen, J. R. (2011). Interaction between leptin and leisure-time physical activity and development of hypertension. <i>Blood Press</i> , 20(6), 362-369. doi:10.3109/00365599.2011.586248					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Rimmer, J. H., Schiller, W., & Chen, M. D. (2012). Effects of disability-associated low energy expenditure deconditioning syndrome. <i>Exerc Sport Sci Rev</i> , 40(1), 22-29. doi:10.1097/JES.0b013e31823b8b82					

Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Mischel, N. A., & Mueller, P. J. (2011). (In)activity-dependent alterations in resting and reflex control of splanchnic sympathetic nerve activity. <i>J Appl Physiol</i> (1985), 111(6), 1854-1862. doi:10.1152/jappphysiol.00961.2011					
Reason for exclusion : Animal study					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cozza, I. C., Di Sacco, T. H., Mazon, J. H., Salgado, M. C., Dutra, S. G., Cesarino, E. J., & Souza, H. C. (2012). Physical exercise improves cardiac autonomic modulation in hypertensive patients independently of angiotensin-converting enzyme inhibitor treatment. <i>Hypertens Res</i> , 35(1), 82-87. doi:10.1038/hr.2011.162					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Martins-Pinge, M. C. (2011). Cardiovascular and autonomic modulation by the central nervous system after aerobic exercise training. <i>Braz J Med Biol Res</i> , 44(9), 848-854.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gmada, N., Marzouki, H., Haboubi, M., Tabka, Z., Shephard, R. J., & Bouhlef, E. (2012). Crossover and maximal fat-oxidation points in sedentary healthy subjects: methodological issues. <i>Diabetes Metab</i> , 38(1), 40-45. doi:10.1016/j.diabet.2011.07.004					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Bouchard, D. R., McGuire, K. A., Davidson, L., & Ross, R. (2011). Cardiorespiratory fitness, obesity, and functional limitation in older adults. <i>J Aging Phys Act</i> , 19(4), 336-346.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kneffel, Z., Varga-Pinter, B., Toth, M., Major, Z., & Pavlik, G. (2011). Relationship between the heart rate and E/A ratio in athletic and non-athletic males. <i>Acta Physiol Hung</i> , 98(3), 284-293. doi:10.1556/APhysiol.98.2011.3.5					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Barnes, J. N., Nualnim, N., Sugawara, J., Sommerlad, S. M., Renzi, C. P., & Tanaka, H. (2011). Arterial stiffening, wave reflection, and inflammation in habitually exercising systemic lupus erythematosus patients. <i>Am J Hypertens</i> , 24(11), 1194-1200. doi:10.1038/ajh.2011.143					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Carnethon, M. R., Sternfeld, B., Liu, K., Jacobs, D. R., Jr., Schreiner, P. J., Williams, O. D., . . . Sidney, S. (2012). Correlates of heart rate recovery over 20 years in a healthy population sample. <i>Med Sci Sports Exerc</i> , 44(2), 273-279. doi:10.1249/MSS.0b013e31822cb190					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Deo, R., Vittinghoff, E., Lin, F., Tseng, Z. H., Hulley, S. B., & Shlipak, M. G. (2011). Risk factor and prediction modeling for sudden cardiac death in women with coronary artery disease. <i>Arch Intern Med</i> , 171(19), 1703-1709. doi:10.1001/archinternmed.2011.328					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Donal, E., Rozoy, T., Kervio, G., Schnell, F., Mabo, P., & Carre, F. (2011). Comparison of the heart function adaptation in trained and sedentary men after 50 and before 35 years of age. <i>Am J Cardiol</i> , 108(7), 1029-1037. doi:10.1016/j.amjcard.2011.05.043					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ekkekakis, P., Parfitt, G., & Petruzzello, S. J. (2011). The pleasure and displeasure people feel when they exercise at different intensities: decennial update and progress towards a tripartite rationale for exercise intensity prescription. <i>Sports Med</i> , 41(8), 641-671. doi:10.2165/11590680-000000000-00000					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Stamatakis, E., & Hamer, M. (2012). The extent to which adiposity markers explain the association between sedentary behavior and cardiometabolic risk factors. <i>Obesity (Silver Spring)</i> , 20(1), 229-232. doi:10.1038/oby.2011.209					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Utz, W., Engeli, S., Haufe, S., Kast, P., Hermsdorf, M., Wiesner, S., . . . Jordan, J. (2011). Myocardial steatosis, cardiac remodelling and fitness in insulin-sensitive and insulin-resistant obese women. <i>Heart</i> , 97(19), 1585-1589. doi:10.1136/hrt.2011.224451					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Rebelo, A. C., Tamburus, N., Salvati, M., Celante, V., Takahashi, A., de Sa, M. F., . . . Silva, E. (2011). Influence of third-generation oral contraceptives on the complexity analysis and symbolic dynamics of heart rate variability. <i>Eur J Contracept Reprod Health Care</i> , 16(4), 289-297. doi:10.3109/13625187.2011.591217					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lamina, S., & Okoye, C. G. (2011). Uricemia as a cardiovascular events risk factor in hypertension: the role of interval training programme in its downregulation. <i>J Assoc Physicians India</i> , 59, 23-28.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

Reference: Mikus, C. R., Fairfax, S. T., Libla, J. L., Boyle, L. J., Vianna, L. C., Oberlin, D. J., . . . Thyfault, J. P. (2011). Seven days of aerobic exercise training improves conduit artery blood flow following glucose ingestion in patients with type 2 diabetes. <i>J Appl Physiol</i> (1985), 111(3), 657-664. doi:10.1152/jappphysiol.00489.2011					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Robillard, M. E., Bellefeuille, P., Comtois, A. S., Aubertin-Leheudre, M., & Karelis, A. D. (2011). The metabolically healthy but obese postmenopausal woman presents a favourable heart rate variability profile. <i>Scand Cardiovasc J</i> , 45(5), 316-320. doi:10.3109/14017431.2011.591818					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: van Lien, R., Goedhart, A., Kupper, N., Boomsma, D., Willemsen, G., & de Geus, E. J. (2011). Underestimation of cardiac vagal control in regular exercisers by 24-hour heart rate variability recordings. <i>Int J Psychophysiol</i> , 81(3), 169-176. doi:10.1016/j.ijpsycho.2011.06.007					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ayer, J. G., Belousova, E., Harmer, J. A., David, C., Marks, G. B., & Celermajer, D. S. (2011). Maternal cigarette smoking is associated with reduced high-density lipoprotein cholesterol in healthy 8-year-old children. <i>Eur Heart J</i> , 32(19), 2446-2453. doi:10.1093/eurheartj/ehr174					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hasdemir, H., Yildiz, M., Metin, G., Kasap, H., Yildiz, B. S., Yaylak, B., & Ozyurt, A. (2011). Aortic properties and atrial electrophysiology in the young and old football players. <i>Rev Assoc Med Bras</i> (1992), 57(3), 280-285.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hart, T. L., Swartz, A. M., Cashin, S. E., & Strath, S. J. (2011). How many days of monitoring predict physical activity and sedentary behaviour in older adults? <i>Int J Behav Nutr Phys Act</i> , 8, 62. doi:10.1186/1479-5868-8-62					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gradmark, A., Pomeroy, J., Renstrom, F., Steingra, S., Persson, M., Wright, A., . . . Franks, P. W. (2011). Physical activity, sedentary behaviors, and estimated insulin sensitivity and secretion in pregnant and non-pregnant women. <i>BMC Pregnancy Childbirth</i> , 11, 44. doi:10.1186/1471-2393-11-44					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Leelarungrayub, D., Saidee, K., Pothongsunun, P., Pratanaphon, S., YanKai, A., & Bloomer, R. J. (2011). Six weeks of aerobic dance exercise improves blood oxidative stress status and increases interleukin-2 in previously sedentary women. <i>J Bodyw Mov Ther</i> , 15(3), 355-362. doi:10.1016/j.jbmt.2010.03.006					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wilson, A. M., Sadrzadeh-Rafie, A. H., Myers, J., Assimes, T., Nead, K. T., Higgins, M., . . . Cooke, J. P. (2011). Low lifetime recreational activity is a risk factor for peripheral arterial disease. <i>J Vasc Surg</i> , 54(2), 427-432, 432.e421-424. doi:10.1016/j.jvs.2011.02.052					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Janner, J. H., Godtfredsen, N. S., Ladelund, S., Vestbo, J., & Prescott, E. (2012). The association between aortic augmentation index and cardiovascular risk factors in a large unselected population. <i>J Hum Hypertens</i> , 26(8), 476-484. doi:10.1038/jhh.2011.59					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hopkins, N., Stratton, G., Ridgers, N. D., Graves, L. E., Cable, N. T., & Green, D. J. (2012). Lack of relationship between sedentary behaviour and vascular function in children. <i>Eur J Appl Physiol</i> , 112(2), 617-622. doi:10.1007/s00421-011-2011-3					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kreider, R. B., Serra, M., Beavers, K. M., Moreillon, J., Kresta, J. Y., Byrd, M., . . . Jonnalagadda, S. S. (2011). A structured diet and exercise program promotes favorable changes in weight loss, body composition, and weight maintenance. <i>J Am Diet Assoc</i> , 111(6), 828-843. doi:10.1016/j.jada.2011.03.013					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gopinath, B., Baur, L. A., Hardy, L. L., Kifley, A., Rose, K. A., Wong, T. Y., & Mitchell, P. (2012). Relationship between a range of sedentary behaviours and blood pressure during early adolescence. <i>J Hum Hypertens</i> , 26(6), 350-356. doi:10.1038/jhh.2011.40					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Henry-Okafor, Q., Cowan, P. A., Wicks, M. N., Rice, M., Husch, D. S., & Khoo, M. S. (2012). Effect of obesity on cardiovascular disease risk factors in African American women. <i>Biol Res Nurs</i> , 14(2), 171-179. doi:10.1177/1099800411405031					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Weissgerber, T. L., Davies, G. A., & Tschakovsky, M. E. (2011). Brachial artery flow-mediated dilation is not affected by pregnancy or regular exercise participation. <i>Clin Sci (Lond)</i> , 121(8), 355-365. doi:10.1042/cs20110008					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the	Sedentarism is not measured objectively	No longitudinal study with a	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	study/no definition of sedentarism		follow-up of min. 1 year		
Reference: Hsu, Y. W., Belcher, B. R., Ventura, E. E., Byrd-Williams, C. E., Weigensberg, M. J., Davis, J. N., . . . Spruijt-Metz, D. (2011). Physical activity, sedentary behavior, and the metabolic syndrome in minority youth. <i>Med Sci Sports Exerc</i> , 43(12), 2307-2313. doi:10.1249/MSS.0b013e318222020f					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wai, W. S., Dhimi, R. S., Gelaye, B., Girma, B., Lemma, S., Berhane, Y., . . . Williams, M. A. (2012). Comparison of measures of adiposity in identifying cardiovascular disease risk among Ethiopian adults. <i>Obesity (Silver Spring)</i> , 20(9), 1887-1895. doi:10.1038/oby.2011.103					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Artero, E. G., Lee, D. C., Ruiz, J. R., Sui, X., Ortega, F. B., Church, T. S., . . . Blair, S. N. (2011). A prospective study of muscular strength and all-cause mortality in men with hypertension. <i>J Am Coll Cardiol</i> , 57(18), 1831-1837. doi:10.1016/j.jacc.2010.12.025					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Komal, W., Jaipanesh, K., & Seemal, M. (2010). Association of leisure time physical activity, watching television, obesity & lipid profile among sedentary low-income south Indian population. <i>East Afr J Public Health</i> , 7(3), 225-228.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gopinath, B., Baur, L. A., Wang, J. J., Hardy, L. L., Teber, E., Kifley, A., . . . Mitchell, P. (2011). Influence of physical activity and screen time on the retinal microvasculature in young children. <i>Arterioscler Thromb Vasc Biol</i> , 31(5), 1233-1239. doi:10.1161/atvbaha.110.219451					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Chaput, J. P., Visby, T., Nyby, S., Klingenberg, L., Gregersen, N. T., Tremblay, A., . . . Sjodin, A. (2011). Video game playing increases food intake in adolescents: a randomized crossover study. <i>Am J Clin Nutr</i> , 93(6), 1196-1203. doi:10.3945/ajcn.110.008680					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Pal, S., Cheng, C., & Ho, S. (2011). The effect of two different health messages on physical activity levels and health in sedentary overweight, middle-aged women. <i>BMC Public Health</i> , 11, 204. doi:10.1186/1471-2458-11-204					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Laurent, P., Marengo, P., Castagna, O., Smulyan, H., Blacher, J., & Safar, M. E. (2011). Differences in central systolic blood pressure and aortic stiffness between aerobically trained and sedentary individuals. <i>J Am Soc Hypertens</i> , 5(2), 85-93. doi:10.1016/j.jash.2011.01.003					

Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Newton, J. L., Pairman, J., Hallsworth, K., Moore, S., Plotz, T., & Trenell, M. I. (2011). Physical activity intensity but not sedentary activity is reduced in chronic fatigue syndrome and is associated with autonomic regulation. <i>Qjm</i> , 104(8), 681-687. doi:10.1093/qjmed/hcr029					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Franklin, B. A. (2011). Health implications of low cardiorespiratory fitness, too little exercise, and too much sitting time: changing paradigms and perceptions. <i>Am J Health Promot</i> , 25(4), exi-v. doi:10.4278/ajhp.25.4.exi					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Vis, J. C., de Bruin-Bon, R. H., Bouma, B. J., Backx, A. P., Huisman, S. A., Imschoot, L., & Mulder, B. J. (2012). 'The sedentary heart': physical inactivity is associated with cardiac atrophy in adults with an intellectual disability. <i>Int J Cardiol</i> , 158(3), 387-393. doi:10.1016/j.ijcard.2011.01.064					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: DaSilva, S. G., Guidetti, L., Buzzachera, C. F., Elsangedy, H. M., Krinski, K., Krause, M. P., . . . Baldari, C. (2010). Age and physiological, perceptual, and affective responses during walking at a self-selected pace. <i>Percept Mot Skills</i> , 111(3), 963-978. doi:10.2466/06.10.13.pms.111.6.963-978					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Shrewsbury, V. A., Nguyen, B., O'Connor, J., Steinbeck, K. S., Lee, A., Hill, A. J., . . . Baur, L. A. (2011). Short-term outcomes of community-based adolescent weight management: The Loozit(R) Study. <i>BMC Pediatr</i> , 11, 13. doi:10.1186/1471-2431-11-13					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lee, Y. S., & Levy, S. S. (2011). Gender and income associations in physical activity and blood pressure among older adults. <i>J Phys Act Health</i> , 8(1), 1-9.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Klonizakis, M., & Winter, E. (2011). Effects of arm-cranking exercise in cutaneous microcirculation in older, sedentary people. <i>Microvasc Res</i> , 81(3), 331-336. doi:10.1016/j.mvr.2011.01.008					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Nualnim, N., Barnes, J. N., Tarumi, T., Renzi, C. P., & Tanaka, H. (2011). Comparison of central artery elasticity in swimmers, runners, and the sedentary. <i>Am J Cardiol</i> , 107(5), 783-787. doi:10.1016/j.amjcard.2010.10.062					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Devan, A. E., Umpierre, D., Harrison, M. L., Lin, H. F., Tarumi, T., Renzi, C. P., . . . Tanaka, H. (2011). Endothelial ischemia-reperfusion injury in humans: association with age and habitual exercise. <i>Am J Physiol Heart Circ Physiol</i> , 300(3), H813-819. doi:10.1152/ajpheart.00845.2010					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Billups, K. L., Miner, M. M., Wierzbicki, A. S., & Jackson, G. (2011). Gender-based cardiometabolic risk evaluation in minority and non-minority men grading the evidence of non-traditional determinants of cardiovascular risk. <i>Int J Clin Pract</i> , 65(2), 134-147. doi:10.1111/j.1742-1241.2010.02564.x					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Chataut, J., Adhikari, R. K., & Sinha, N. P. (2011). The prevalence of and risk factors for hypertension in adults living in central development region of Nepal. <i>Kathmandu Univ Med J (KUMJ)</i> , 9(33), 13-18.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Vogler, J., O'Hara, L., Gregg, J., & Burnell, F. (2011). The impact of a short-term iyengar yoga program on the health and well-being of physically inactive older adults. <i>Int J Yoga Therap</i> (21), 61-72.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Triik, J. L., Singhal, A., Bigelman, K. A., & Cureton, K. J. (2011). Effect of sprint interval training on circulatory function during exercise in sedentary, overweight/obese women. <i>Eur J Appl Physiol</i> , 111(8), 1591-1597. doi:10.1007/s00421-010-1777-z					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Joseph, J., Svartberg, J., Njolstad, I., & Schirmer, H. (2011). Risk factors for type 2 diabetes in groups stratified according to metabolic syndrome: a 10-year follow-up of the Tromso Study. <i>Eur J Epidemiol</i> , 26(2), 117-124. doi:10.1007/s10654-010-9540-7					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Pahkala, K., Heinonen, O. J., Lagstrom, H., Hakala, P., Hakanen, M., Hernelahti, M., . . . Simell, O. (2012). Clustered metabolic risk and leisure-time physical activity in adolescents: effect of dose? <i>Br J Sports Med</i> , 46(2), 131-137. doi:10.1136/bjism.2010.073239					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Stickland, M. K. (2010). Exercise-induced pulmonary edema in the athlete, or couch potato? <i>J Appl Physiol</i> (1985), 109(4), 1278; discussion 1281-1272.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Fujimoto, N., Prasad, A., Hastings, J. L., Arbab-Zadeh, A., Bhella, P. S., Shibata, S., . . . Levine, B. D. (2010). Cardiovascular effects of 1 year of progressive and vigorous exercise training in previously sedentary individuals older than 65 years of age. <i>Circulation</i> , 122(18), 1797-1805. doi:10.1161/circulationaha.110.973784					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Segerstrom, A. B., Holmback, A. M., Elzyri, T., Eriksson, K. F., Ringsberg, K., Groop, L., . . . Wollmer, P. (2011). Upper body muscle strength and endurance in relation to peak exercise capacity during cycling in healthy sedentary male subjects. <i>J Strength Cond Res</i> , 25(5), 1413-1417. doi:10.1519/JSC.0b013e3181d68579					
Reason for exclusion :					
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Reference: Duru, O. K., Sarkisian, C. A., Leng, M., & Mangione, C. M. (2010). Sisters in motion: a randomized controlled trial of a faith-based physical activity intervention. <i>J Am Geriatr Soc</i> , 58(10), 1863-1869. doi:10.1111/j.1532-5415.2010.03082.x					
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Reference: Monteiro, L. Z., Fiani, C. R., Freitas, M. C., Zanetti, M. L., & Foss, M. C. (2010). Decrease in blood pressure, body mass in dex and glycemia after aerobic training in elderly women with type 2 diabetes. <i>Arq Bras Cardiol</i> , 95(5), 563-570.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hargens, T. A., Griffin, D. C., Kaminsky, L. A., & Whaley, M. H. (2011). The influence of aerobic exercise training on the double product break point in low-to-moderate risk adults. <i>Eur J Appl Physiol</i> , 111(2), 313-318. doi:10.1007/s00421-010-1661-x					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	definition of sedentarism				
Reference: Hiruntrakul, A., Nanagara, R., Emasithi, A., & Borer, K. T. (2010). Effect of once a week endurance exercise on fitness status in sedentary subjects. <i>J Med Assoc Thai</i> , 93(9), 1070-1074.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Costa, T. R., Lima, T. P., Gontijo, P. L., Carvalho, H. A., Cardoso, F. P., Faria, O. P., & Cavalcanti Neto, F. F. (2010). Correlation of respiratory muscle strength with anthropometric variables of normal-weight and obese women. <i>Rev Assoc Med Bras</i> (1992), 56(4), 403-408.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Segerstrom, A. B., Glans, F., Eriksson, K. F., Holmback, A. M., Groop, L., Thorsson, O., & Wollmer, P. (2010). Impact of exercise intensity and duration on insulin sensitivity in women with T2D. <i>Eur J Intern Med</i> , 21(5), 404-408. doi:10.1016/j.ejim.2010.05.003					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: White, K., Schofield, G., & Kilding, A. E. (2011). Energy expended by boys playing active video games. <i>J Sci Med Sport</i> , 14(2), 130-134. doi:10.1016/j.jsams.2010.07.005					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Battagin, A. M., Dal Corso, S., Soares, C. L., Ferreira, S., Leticia, A., Souza, C., & Malaguti, C. (2010). Pressure response after resistance exercise for different body segments in hypertensive people. <i>Arq Bras Cardiol</i> , 95(3), 405-411.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ullrich-French, S. C., Power, T. G., Daratha, K. B., Bindler, R. C., & Steele, M. M. (2010). Examination of adolescents' screen time and physical fitness as independent correlates of weight status and blood pressure. <i>J Sports Sci</i> , 28(11), 1189-1196. doi:10.1080/02640414.2010.487070					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Martins, R. A., Verissimo, M. T., Coelho e Silva, M. J., Cumming, S. P., & Teixeira, A. M. (2010). Effects of aerobic and strength-based training on metabolic health indicators in older adults. <i>Lipids Health Dis</i> , 9, 76. doi:10.1186/1476-511x-9-76					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Atalay, A., Turhan, N., & Atalay, B. (2012). Deconditioning in chronic low back pain: might there be a relationship between fitness and magnetic resonance imaging findings? <i>Rheumatol Int</i> , 32(1), 21-25. doi:10.1007/s00296-010-1544-9					
Reason for exclusion :					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Simsek, Z., Gundogdu, F., Alpaydin, S., Gerek, Z., Ercis, S., Sen, I., . . . Karakelleoglu, S. (2011). Analysis of athletes' heart by tissue Doppler and strain/strain rate imaging. <i>Int J Cardiovasc Imaging</i> , 27(1), 105-111. doi:10.1007/s10554-010-9669-1					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Eriksson, M., Udden, J., Hemmingsson, E., & Agewall, S. (2010). Impact of physical activity and body composition on heart function and morphology in middle-aged, abdominally obese women. <i>Clin Physiol Funct Imaging</i> , 30(5), 354-359. doi:10.1111/j.1475-097X.2010.00952.x					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Pierce, G. L., Eskurza, I., Walker, A. E., Fay, T. N., & Seals, D. R. (2011). Sex-specific effects of habitual aerobic exercise on brachial artery flow-mediated dilation in middle-aged and older adults. <i>Clin Sci (Lond)</i> , 120(1), 13-23. doi:10.1042/cs20100174					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Pressler, A., Knebel, U., Esch, S., Kolbl, D., Esefeld, K., Scherr, J., . . . Leimeister, J. M. (2010). An internet-delivered exercise intervention for workplace health promotion in overweight sedentary employees: a randomized trial. <i>Prev Med</i> , 51(3-4), 234-239. doi:10.1016/j.ypmed.2010.07.008					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hallage, T., Krause, M. P., Haile, L., Miculis, C. P., Nagle, E. F., Reis, R. S., & Da Silva, S. G. (2010). The effects of 12 weeks of step aerobics training on functional fitness of elderly women. <i>J Strength Cond Res</i> , 24(8), 2261-2266. doi:10.1519/JSC.0b013e3181ddacc6					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Yeo, S. (2010). Prenatal stretching exercise and autonomic responses: preliminary data and a model for reducing preeclampsia. <i>J Nurs Scholarsh</i> , 42(2), 113-121. doi:10.1111/j.1547-5069.2010.01344.x					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Richter, C. M., Panigas, T. F., Bundchen, D. C., Dipp, T., Belli, K. C., & Vecili, P. R. (2010). Blood pressure reduction in hyper-reactive individuals after aerobic exercise. <i>Arq Bras Cardiol</i> , 95(2), 251-257.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

Reference: Kawano, H., Tanimoto, M., Yamamoto, K., Gando, Y., Sanada, K., Tabata, I., . . . Miyachi, M. (2010). Greater forearm venous compliance in resistance-trained men. <i>Eur J Appl Physiol</i> , 110(4), 769-777. doi:10.1007/s00421-010-1557-9					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Brown, B., Noonan, C., Bentley, B., Conway, K., Corcoran, M., FourStar, K., . . . Wagner, S. (2010). Acanthosis nigricans among Northern Plains American Indian children. <i>J Sch Nurs</i> , 26(6), 450-460. doi:10.1177/1059840510376383					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Bianco, A., Bellafiore, M., Battaglia, G., Paoli, A., Caramazza, G., Farina, F., & Palma, A. (2010). The effects of indoor cycling training in sedentary overweight women. <i>J Sports Med Phys Fitness</i> , 50(2), 159-165.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lamina, S. (2011). Comparative effect of interval and continuous training programs on serum uric acid in management of hypertension: a randomized controlled trial. <i>J Strength Cond Res</i> , 25(3), 719-726. doi:10.1519/JSC.0b013e3181d09edf					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Mota, J., Ribeiro, J. C., Carvalho, J., Santos, M. P., & Martins, J. (2010). Television viewing and changes in body mass index and cardiorespiratory fitness over a two-year period in schoolchildren. <i>Pediatr Exerc Sci</i> , 22(2), 245-253.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Graves, L. E., Ridgers, N. D., Williams, K., Stratton, G., Atkinson, G., & Cable, N. T. (2010). The physiological cost and enjoyment of Wii Fit in adolescents, young adults, and older adults. <i>J Phys Act Health</i> , 7(3), 393-401.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Martins Mdo, C., Ricarte, I. F., Rocha, C. H., Maia, R. B., Silva, V. B., Veras, A. B., & Filho, M. D. (2010). Blood pressure, excess weight and level of physical activity in students of a public university. <i>Arq Bras Cardiol</i> , 95(2), 192-199.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Giagkoudaki, F., Dimitros, E., Kouidi, E., & Deligiannis, A. (2010). Effects of exercise training on heart-rate-variability indices in individuals with Down Syndrome. <i>J Sport Rehabil</i> , 19(2), 173-183.					
<i>Reason for exclusion :</i>					
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Reference:					

Hornnes, N., Larsen, K., & Boysen, G. (2010). Little change of modifiable risk factors 1 year after stroke: a pilot study. <i>Int J Stroke</i> , 5(3), 157-162. doi:10.1111/j.1747-4949.2010.00424.x					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: van Duijnhoven, N. T., Green, D. J., Felsenberg, D., Belavy, D. L., Hopman, M. T., & Thijssen, D. H. (2010). Impact of bed rest on conduit artery remodeling: effect of exercise countermeasures. <i>Hypertension</i> , 56(2), 240-246. doi:10.1161/hypertensionaha.110.152868					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Parker, B. A., Kalasky, M. J., & Proctor, D. N. (2010). Evidence for sex differences in cardiovascular aging and adaptive responses to physical activity. <i>Eur J Appl Physiol</i> , 110(2), 235-246. doi:10.1007/s00421-010-1506-7					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Navasolava, N. M., Dignat-George, F., Sabatier, F., Larina, I. M., Demiot, C., Fortrat, J. O., . . . Custaud, M. A. (2010). Enforced physical inactivity increases endothelial microparticle levels in healthy volunteers. <i>Am J Physiol Heart Circ Physiol</i> , 299(2), H248-256. doi:10.1152/ajpheart.00152.2010					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kato, T., Kikuya, M., Ohkubo, T., Satoh, M., Hara, A., Obara, T., . . . Imai, Y. (2010). Factors associated with day-by-day variability of self-measured blood pressure at home: the Ohasama study. <i>Am J Hypertens</i> , 23(9), 980-986. doi:10.1038/ajh.2010.94					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Erbs, S., Holtriegel, R., Linke, A., Beck, E. B., Adams, V., Gielen, S., . . . Schuler, G. (2010). Exercise training in patients with advanced chronic heart failure (NYHA IIIb) promotes restoration of peripheral vasomotor function, induction of endogenous regeneration, and improvement of left ventricular function. <i>Circ Heart Fail</i> , 3(4), 486-494. doi:10.1161/circheartfailure.109.868992					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: De Bock, F., Menze, J., Becker, S., Litaker, D., Fischer, J., & Seidel, I. (2010). Combining accelerometry and HR for assessing preschoolers' physical activity. <i>Med Sci Sports Exerc</i> , 42(12), 2237-2243. doi:10.1249/MSS.0b013e3181e27b5d					
<i>Reason for exclusion :</i>					
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Reference: Carvalho, V. O., Bocchi, E. A., & Guimaraes, G. V. (2010). The carvedilol's beta-blockade in heart failure and exercise training's sympathetic blockade in healthy athletes during the rest and peak effort. <i>Cardiovasc Ther</i> , 28(2), 87-92. doi:10.1111/j.1755-5922.2009.00113.x					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Earnest, C. P., Blair, S. N., & Church, T. S. (2010). Age attenuated response to aerobic conditioning in postmenopausal women. <i>Eur J Appl Physiol</i> , 110(1), 75-82. doi:10.1007/s00421-010-1472-0					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wang, H., Cao, J., Li, J., Chen, J., Wu, X., Duan, X., . . . Gu, D. (2010). Blood pressure, body mass index and risk of cardiovascular disease in Chinese men and women. <i>BMC Public Health</i> , 10, 189. doi:10.1186/1471-2458-10-189					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gardner, A. W., & Montgomery, P. S. (2010). Resting energy expenditure in patients with intermittent claudication and critical limb ischemia. <i>J Vasc Surg</i> , 51(6), 1436-1441. doi:10.1016/j.jvs.2009.12.072					
<i>Reason for exclusion :</i>					
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Reference: Okuno, M., Kim, M. K., Mizu, M., Mori, M., Mori, H., & Yamori, Y. (2010). Palatinose-blended sugar compared with sucrose: different effects on insulin sensitivity after 12 weeks supplementation in sedentary adults. <i>Int J Food Sci Nutr</i> , 61(6), 643-651. doi:10.3109/09637481003694576					
<i>Reason for exclusion :</i>					
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Reference: Cooney, M. T., Vartiainen, E., Laatikainen, T., Juolevi, A., Dudina, A., & Graham, I. M. (2010). Elevated resting heart rate is an independent risk factor for cardiovascular disease in healthy men and women. <i>Am Heart J</i> , 159(4), 612-619.e613. doi:10.1016/j.ahj.2009.12.029					
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Reference: Garelnabi, M., Veledar, E., Abramson, J., White-Welkley, J., Santanam, N., Weintraub, W., & Parthasarathy, S. (2010). Physical inactivity and cardiovascular risk: baseline observations from men and premenopausal women. <i>J Clin Lab Anal</i> , 24(2), 100-105. doi:10.1002/jcla.20368					
<i>Reason for exclusion :</i>					
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Reference: Meyer, P., Kayser, B., Kossovsky, M. P., Sigaud, P., Carballo, D., Keller, P. F., . . . Mach, F. (2010). Stairs instead of elevators at workplace: cardioprotective effects of a pragmatic intervention. <i>Eur J Cardiovasc Prev Rehabil</i> , 17(5), 569-575. doi:10.1097/HJR.0b013e328338a4dd					
<i>Reason for exclusion :</i>					
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Reference: Aires, L., Silva, P., Silva, G., Santos, M. P., Ribeiro, J. C., & Mota, J. (2010). Intensity of physical activity, cardiorespiratory fitness, and body mass index in youth. <i>J Phys Act Health</i> , 7(1), 54-59.					
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Reference: Rebello, A. C., Zuttin, R. S., Verlengia, R., Cesar Mde, C., de Sa, M. F., & da Silva, E. (2010). Effect of low-dose combined oral contraceptive on aerobic capacity and anaerobic threshold level in active and sedentary young women. <i>Contraception</i> , 81(4), 309-315. doi:10.1016/j.contraception.2009.11.005					
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Reference: Weissgerber, T. L., Davies, G. A., & Roberts, J. M. (2010). Modification of angiogenic factors by regular and acute exercise during pregnancy. <i>J Appl Physiol</i> (1985), 108(5), 1217-1223. doi:10.1152/jappphysiol.00008.2010					
<i>Reason for exclusion :</i>					
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Reference: de Ramirez, S. S., Enquobahrie, D. A., Nyadzi, G., Mjungu, D., Magombo, F., Ramirez, M., . . . Willett, W. (2010). Prevalence and correlates of hypertension: a cross-sectional study among rural populations in sub-Saharan Africa. <i>J Hum Hypertens</i> , 24(12), 786-795. doi:10.1038/jhh.2010.14					
<i>Reason for exclusion :</i>					
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Reference: Kazlauskaitė, R., Doukky, R., Evans, A., Margeta, B., Ruchi, A., Fogelfeld, L., & Kelly, R. F. (2010). Predictors of diastolic dysfunction among minority patients with newly diagnosed type 2 diabetes. <i>Diabetes Res Clin Pract</i> , 88(2), 189-195. doi:10.1016/j.diabetes.2009.12.007					
<i>Reason for exclusion :</i>					
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Reference: Chaiton, M., O'Loughlin, J., Karp, I., & Lambert, M. (2010). Depressive symptoms and C-reactive protein are not associated in a population-based sample of adolescents. <i>Int J Behav Med</i> , 17(3), 216-222. doi:10.1007/s12529-010-9078-9					
<i>Reason for exclusion :</i>					
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Reference: Penko, A. L., & Barkley, J. E. (2010). Motivation and physiologic responses of playing a physically interactive video game relative to a sedentary alternative in children. <i>Ann Behav Med</i> , 39(2), 162-169. doi:10.1007/s12160-010-9164-x					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Whyte, L. J., Gill, J. M., & Cathcart, A. J. (2010). Effect of 2 weeks of sprint interval training on health-related outcomes in sedentary overweight/obese men. <i>Metabolism</i> , 59(10), 1421-1428. doi:10.1016/j.metabol.2010.01.002					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no	Sedentarism is not measured objectively	No longitudinal study with a	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	definition of sedentarism		follow-up of min. 1 year		
Reference: Stapleton, J., Gagnon, D., & Kenny, G. P. (2010). Short-term exercise training does not improve whole-body heat loss when rate of metabolic heat production is considered. <i>Eur J Appl Physiol</i> , 109(3), 437-446. doi:10.1007/s00421-010-1380-3					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Campbell, P. T., Gross, M. D., Potter, J. D., Schmitz, K. H., Duggan, C., McTiernan, A., & Ulrich, C. M. (2010). Effect of exercise on oxidative stress: a 12-month randomized, controlled trial. <i>Med Sci Sports Exerc</i> , 42(8), 1448-1453. doi:10.1249/MSS.0b013e3181cfc908					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wijndaele, K., Healy, G. N., Dunstan, D. W., Barnett, A. G., Salmon, J., Shaw, J. E., . . . Owen, N. (2010). Increased cardiometabolic risk is associated with increased TV viewing time. <i>Med Sci Sports Exerc</i> , 42(8), 1511-1518. doi:10.1249/MSS.0b013e3181d322ac					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Andersen, L. J., Hansen, P. R., Sogaard, P., Madsen, J. K., Bech, J., & Krstrup, P. (2010). Improvement of systolic and diastolic heart function after physical training in sedentary women. <i>Scand J Med Sci Sports</i> , 20 Suppl 1, 50-57. doi:10.1111/j.1600-0838.2009.01088.x					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Chaix, B., Bean, K., Leal, C., Thomas, F., Havard, S., Evans, D., . . . Pannier, B. (2010). Individual/neighborhood social factors and blood pressure in the RECORD Cohort Study: which risk factors explain the associations? <i>Hypertension</i> , 55(3), 769-775. doi:10.1161/hypertensionaha.109.143206					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: So, H. K., Sung, R. Y., Li, A. M., Choi, K. C., Nelson, E. A., Yin, J., . . . Fok, T. F. (2010). Higher exercise frequency associated with lower blood pressure in Hong Kong adolescents: a population-based study. <i>J Hum Hypertens</i> , 24(10), 646-651. doi:10.1038/jhh.2009.117					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Stepp, D. W. (2010). Origins of vascular disease: is fat where it's at? <i>J Appl Physiol</i> (1985), 108(3), 475-476. doi:10.1152/jappphysiol.01434.2009					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Nygaard, H., Tomten, S. E., & Hostmark, A. T. (2009). Slow postmeal walking reduces postprandial glycemia in middle-aged women. <i>Appl Physiol Nutr Metab</i> , 34(6), 1087-1092. doi:10.1139/h09-110					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65]]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Foster, C., Porcari, J. P., Gibson, M., Wright, G., Greany, J., Talati, N., & Recalde, P. (2009). Translation of submaximal exercise test responses to exercise prescription using the Talk Test. <i>J Strength Cond Res</i> , 23(9), 2425-2429.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65]]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Koivukangas, J., Tammelin, T., Kaakinen, M., Maki, P., Moilanen, I., Taanila, A., & Veijola, J. (2010). Physical activity and fitness in adolescents at risk for psychosis within the Northern Finland 1986 Birth Cohort. <i>Schizophr Res</i> , 116(2-3), 152-158. doi:10.1016/j.schres.2009.10.022					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65]]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Thorp, A. A., Healy, G. N., Owen, N., Salmon, J., Ball, K., Shaw, J. E., . . . Dunstan, D. W. (2010). Deleterious associations of sitting time and television viewing time with cardiometabolic risk biomarkers: Australian Diabetes, Obesity and Lifestyle (AusDiab) study 2004-2005. <i>Diabetes Care</i> , 33(2), 327-334. doi:10.2337/dc09-0493					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65]]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gouvea, A. F., Vargas, P. A., Jorge, J., & Lopes, M. A. (2009). Using panoramic radiographs to detect carotid artery calcifications: are they a helpful diagnostic tool? <i>Gen Dent</i> , 57(5), 480-484.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65]]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sisson, S. B., Camhi, S. M., Church, T. S., Martin, C. K., Tudor-Locke, C., Bouchard, C., . . . Katzmarzyk, P. T. (2009). Leisure time sedentary behavior, occupational/domestic physical activity, and metabolic syndrome in U.S. men and women. <i>Metab Syndr Relat Disord</i> , 7(6), 529-536. doi:10.1089/met.2009.0023					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65]]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Besson, H., Brage, S., Jakes, R. W., Ekelund, U., & Wareham, N. J. (2010). Estimating physical activity energy expenditure, sedentary time, and physical activity intensity by self-report in adults. <i>Am J Clin Nutr</i> , 91(1), 106-114. doi:10.3945/ajcn.2009.28432					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65]]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lockwood, C. M., Moon, J. R., Smith, A. E., Tobkin, S. E., Kendall, K. L., Graef, J. L., . . . Stout, J. R. (2010). Low-calorie energy drink improves physiological response to exercise in previously sedentary men: a placebo-controlled efficacy and safety study. <i>J Strength Cond Res</i> , 24(8), 2227-2238. doi:10.1519/JSC.0b013e3181aeb0cf					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kraemer-Aguiar, L. G., Maranhao, P. A., Sicuro, F. L., & Bouskela, E. (2010). Microvascular dysfunction: a direct link among BMI, waist circumference and glucose homeostasis in young overweight/obese normoglycemic women? <i>Int J Obes (Lond)</i> , 34(1), 111-117. doi:10.1038/ijo.2009.209					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lindholm, H., Sinisalo, J., Ahlberg, J., Jahkola, A., Partinen, M., Hublin, C., & Savolainen, A. (2009). High job control enhances vagal recovery in media work. <i>Occup Med (Lond)</i> , 59(8), 570-573. doi:10.1093/occmed/kqp141					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: King, N. A., Hopkins, M., Caudwell, P., Stubbs, R. J., & Blundell, J. E. (2009). Beneficial effects of exercise: shifting the focus from body weight to other markers of health. <i>Br J Sports Med</i> , 43(12), 924-927. doi:10.1136/bjism.2009.065557					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gluba, A., Banach, M., Mikhailidis, D. P., & Rysz, J. (2009). Genetic determinants of cardiovascular disease: the renin-angiotensin-aldosterone system, paraoxonases, endothelin-1, nitric oxide synthase and adrenergic receptors. <i>In Vivo</i> , 23(5), 797-812.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lepretre, P. M., Vogel, T., Brechat, P. H., Dufour, S., Richard, R., Kaltenbach, G., . . . Lonsdorfer, J. (2009). Impact of short-term aerobic interval training on maximal exercise in sedentary aged subjects. <i>Int J Clin Pract</i> , 63(10), 1472-1478. doi:10.1111/j.1742-1241.2009.02120.x					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Barakat, R., Ruiz, J. R., Rodriguez-Romo, G., Montejo-Rodriguez, R., & Lucia, A. (2010). Does exercise training during pregnancy influence fetal cardiovascular responses to an exercise stimulus? Insights from a randomised, controlled trial. <i>Br J Sports Med</i> , 44(10), 762-764. doi:10.1136/bjism.2009.062547					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Tesfaye, F., Byass, P., & Wall, S. (2009). Population based prevalence of high blood pressure among adults in Addis Ababa: uncovering a silent epidemic. <i>BMC Cardiovasc Disord</i> , 9, 39. doi:10.1186/1471-2261-9-39					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no	Sedentarism is not measured objectively	No longitudinal study with a	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	definition of sedentarism		follow-up of min. 1 year		
Reference: van der Heijden, G. J., Wang, Z. J., Chu, Z. D., Sauer, P. J., Haymond, M. W., Rodriguez, L. M., & Snehag, A. L. (2010). A 12-week aerobic exercise program reduces hepatic fat accumulation and insulin resistance in obese, Hispanic adolescents. <i>Obesity (Silver Spring)</i> , 18(2), 384-390. doi:10.1038/oby.2009.274					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lind, E., Welch, A. S., & Ekkekakis, P. (2009). Do 'mind over muscle' strategies work? Examining the effects of attentional association and dissociation on exertional, affective and physiological responses to exercise. <i>Sports Med</i> , 39(9), 743-764. doi:10.2165/11315120-000000000-00000					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Faerch, K., Borch-Johnsen, K., Holst, J. J., & Vaag, A. (2009). Pathophysiology and aetiology of impaired fasting glycaemia and impaired glucose tolerance: does it matter for prevention and treatment of type 2 diabetes? <i>Diabetologia</i> , 52(9), 1714-1723. doi:10.1007/s00125-009-1443-3					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Zaros, P. R., Pires, C. E., Bacci, M., Jr., Moraes, C., & Zanesco, A. (2009). Effect of 6-months of physical exercise on the nitrate/nitrite levels in hypertensive postmenopausal women. <i>BMC Womens Health</i> , 9, 17. doi:10.1186/1472-6874-9-17					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Labarthe, D. R., Dai, S., Fulton, J. E., Harrist, R. B., Shah, S. M., & Eissa, M. A. (2009). Systolic and fourth- and fifth-phase diastolic blood pressure from ages 8 to 18 years: Project HeartBeat! <i>Am J Prev Med</i> , 37(1 Suppl), S86-96. doi:10.1016/j.amepre.2009.04.014					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Arsenault, B. J., Cote, M., Cartier, A., Lemieux, I., Despres, J. P., Ross, R., . . . Church, T. S. (2009). Effect of exercise training on cardiometabolic risk markers among sedentary, but metabolically healthy overweight or obese post-menopausal women with elevated blood pressure. <i>Atherosclerosis</i> , 207(2), 530-533. doi:10.1016/j.atherosclerosis.2009.05.009					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Harris, C. L., & George, V. A. (2010). Dietary restraint influences accuracies in estimating energy expenditure and energy intake among physically inactive males. <i>Am J Mens Health</i> , 4(1), 33-40. doi:10.1177/1557988308327052					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Pasqualini, L., Schillaci, G., Innocente, S., Pucci, G., Coscia, F., Siepi, D., . . . Mannarino, E. (2010). Lifestyle intervention improves microvascular reactivity and increases serum adiponectin in overweight hypertensive patients. <i>Nutr Metab Cardiovasc Dis</i> , 20(2), 87-92. doi:10.1016/j.numecd.2009.03.002					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hurwitz, B. E., Coryell, V. T., Parker, M., Martin, P., Laperriere, A., Klimas, N. G., . . . Bilsker, M. S. (2009). Chronic fatigue syndrome: illness severity, sedentary lifestyle, blood volume and evidence of diminished cardiac function. <i>Clin Sci (Lond)</i> , 118(2), 125-135. doi:10.1042/cs20090055					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Muxfeldt, E. S., Cardoso, C. R., & Salles, G. F. (2009). Prognostic value of nocturnal blood pressure reduction in resistant hypertension. <i>Arch Intern Med</i> , 169(9), 874-880. doi:10.1001/archinternmed.2009.68					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ferretti, G., Iellamo, F., Pizzinelli, P., Kenfack, M. A., Lador, F., Lucini, D., . . . Pagani, M. (2009). Prolonged head down bed rest-induced inactivity impairs tonic autonomic regulation while sparing oscillatory cardiovascular rhythms in healthy humans. <i>J Hypertens</i> , 27(3), 551-561. doi:10.1097/HJH.0b013e328322ca2f					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Castelbon, K., Vernay, M., Malon, A., Salanave, B., Deschamps, V., Roudier, C., . . . Hercberg, S. (2009). Dietary intake, physical activity and nutritional status in adults: the French nutrition and health survey (ENNS, 2006-2007). <i>Br J Nutr</i> , 102(5), 733-743. doi:10.1017/s0007114509274745					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Van Duijnhoven, N. T., Janssen, T. W., Green, D. J., Minson, C. T., Hopman, M. T., & Thijssen, D. H. (2009). Effect of functional electrostimulation on impaired skin vasodilator responses to local heating in spinal cord injury. <i>J Appl Physiol</i> (1985), 106(4), 1065-1071. doi:10.1152/jappphysiol.91611.2008					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gerber, Y., Benyamini, Y., Goldbourt, U., & Drory, Y. (2009). Prognostic importance and long-term determinants of self-rated health after initial acute myocardial infarction. <i>Med Care</i> , 47(3), 342-349. doi:10.1097/MLR.0b013e3181894270					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cardoso, C. R., Ferreira, M. T., Leite, N. C., Barros, P. N., Conte, P. H., & Salles, G. F. (2009). Microvascular degenerative complications are associated with increased aortic stiffness in type 2 diabetic patients. <i>Atherosclerosis</i> , 205(2), 472-476. doi:10.1016/j.atherosclerosis.2008.12.027					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Grippe, A. J., & Johnson, A. K. (2009). Stress, depression and cardiovascular dysregulation: a review of neurobiological mechanisms and the integration of research from preclinical disease models. <i>Stress</i> , 12(1), 1-21. doi:10.1080/10253890802046281					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Leung, F. P., Yung, L. M., Laher, I., Yao, X., Chen, Z. Y., & Huang, Y. (2008). Exercise, vascular wall and cardiovascular diseases: an update (Part 1). <i>Sports Med</i> , 38(12), 1009-1024. doi:10.2165/00007256-200838120-00005					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hopkins, N. D., Stratton, G., Tinken, T. M., McWhannell, N., Ridgers, N. D., Graves, L. E., . . . Green, D. J. (2009). Relationships between measures of fitness, physical activity, body composition and vascular function in children. <i>Atherosclerosis</i> , 204(1), 244-249. doi:10.1016/j.atherosclerosis.2008.09.004					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Earnest, C. P., Lavie, C. J., Blair, S. N., & Church, T. S. (2008). Heart rate variability characteristics in sedentary postmenopausal women following six months of exercise training: the DREW study. <i>PLoS One</i> , 3(6), e2288. doi:10.1371/journal.pone.0002288					
Reason for exclusion :					
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Reference: Bertoli, S., Spadafranca, A., Merati, G., Testolin, G., Veicsteinas, A., & Battezzati, A. (2008). Nutritional counselling in disabled people: effects on dietary patterns, body composition and cardiovascular risk factors. <i>Eur J Phys Rehabil Med</i> , 44(2), 149-158.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Mikus, C. R., Earnest, C. P., Blair, S. N., & Church, T. S. (2009). Heart rate and exercise intensity during training: observations from the DREW Study. <i>Br J Sports Med</i> , 43(10), 750-755. doi:10.1136/bjism.2008.046342					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ibhazehiebo, K., Dimkpa, U. I., & Iyawe, V. I. (2007). Hypertension, and blood pressure response to graded exercise in young obese and non-athletic Nigerian university students. <i>Niger J Physiol Sci</i> , 22(1-2), 37-42.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ekkekakis, P., Hall, E. E., & Petruzzello, S. J. (2008). The relationship between exercise intensity and affective responses demystified: to crack the 40-year-old nut, replace the 40-year-old nutcracker! <i>Ann Behav Med</i> , 35(2), 136-149. doi:10.1007/s12160-008-9025-z					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Johnson, R. J., Gaucher, E. A., Sautin, Y. Y., Henderson, G. N., Angerhofer, A. J., & Benner, S. A. (2008). The planetary biology of ascorbate and uric acid and their relationship with the epidemic of obesity and cardiovascular disease. <i>Med Hypotheses</i> , 71(1), 22-31. doi:10.1016/j.mehy.2008.01.017					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Thijssen, D. H., Kooijman, M., de Groot, P. C., Bleeker, M. W., Smits, P., Green, D. J., & Hopman, M. T. (2008). Endothelium-dependent and -independent vasodilation of the superficial femoral artery in spinal cord-injured subjects. <i>J Appl Physiol</i> (1985), 104(5), 1387-1393. doi:10.1152/jappphysiol.01039.2007					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Dennison, D. A., Yin, Z., Kibbe, D., Burns, S., & Trowbridge, F. (2008). Training health care professionals to manage overweight adolescents: experience in rural Georgia communities. <i>J Rural Health</i> , 24(1), 55-59. doi:10.1111/j.1748-0361.2008.00137.x					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Yamada, Y., Kato, K., Yoshida, T., Yokoi, K., Matsuo, H., Watanabe, S., . . . Nozawa, Y. (2008). Association of polymorphisms of ABCA1 and ROS1 with hypertension in Japanese individuals. <i>Int J Mol Med</i> , 21(1), 83-89.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kooijman, M., Thijssen, D. H., de Groot, P. C., Bleeker, M. W., van Kuppevelt, H. J., Green, D. J., . . . Hopman, M. T. (2008). Flow-mediated dilatation in the superficial femoral artery is nitric oxide mediated in humans. <i>J Physiol</i> , 586(4), 1137-1145. doi:10.1113/jphysiol.2007.145722					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Alexander, L. M. (2007). Hypertension within the cardiovascular disease risk paradigm. <i>Jaapa, Suppl Hypertension</i> , 3-8.					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Selby, J. V., Swain, B. E., Gerzoff, R. B., Karter, A. J., Waitzfelder, B. E., Brown, A. F., . . . Narayan, K. M. (2007). Understanding the gap between good processes of diabetes care and poor intermediate outcomes: Translating Research into Action for Diabetes (TRIAD). <i>Med Care</i> , 45(12), 1144-1153. doi:10.1097/MLR.0b013e3181468e79					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sun, Y., Yang, Y., Pei, W., Wu, Y., & Zhao, J. (2007). Is elevated high-density lipoprotein cholesterol always good for coronary heart disease? <i>Clin Cardiol</i> , 30(11), 576-580. doi:10.1002/clc.20137					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Suzuki, T., & Homma, S. (2007). Treatment of hypertension and other cardiovascular risk factors in patients with metabolic syndrome. <i>Med Clin North Am</i> , 91(6), 1211-1223, x. doi:10.1016/j.mcna.2007.06.009					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sagiv, M., Goldhammer, E., Ben-Sira, D., & Amir, R. (2007). What maintains energy supply at peak aerobic exercise in trained and untrained older men? <i>Gerontology</i> , 53(6), 357-361. doi:10.1159/000104898					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Berndtsson, G., Mattsson, E., Marcus, C., & Larsson, U. E. (2007). Age and gender differences in VO2max in Swedish obese children and adolescents. <i>Acta Paediatr</i> , 96(4), 567-571. doi:10.1111/j.1651-2227.2007.00139.x					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Bryan, A., Hutchison, K. E., Seals, D. R., & Allen, D. L. (2007). A transdisciplinary model integrating genetic, physiological, and psychological correlates of voluntary exercise. <i>Health Psychol</i> , 26(1), 30-39. doi:10.1037/0278-6133.26.1.30					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Taivassalo, T., Gardner, J. L., Taylor, R. W., Schaefer, A. M., Newman, J., Barron, M. J., . . . Turnbull, D. M. (2006). Endurance training and detraining in mitochondrial myopathies due to single large-scale mtDNA deletions. <i>Brain</i> , 129(Pt 12), 3391-3401. doi:10.1093/brain/awl282					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Thijssen, D. H., Vos, J. B., Verseyden, C., van Zonneveld, A. J., Smits, P., Sweep, F. C., . . . de Boer, H. C. (2006). Haematopoietic stem cells and endothelial progenitor cells in healthy men: effect of aging and training. <i>Aging Cell</i> , 5(6), 495-503. doi:10.1111/j.1474-9726.2006.00242.x					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Stump, C. S., Henriksen, E. J., Wei, Y., & Sowers, J. R. (2006). The metabolic syndrome: role of skeletal muscle metabolism. <i>Ann Med</i> , 38(6), 389-402. doi:10.1080/07853890600888413					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no	Sedentarism is not measured objectively	No longitudinal study with a	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	definition of sedentarism		follow-up of min. 1 year		
Reference: Salles, G., Cardoso, C., Nogueira, A. R., Bloch, K., & Muxfeldt, E. (2006). Importance of the electrocardiographic strain pattern in patients with resistant hypertension. <i>Hypertension</i> , 48(3), 437-442. doi:10.1161/01.HYP.0000236550.90214.1c					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Borgman, M., & McErlean, E. (2006). What is the metabolic syndrome? Prediabetes and cardiovascular risk. <i>J Cardiovasc Nurs</i> , 21(4), 285-290.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Haller, R. G., Wyrick, P., Taivassalo, T., & Vissing, J. (2006). Aerobic conditioning: an effective therapy in McArdle's disease. <i>Ann Neurol</i> , 59(6), 922-928. doi:10.1002/ana.20881					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wilder, R. P., Greene, J. A., Winters, K. L., Long, W. B., 3rd, Gubler, K., & Edlich, R. F. (2006). Physical fitness assessment: an update. <i>J Long Term Eff Med Implants</i> , 16(2), 193-204.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Muxfeldt, E. S., Bloch, K. V., Nogueira Ada, R., & Salles, G. F. (2005). True resistant hypertension: is it possible to be recognized in the office? <i>Am J Hypertens</i> , 18(12 Pt 1), 1534-1540. doi:10.1016/j.amjhyper.2005.06.013					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Geleijnse, J. M., Grobbee, D. E., & Kok, F. J. (2005). Impact of dietary and lifestyle factors on the prevalence of hypertension in Western populations. <i>J Hum Hypertens</i> , 19 Suppl 3, S1-4. doi:10.1038/sj.jhh.1001953					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Wolfarth, B., Bray, M. S., Hagberg, J. M., Perusse, L., Rauramaa, R., Rivera, M. A., . . . Bouchard, C. (2005). The human gene map for performance and health-related fitness phenotypes: the 2004 update. <i>Med Sci Sports Exerc</i> , 37(6), 881-903.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Villegas, R., Creagh, D., Hinchion, R., O'Halloran, D., & Perry, I. J. (2004). Prevalence and lifestyle determinants of the metabolic syndrome. <i>Ir Med J</i> , 97(10), 300-303.					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hu, G., Tuomilehto, J., Silventoinen, K., Barengo, N., & Jousilahti, P. (2004). Joint effects of physical activity, body mass index, waist circumference and waist-to-hip ratio with the risk of cardiovascular disease among middle-aged Finnish men and women. <i>Eur Heart J</i> , 25(24), 2212-2219. doi:10.1016/j.ehj.2004.10.020					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Lind, E., Joens-Matre, R. R., & Ekkekakis, P. (2005). What intensity of physical activity do previously sedentary middle-aged women select? Evidence of a coherent pattern from physiological, perceptual, and affective markers. <i>Prev Med</i> , 40(4), 407-419. doi:10.1016/j.ypmed.2004.07.006					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Taylor, A. H., Cable, N. T., Faulkner, G., Hillsdon, M., Narici, M., & Van Der Bij, A. K. (2004). Physical activity and older adults: a review of health benefits and the effectiveness of interventions. <i>J Sports Sci</i> , 22(8), 703-725. doi:10.1080/02640410410001712421					
<i>Reason for exclusion :</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hills, S. A., Balkau, B., Coppock, S. W., Dekker, J. M., Mari, A., Natali, A., . . . Ferrannini, E. (2004). The EGIR-RISC STUDY (The European group for the study of insulin resistance: relationship between insulin sensitivity and cardiovascular disease risk): I. Methodology and objectives. <i>Diabetologia</i> , 47(3), 566-570. doi:10.1007/s00125-004-1335-5					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Koenig, S. C., Ewert, D. L., Ludwig, D. A., Fanton, J. F., & Convertino, V. A. (2004). Bed rest affects ventricular and arterial elastances in monkeys: implications for humans. <i>Aviat Space Environ Med</i> , 75(1), 7-15.					
Reason for exclusion : Animal study					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cabrera, C., Wilhelmsen, K., Allebeck, P., Wedel, H., Steen, B., & Lissner, L. (2003). Cohort differences in obesity-related health indicators among 70-year olds with special reference to gender and education. <i>Eur J Epidemiol</i> , 18(9), 883-890.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ball, S. G. (2003). Benefits of blood pressure reduction in diabetic patients. <i>J Hypertens Suppl</i> , 21(6), S31-36.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Rennie, K. L., Hemingway, H., Kumari, M., Brunner, E., Malik, M., & Marmot, M. (2003). Effects of moderate and vigorous physical activity on heart rate variability in a British study of civil servants. <i>Am J Epidemiol</i> , 158(2), 135-143.					
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Reference: Bowles, D. K., & Wamhoff, B. R. (2003). Coronary smooth muscle adaptation to exercise: does it play a role in cardioprotection? <i>Acta Physiol Scand</i> , 178(2), 117-121. doi:10.1046/j.1365-201X.2003.01130.x					
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Reference:					

Furberg, A. S., & Thune, I. (2003). Metabolic abnormalities (hypertension, hyperglycemia and overweight), lifestyle (high energy intake and physical inactivity) and endometrial cancer risk in a Norwegian cohort. <i>Int J Cancer</i> , 104(6), 669-676. doi:10.1002/ijc.10974					
<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
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<i>Reason for exclusion :</i>					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion :</i>					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Squires, R. W. (1991). Exercise training after cardiac transplantation. <i>Med Sci Sports Exerc</i> , 23(6), 686-694.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Moller, L., Kristensen, T. S., & Hollnagel, H. (1991). Social class and cardiovascular risk factors in Danish men. <i>Scand J Soc Med</i> , 19(2), 116-126.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Martinsen, E. W., Strand, J., Paulsson, G., & Kaggstad, J. (1989). Physical fitness level in patients with anxiety and depressive disorders. <i>Int J Sports Med</i> , 10(1), 58-61. doi:10.1055/s-2007-1024876					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ragnarsson, K. T. (1988). Physiologic effects of functional electrical stimulation-induced exercises in spinal cord-injured individuals. <i>Clin Orthop Relat Res</i> (233), 53-63.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Fortmann, S. P., Haskell, W. L., & Wood, P. D. (1988). Effects of weight loss on clinic and ambulatory blood pressure in normotensive men. <i>Am J Cardiol</i> , 62(1), 89-93.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Sicree, R. A., Tuomilehto, J., Zimmet, P., King, H., Ram, P., Hunt, D., & Coventry, J. (1988). Electrocardiographic abnormalities amongst Melanesian and Indian men of Fiji: prevalence and associated factors. <i>Int J Cardiol</i> , 19(1), 27-38.					
Reason for exclusion :					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Astrand, P. O. (1988). From exercise physiology to preventive medicine. <i>Ann Clin Res</i> , 20(1-2), 10-17.					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Alexandrov, A., Isakova, G., Maslennikova, G., Shugaeva, E., Prokhorov, A., Olfieriev, A., & Kulikov, S. (1988). Prevention of atherosclerosis among 11-year-old schoolchildren in two Moscow administrative districts. <i>Health Psychol</i> , 7 Suppl, 247-252.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Eriksson, P., Lofstrom, L., & Ekblom, B. (1988). Aerobic power during maximal exercise in untrained and well-trained persons with quadriplegia and paraplegia. <i>Scand J Rehabil Med</i> , 20(4), 141-147.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gordon, D. J., Leon, A. S., Ekelund, L. G., Sopko, G., Probstfield, J. L., Rubenstein, C., & Sheffield, L. T. (1987). Smoking, physical activity, and other predictors of endurance and heart rate response to exercise in asymptomatic hypercholesterolemic men. The Lipid Research Clinics Coronary Primary Prevention Trial. <i>Am J Epidemiol</i> , 125(4), 587-600.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Leon, A. S. (1987). Age and other predictors of coronary heart disease. <i>Med Sci Sports Exerc</i> , 19(2), 159-167.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Oberman, A. (1985). Exercise and the primary prevention of cardiovascular disease. <i>Am J Cardiol</i> , 55(10), 10d-20d.					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Leon, A. S. (1985). Physical activity levels and coronary heart disease. Analysis of epidemiologic and supporting studies. <i>Med Clin North Am</i> , 69(1), 3-20.					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Pepper, M. S. (1984). Dance--a suitable form of exercise? A physiological appraisal. <i>S Afr Med J</i> , 66(23), 883-888.					
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Jorgensen, P. G., Arnemo, J., Swenson, J. E., Jensen, J. S., Galatius, S., & Frobert, O. (2014). Low cardiac output as physiological phenomenon in hibernating, free-ranging Scandinavian brown bears (<i>Ursus arctos</i>) - an observational study. <i>Cardiovasc Ultrasound</i> , 12, 6. doi:10.1186/1476-7120-12-36					
Reason for exclusion : Animal study					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Joshi, A., Perin, D. M. P., & Arora, M. (2013). Using Portable Health Information Kiosk to assess chronic disease burden in remote settings. <i>Rural and Remote Health</i> , 13(1), 11.					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion :					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Alkahtani, S., Elkilany, A., & Alhariri, M. (2015). Association between sedentary and physical activity patterns and risk factors of metabolic syndrome in Saudi men: A cross-sectional study. <i>BMC Public Health</i> , 15, 1234. doi:10.1186/s12889-015-2578-4					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Dickie, K., Micklesfield, L. K., Chantler, S., Lambert, E. V., & Goedecke, J. H. (2016). Cardiorespiratory Fitness and Light-Intensity Physical Activity Are Independently Associated with Reduced Cardiovascular Disease Risk in Urban Black South African Women: A Cross-Sectional Study. <i>Metab Syndr Relat Disord</i> , 14(1), 23-32. doi:10.1089/met.2015.0064					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Green, A. N., McGrath, R., Martinez, V., Taylor, K., Paul, D. R., & Vella, C. A. (2014). Associations of objectively measured sedentary behavior, light activity, and markers of cardiometabolic health in young women. <i>Eur J Appl Physiol</i> , 114(5), 907-919. doi:10.1007/s00421-014-2822-0					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Silva, T. R., Alves, B. C., Maturana, M. A., & Spritzer, P. M. (2013). Healthier dietary pattern and lower risk of metabolic syndrome in physically active postmenopausal women. <i>J Am Coll Nutr</i> , 32(5), 287-295. doi:10.1080/07315724.2013.826111					
Reason for exclusion :					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion:					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion:					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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Reason for exclusion:					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

Reference: Akerberg, A., Koshmak, G., Johansson, A., & Linden, M. (2015). Heart rate measurement as a tool to quantify sedentary behavior. <i>Stud Health Technol Inform</i> , 211, 105-110.					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Zhou, Z., Xi, Y., Zhang, F., Lu, Q., Zhang, F., Huang, D., . . . Yin, Z. (2016). Sedentary Behavior Predicts Changes in Cardiometabolic Risk in Professional Workers: A One-Year Prospective Study. <i>J Occup Environ Med</i> , 58(4), e117-123. doi:10.1097/jom.0000000000000673					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Vicente-Campos, D., Mora, J., Castro-Pinero, J., Gonzalez-Montesinos, J. L., Conde-Caveda, J., & Chicharro, J. L. (2012). Impact of a physical activity program on cerebral vasoreactivity in sedentary elderly people. <i>J Sports Med Phys Fitness</i> , 52(5), 537-544.					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Antunes, H. K., De Mello, M. T., Santos-Galduroz, R. F., Galduroz, J. C., Lemos, V. A., Tufik, S., & Bueno, O. F. (2015). Effects of a physical fitness program on memory and blood viscosity in sedentary elderly men. <i>Braz J Med Biol Res</i> , 48(9), 805-812. doi:10.1590/1414-431x20154529					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Koschate, J., Drescher, U., Brinkmann, C., Baum, K., Schiffer, T., Latsch, J., . . . Hoffmann, U. (2016). Faster heart rate and muscular oxygen uptake kinetics in type 2 diabetes patients following endurance training. <i>Appl Physiol Nutr Metab</i> , 41(11), 1146-1154. doi:10.1139/apnm-2016-0001					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Pandey, A., Park, B. D., Ayers, C., Das, S. R., Lakoski, S., Matulevicius, S., . . . Berry, J. D. (2016). Determinants of Racial/Ethnic Differences in Cardiorespiratory Fitness (from the Dallas Heart Study). <i>Am J Cardiol</i> , 118(4), 499-503. doi:10.1016/j.amjcard.2016.05.043					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference:					

Dow, C. A., Lincenberg, G. M., Greiner, J. J., Stauffer, B. L., & DeSouza, C. A. (2016). Endothelial vasodilator function in normal-weight adults with metabolic syndrome. <i>Appl Physiol Nutr Metab</i> , 41(10), 1013-1017. doi:10.1139/apnm-2016-0171					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Halloway, S., Wilbur, J., Schoeny, M. E., Semanik, P. A., & Marquez, D. X. (2016). Combined Effects of Sedentary Behavior and Moderate-to-Vigorous Physical Activity on Cardiovascular Health in Older, Community-Dwelling Latinos. <i>J Aging Phys Act</i> , 24(2), 296-304. doi:10.1123/japa.2015-0096					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Imhof, K., Zahner, L., Schmidt-Trucksass, A., Faude, O., & Hanssen, H. (2016). Influence of physical fitness and activity behavior on retinal vessel diameters in primary schoolchildren. <i>Scand J Med Sci Sports</i> , 26(7), 731-738. doi:10.1111/sms.12499					
<i>Reason for exclusion:</i>					
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Reference: Matta, S., Chammas, E., Alraies, C., Abchee, A., & AlJaroudi, W. (2016). Association Between Sedentary Lifestyle and Diastolic Dysfunction Among Outpatients With Normal Left Ventricular Systolic Function Presenting to a Tertiary Referral Center in the Middle East. <i>Clin Cardiol</i> , 39(5), 269-275. doi:10.1002/clc.22523					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Headley, S., Germain, M., Wood, R., Joubert, J., Milch, C., Evans, E., . . . Pescatello, L. S. (2017). Blood pressure response to acute and chronic exercise in chronic kidney disease. <i>Nephrology (Carlton)</i> , 22(1), 72-78. doi:10.1111/nep.12730					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
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<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Matelot, D., Schnell, F., Khodor, N., Endjah, N., Kervio, G., Carrault, G., . . . Carre, F. (2016). Does Deep Bradycardia Increase the Risk of Arrhythmias and Syncope in Endurance Athletes? <i>Int J Sports Med</i> , 37(10), 792-798. doi:10.1055/s-0035-1569348					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Landers-Ramos, R. Q., Corrigan, K. J., Guth, L. M., Altom, C. N., Spangenburg, E. E., Prior, S. J., & Hagberg, J. M. (2016). Short-term exercise training improves flow-mediated dilation and circulating angiogenic cell number in older sedentary adults. <i>Appl Physiol Nutr Metab</i> , 41(8), 832-841. doi:10.1139/apnm-2015-0637					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

	definition of sedentarism				
Reference: Peterman, J. E., Morris, K. L., Kram, R., & Byrnes, W. C. (2016). Pedelecs as a physically active transportation mode. <i>Eur J Appl Physiol</i> , 116(8), 1565-1573. doi:10.1007/s00421-016-3408-9					
Reason for exclusion:					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Veijalainen, A., Tompuri, T., Haapala, E. A., Viitasalo, A., Lintu, N., Vaisto, J., . . . Lakka, T. A. (2016). Associations of cardiorespiratory fitness, physical activity, and adiposity with arterial stiffness in children. <i>Scand J Med Sci Sports</i> , 26(8), 943-950. doi:10.1111/sms.12523					
Reason for exclusion:					
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Reference: Matelot, D., Schnell, F., Kervio, G., Ridard, C., Thillaye du Boullay, N., Wilson, M., & Carre, F. (2016). Cardiovascular Benefits of Endurance Training in Seniors: 40 is not too Late to Start. <i>Int J Sports Med</i> , 37(8), 625-632. doi:10.1055/s-0035-1565237					
Reason for exclusion:					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Kwon, O., Park, S., Kim, Y. J., Min, S. Y., Kim, Y. R., Nam, G. B., . . . Kim, Y. H. (2016). The exercise heart rate profile in master athletes compared to healthy controls. <i>Clin Physiol Funct Imaging</i> , 36(4), 286-292. doi:10.1111/cpf.12226					
Reason for exclusion:					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Carson, V., Tremblay, M. S., Chaput, J. P., & Chastin, S. F. (2016). Associations between sleep duration, sedentary time, physical activity, and health indicators among Canadian children and youth using compositional analyses. <i>Appl Physiol Nutr Metab</i> , 41(6 Suppl 3), S294-302. doi:10.1139/apnm-2016-0026					
Reason for exclusion:					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Hochsmann, C., Schubach, M., & Schmidt-Trucksass, A. (2016). Effects of Exergaming on Physical Activity in Overweight Individuals. <i>Sports Med</i> , 46(6), 845-860. doi:10.1007/s40279-015-0455-z					
Reason for exclusion:					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Martins, C., Kazakova, I., Ludviksen, M., Mehus, I., Wisloff, U., Kulseng, B., . . . King, N. (2016). High-Intensity Interval Training and Isocaloric Moderate-Intensity Continuous Training Result in Similar Improvements in Body Composition and Fitness in Obese Individuals. <i>Int J Sport Nutr Exerc Metab</i> , 26(3), 197-204. doi:10.1123/ijnsnem.2015-0078					
Reason for exclusion:					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Caldwell, H. A., Proudfoot, N. A., King-Dowling, S., Di Cristofaro, N. A., Cairney, J., & Timmons, B. W. (2016). Tracking of physical activity and fitness during the early years. <i>Appl Physiol Nutr Metab</i> , 41(5), 504-510. doi:10.1139/apnm-2015-0338					

<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Cherkas, A., Eckl, P., Gueraud, F., Abrahamovych, O., Serhiyenko, V., Yatskevych, O., . . . Golota, S. (2016). Helicobacter pylori in sedentary men is linked to higher heart rate, sympathetic activity, and insulin resistance but not inflammation or oxidative stress. <i>Croat Med J</i> , 57(2), 141-149.					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Tucker, J. M., Welk, G. J., Beyler, N. K., & Kim, Y. (2016). Associations Between Physical Activity and Metabolic Syndrome: Comparison Between Self-Report and Accelerometry. <i>Am J Health Promot</i> , 30(3), 155-162. doi:10.4278/ajhp.121127-QUAN-576					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Koubaa, A., Triki, M., Trabelsi, H., Masmoudi, L., Zeghal, K. N., Sahnoun, Z., & Hakim, A. (2015). Effect of low-intensity continuous training on lung function and cardiorespiratory fitness in both cigarette and hookah smokers. <i>Afr Health Sci</i> , 15(4), 1170-1181. doi:10.4314/ahs.v15i4.16					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: L, E. F. G., R, C. M., Shepherd, S. O., Cabot, J., & Hopkins, N. D. (2015). Evaluation of sit-stand workstations in an office setting: a randomised controlled trial. <i>BMC Public Health</i> , 15, 1145. doi:10.1186/s12889-015-2469-8					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Ekblom-Bak, E., Bjorkman, F., Hellenius, M. L., & Ekblom, B. (2014). A new submaximal cycle ergometer test for prediction of VO2max. <i>Scand J Med Sci Sports</i> , 24(2), 319-326. doi:10.1111/sms.12014					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Moller, M., Malan, L., Magnusson, M., Mels, C. M. C., & Malan, N. T. (2017). Defensive coping and essential amino acid markers as possible predictors for structural vascular disease in an African and Caucasian male cohort: The SABPA study. <i>Psychophysiology</i> , 54(5), 696-705. doi:10.1111/psyp.12833					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Gerber, M., Endes, K., Herrmann, C., Colledge, F., Brand, S., Donath, L., . . . Zahner, L. (2016). Does Physical Fitness Buffer the Relationship between Psychosocial Stress, Retinal Vessel Diameters, and Blood Pressure among Primary Schoolchildren? <i>Biomed Res Int</i> , 2016, 6340431. doi:10.1155/2016/6340431					
<i>Reason for exclusion:</i>					

Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter
Reference: Igarashi, R., Fujihara, K., Heianza, Y., Ishizawa, M., Kodama, S., Saito, K., . . . Sone, H. (2016). Impact of individual components and their combinations within a family history of hypertension on the incidence of hypertension: Toranomon hospital health management center study 22. <i>Medicine (Baltimore)</i> , 95(38), e4564. doi:10.1097/md.0000000000004564					
<i>Reason for exclusion:</i>					
Age of population ≠ [18-65j]	Sedentarism ≠ present in the study/no definition of sedentarism	Sedentarism is not measured objectively	No longitudinal study with a follow-up of min. 1 year	Population is not "healthy"	Outcome ≠ cardiovascular parameter

Table 3.1	
<i>Questions used in the checklist to assess the quality of nine included articles</i>	
Question number	Question
Methods and design	
1	Are the compared groups defined adequately? ³
2	Were the groups comparable at baseline? If not, did they perform corrections in the analysis? ² (Selection bias)
3	Was the selection of patients valid for the study? ³
4	Is there a sufficient proportion of complete follow-up available of all patients included? ¹ (Attrition bias)
5	Was the follow-up long enough to make sure that the studied outcome could appear? ³
6	Were the intervention and outcomes established independently of each other? ³
7	Are the groups treated equally? ² (Performance bias)
Outcome	
8	Are the outcome measures described explicitly and objectively? ¹
9	Were the measurements of the outcomes valid and reliable? ¹ (Detection bias)
10	Were the outcomes established independently of each other? ¹
11	Is a selective publication of results excluded sufficiently? ² (Reporting bias)
12	Is the undesirable influence of sponsoring excluded sufficiently? ²
Prognostic factors	
13	Are the prognostic factors described explicitly and objectively? ¹
14	Were the measurements of the prognostic factors valid and reliable? ¹
15	Is the measurement of the prognostic factors executed in the same way for all patients? ¹
16	Is the measurement of the prognostic factors executed in a sufficient proportion of the population? ¹
17	Were the most important prognostic factors (confounders) included in the analysis and were corrections executed? ³

¹Quality Assessment – Article concerning prognosis (Cochrane checklist)

²Quality Assessment – Randomised controlled trial (Cochrane checklist)

³Quality Assessment – Article concerning side-effects or etiology (Cochrane checklist)

Table 3.2									
<i>Quality assessment of nine included articles</i>									
N°	Chastin et al. (2015)	Franks et al. (2007)	Healy et al. (2011)	Honda et al. (2014)	Miyashita et al. (2013)	Shiraishi et al. (2003)	Sonne et al. (2010)	Sonne et al. (2011)	Wientzek et al. (2014)
Method and design									
1	N.a., but one well defined group	N.a., but one well defined group	+	N.a., but one well defined group	N.a., but one well defined group	N.a., but one well defined group	+	N.a., but one well defined group	N.a., but one well defined group
2	N.a. but comparable within the groups	N.a. but comparable within the group	+	N.a. but comparable within the groups	N.a. but comparable within the groups	N.a. but comparable within the groups	+	N.a. but comparable within the groups	N.a. but comparable within the groups
3	+	+	+	+	+	+	+	+	+
4	-	?, restudy rate was 80%	+	?, 661/823 available for follow-up)	+	+	+	+	+
5	-	+	-	-	?	?	?	-	?
6	N.a.	N.a.	N.a.	N.a.	?	?	?	?	N.a.
7	N.a., but all persons treated equally	N.a., but all persons treated equally	+	N.a., but all persons treated equally	N.a., but all persons treated equally	N.a., but all persons treated equally	+	N.a., but all persons treated equally	N.a., but all persons treated equally
Outcome									
8	+	+	+	+	+	+	+	+	+
9	?	-	?	+	+, except LPL protein measures	?	+	+	+
10	?	-	?	-	-	-	-	-	-
11	+	+	+	+	+	+	+	+	+
12	+	+	?	+	?	?	+	+	+
Prognostic factors									
13	+	+	+	+	+	+	+	+	+
14	+	-	+	+	-	+	?	-	+
15	+	+	+	+	+	+	+	+	+
16	?	+	-	-	-	-	-	-	-
17	+	+	-	+	-	-	-	?	-

(+): good; (-) not good; (?) not mentioned

Table 3.3	
<i>Quality assessment of the included clinical trial (Kop et al., 2008) using the items of the Cochrane checklist for a randomised controlled trial</i>	
Question	Good (+), not good (-), not mentioned (?)
Was the allocation of the patients to the intervention randomised?	+
Was the person, who included the patients, blind to the randomisation sequence?	?
Were the patients and therapists blind to the treatment?	-
Were the persons who assessed the effect(s) of the treatment blind to the treatment? (Detection bias)	?
Were the groups comparable at baseline? If not, did they perform corrections in the analysis? (Selection bias)	+
Is there a sufficient proportion of complete follow-up available of all patients included? If not, is a selective loss-to-follow-up excluded? (Attrition bias)	+
Are the enrolled patients analysed in the group to which they were randomised?	?
Are the groups treated equally, apart from the intervention? (Performance bias)	+
Is a selective publication of results excluded sufficiently? (Reporting bias)	+
Is the undesirable influence of sponsoring excluded sufficiently?	?

(+): good; (-) not good; (?) not mentioned

Table 4*Strengths and weaknesses of the included studies*

Study	Strengths	Weaknesses
Chastin et al.	<ul style="list-style-type: none"> - They performed a compositional analysis that was applied to a well-known and characterised data set, in which activity and sedentary behaviours were objectively measured. - NHANES is a survey conducted over a two year cycle designed to assess the health and nutritional status of a representative sample of the US population. - Confounders were entered in the model as covariates. 	<ul style="list-style-type: none"> - Objective measurements are less prone to error, especially for quantifying time spent in MVPA. This is however less true for SB and LIPA time. - Accelerometer data were classified every minute of the day as MVPA, SB or LIPA depending on a threshold. This method is less accurate than postural allocation at distinguishing between SB and LIPA. - Objective data for sleep time were not available. - Sleep was only evaluated over week or working days, while the accelerometry was averaged over the whole week. It is likely that this introduced some random error. - The data loss from the full NHANES sample is relatively high (around 50%) (selection bias) - As with all cross-sectional analysis, causal interference is limited.
Franks et al.	<ul style="list-style-type: none"> - All assays were performed in the same laboratory. 	<ul style="list-style-type: none"> - They observed a modest average increase in PAEE during follow-up, which is partially due to an increase in body weight, and thus an increase in the metabolic cost of locomotion. - In observational studies, it is impossible to fully disentangle temporal trends or the independent effects of highly correlated factors. - Leptin is primarily secreted in white adipose tissue in humans, and they adjusted for fat mass in their analysis. They are likely to have adjusted out some of the variance that leptin explains in changes in PAEE and insulin. - They used fasting and postglucose challenge plasma insulin concentrations as a proxy measure of insulin action and a bioimpedance assessment of body fat percent, neither of which are gold-standard measures of the respective phenotypes.
Healy et al.	<ul style="list-style-type: none"> - The exposure variables were measured objectively. Compared with self-report, objective measures are more precise, less biased, and reduce the potential for differential measurement errors. - The study was conducted in a representative sample of the USA civilian population. 	<ul style="list-style-type: none"> - Estimates depend heavily on wear time, which was estimated rather than directly measured. - The uni-axial accelerometer predominantly captures ambulatory activities and cannot distinguish between different postures or variations in walking conditions. - Although they controlled for confounding, residual confounding is possible. E.g., adjustments were not made for occupational characteristics. - There may have been some selection bias as we excluded a large proportion of participants, predominantly for lacking sufficient accelerometer data to acquire habitual estimates of sedentary time. - These associations were cross-sectional. Thus, reverse causation is a possibility, and causality cannot be determined.
Honda et al.	<ul style="list-style-type: none"> - They used a tri-axial accelerometer to assess sedentary behaviour, which is able to estimate physical activity intensity more accurately 	<ul style="list-style-type: none"> - The cross-sectional nature of the study precludes the examination of causal relationships between sedentary behaviours and outcomes.

	<p>by its specific algorithm for low-intensity physical activities compared to conventional uni-axial accelerometers.</p> <ul style="list-style-type: none"> - They adjusted for a variety of socioeconomic and lifestyle confounders, including occupation, depression, and diet, which were not always available in other population-based studies. 	<ul style="list-style-type: none"> - Since the participants were enrolled from only two enterprise groups, the generalizability of this study is limited. - They did not differentiate between workday and non-workday when quantifying the levels of sedentary time - With respect to the measurements, device-based measurement may include some modest misclassification of sitting and standing behaviour, and some moderate-to-vigorous intensity physical activities, were not properly captured by the accelerometer. - Self-report measurements also have known limitations that include recall bias, and sitting in transportation was not assessed in this study. - They did not have access to information about medical history or family history of cardiovascular and metabolic diseases and therefore could not adjust for them.
Kop et al.	<ul style="list-style-type: none"> - Participants were randomised to either discontinue or to maintain regular aerobic exercise activities. 	<ul style="list-style-type: none"> - The exercise withdrawal paradigm may not have been powerful enough to determine interrelationships between inflammatory markers and negative mood symptoms or autonomic nervous system indices in healthy individuals. - Although the differential development of negative mood symptoms was highly significant between the exercise-withdrawn versus control groups, the actual level of negative mood symptoms was not high and well below clinical cut-points of clinical mood disorders. - There was a lack of control of potentially confounding variables in a naturalistic setting. E.g., no systematic information was obtained regarding diet, length of menstrual cycle, of perceived distress.
Miyashita et al.		<ul style="list-style-type: none"> - A limitation of the present study was the reliance on participants to standardise their own food intake. - The measured inactive monomeric LPL protein only represents a small fraction of total LPL. - No confounders were included.
Shiraishi et al.	<ul style="list-style-type: none"> - Heart rate was continuously monitored 	<ul style="list-style-type: none"> - No correction for confounding factors in the analysis.
Sonne P. et al. (2010)	<ul style="list-style-type: none"> - Bed rest allows supervision of the subjects eliminating noncompliance. - Bed rest is easy to standardise. - During bed rest is the diet easily controlled. - This study was characterized by a less strict bed rest regimen than in most other bed rest studies. - All subjects were matched groupwise according to age, BMI and physical fitness. 	<ul style="list-style-type: none"> - Bed rest is an exaggerated stimulus and whether the outcome of bed rest resembles real life inactivity is difficult to address. - Bed rest eliminates daily non exercise activities. - The before bed rest study day and bed rest were not directly followed by each other. - Only the arms were examined (see above). The impact of bed rest is more pronounced on the legs than the arms. - No confounders were included.
Sonne P. et al. (2011)	<ul style="list-style-type: none"> - All subjects were matched groupwise according to age, BMI and physical fitness. - Prior to the series of experiments, reproducibility studies of blood flow measurements were carried out. 	<ul style="list-style-type: none"> - In the present model of bed rest, they allowed the use of the arms. Thus, the present regimen was not as strict as seen in other bed rest studies. They could have chosen to study the legs, but this was not possible owing to logistic problems. Nevertheless, while the free movement of the arms may be seen as a weakness of the study, it could also be viewed as a strength because it enhances the generalization to real-life inactivity. - It could be argued that the stimulus was of insufficient magnitude.

Wientzek et al.	<ul style="list-style-type: none"> - They performed repeated estimates of the targeted metabolomics platform that included quantitative measurements of 127 metabolites of known identity. - They used a combined heart rate and movement sensor that objectively measured physical activity. - Also CRF was estimated at both occasions using a submaximal step test. 	<ul style="list-style-type: none"> - No confounders were included. - The cross-sectional nature of the study precludes the examination of causal relationships between sedentary behaviours and outcomes. - The small sample size of 100 participants results in a low power and may lead to underestimation of some true relationships. - The large number of investigated metabolites introduces the possibility of a Type I error. Nevertheless, this problem was addressed by multiple testing corrections. - The fact that PAEE and sedentary time in model 3 might be burdened with the problem of multicollinearity should be considered, as the direction of many associations changed from positive to negative after the mutual adjustment and the correlation coefficient between PAEE and sedentary time was high. Therefore, the association directions for these exposures should be interpreted by considering Model 2. - There is a chance that due to the objective physical activity measurement some participants may have changed their activity during the measurement period. - There were missing dietary data as a potential confounder.
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Table 5.1*Data extraction: description of the included studies*

N°	Author	Year	Population (sample, % men, mean age [years ± SD], mean BMI [kg/m ² ± SD], country)	Experimental design	Exposure	Outcome measures	Covariates adjusted for in the analysis
1	Chastin et al.	2015	N = 1937 adults, 49% men Mean age: ? Mean BMI: 27.8 kg/m ² U.S.A.	Observational cross-sectional study	N.a.	Time spent in sleep, SB, LIPA and MVPA vs. BMI, WC, TRI, HDL-C, LDL-C, GLU, INS, HOMA-IR, CRP, SBP and DBP	<u>Sociodemographic</u> : age, sex, race/ethnicity, marital status, education, work status, ratio of family income to poverty level <u>Lifestyle</u> : smoking status, consumption of caffeine and alcohol and total energy and saturated fat dietary intake <u>Self-reported health</u> : previous diagnosis of cancer, diabetes, cardiovascular disease and stroke diabetes; and current use of diabetic, antihypertensive of lipidemic drugs
2	Franks et al.	2007	N = 288, LL: 42% men and HL: 41% men Mean age: 52,5 years ± 4,9 SD (after 5 yr follow-up 58,2 years ± 4,9 SD) Mean BMI: 26,3 kg/m ² ± 3,9 SD (after 5 yr follow-up 26,8 kg/m ² ± 4,6 SD) U.K.	Observational prospective study	N.a.	PAEE vs. Leptin, GLU, INS (fasting, 30', 2h, HOMA-IR), PAEE, height, BMI, fat mass, FFM	Age, sex, baseline and follow-up fat mass and FFM, follow-up time, and the baseline outcome variable (indexes of IR or PAEE)
3	Healy et al.	2011	N = 4757 (fasting subsample N = 2118 & OGTT subsample N = 910), 50% men Mean age: 46,5 years ± 14,2 SD Mean BMI: ? U.S.A.	Observational cross-sectional study	N.a.	ST and breaks in ST vs. WC, SBP, DBP, non-fasting HDL-C, non-fasting CRP, fasting TRI, fasting GLU, fasting INS, HOMA-%B, HOMA-%S, 2 h plasma GLU	<u>Sociodemographic</u> : age, educational attainment, marital status, poverty-income ratio, sex, race/ethnicity <u>Behaviours</u> : smoking status (serum-cotinine level), 24h diet-recall <u>Medical history</u> : diabetes, CVD, cancer, current medication, (for females only) use of oral contraceptives, hormone replacement and post-menopausal status

4	Honda et al.	2014	N = 661, 78% men Mean age: 43 years \pm 9 SD Mean BMI: 22,8 kg/m ² \pm 3,4 SD Japan	Observational cross-sectional study	N.a.	PAL vs. BMI, WC, resting BP, TRI, HDL-C, LDL-C, total:HDL-C ratio, GLU, and HbA1c	Sex, age, educational attainment, current smoking and drinking habits, marital status, occupation, total calorie intake and saturated fat consumption in the past month, use of antihypertensive, antidiabetic, and lipid lowering medications, depressive symptoms, volume of MVPA
5	Kop et al.	2008	N = 40 (CON N = 20, EX-W N = 20), 45% men Mean age: 31,3 years \pm 7,5 SD (CON 32,6 years \pm 7,8 SD; EX-W 30,0 years \pm 7,2 SD) Mean BMI: CON = 23,6 kg/m ² \pm 2,9 SD; EX-W = 23,6 kg/m ² \pm 3,3 SD U.S.A.	Clinical trial	Randomised in CON (remaining PA) or EX-W group (quit physical aerobic exercise) for 2 weeks	Physical inactivity & remained aerobic PA vs. Inflammatory markers (IL6, CRP, fibrinogen, sICAM-1), negative mood (POMS and BDI), fatigue (MFI) and autonomic nervous system activity (HR variability-based indices: baseline HR, exercise HR, recovery HR, rMSSD, pNN50, LF-HRV, HF-HRV, LF/HF ratio)	/
6	Miyashita et al.	2013	N = 15, 100% men Mean age: 26,8 years \pm 2,0 SD Mean BMI: 22,5 kg/m ² \pm 1,5 SD Japan	Experimental prospective study	3 trials of 2 days: sitting (8h), standing (6 X 45'), walking (30'); standardisation of diet and sleep pattern	Effect of sitting, standing and walking vs. Concentrations of TAG, inactive monomeric LPL protein, Apo C-II, Apo C-III, NEFA, 3-OHB, INS and GLU	/
7	Shiraishi et al.	2003	N = 6, 100% men Mean age: 30,8 years \pm 7,6 SD Mean BMI: ? (mean height 181 cm \pm 5,3 SD; mean weight 79,5 kg \pm 18,9 SD) ?	Experimental prospective study	120 day HDBR, standardisation of diet, sleep pattern and environment	120 days of HDBR vs. Phase, amplitude, acrophase and 1/f fluctuations of SBP, SBP, HR	/
8	Sonne et al.	2010	N = 53 (LBW N = 20, FDR N = 13, CON N = 20), 100% men Mean age: CON = 25 years \pm 0,2 SD, LBW = 26 years \pm 0,5 SD, FDR = 26 years \pm 1,0 SD Mean BMI: CON = 24,1 kg/m ² \pm 0,5 SD, LBW = 23,3 kg/m ² \pm 1 SD, FDR = 24,9 kg/m ² \pm 0,9 SD Denmark	Experimental prospective study	10 days of BR, standardisation of diet 4 days before start and during the experiment	10 days of BR in CON, FDR & LBW vs. Body composition (Weight, BMI, total fat mass, total lean mass, % body fat, trunk fat mass/total fat mass, leg fat mass/total fat mass, WC, waist-to-hip ratio), PA score, total number of heart beats per day, VO _{2max} , SBP,	/

						DBP, fasting arterial GLU and INS, HbA1c, C-peptide, BDNF, total cholesterol, HDL-C, LDL-C, VLDL-C, TRI, average GLU infusion rate (per lean body mass), (INS-stimulated) forearm GLU clearance, whole body INS-stimulated GLU uptake rates, (INS-stimulated) GLU extraction fraction, (INS-stimulated) FBF	
9	Sonne et al.	2011	N = 53 (LBW N = 20, FDR N = 13, CON N = 20), 100% men Mean age: CON = 25 years ± 0,2 SD, LBW = 26 years ± 0,5 SD, FDR = 26 years ± 1,0 SD Mean BMI: CON = 24,1 kg/m ² ± 0,5 SD, LBW = 23,3 kg/m ² ± 1 SD, FDR = 24,9 kg/m ² ± 0,9 SD Denmark	Experimental prospective study	10 days of BR, standardisation of diet 4 days before start and during the experiment	10 days of BR in CON, FDR & LBW vs. VO _{2max} , fasting GLU and INS, weight, BMI, % body fat, WC, SBP, DBP, PA score, total number of heart beats per day, FBF, conductance and the arterial plasma concentrations of some biomarkers of inflammation and endothelial function (hsCRP, homocysteine, ICAM-1, VCAM-1, vWF)	/
10	Wientzek et al.	2014	N = 100, 50% men Mean age: 56,15 years ± 4,06 SD Mean BMI: 26,77 kg/m ² ± 4,05 SD Germany	Observational cross-sectional study	N.a.	PA and VO _{2max} vs. Serum metabolites (127 species and two of these are linked to the risk for developing DM type II)	Age, sex, measurement occasion, BMI, WC, educational attainment, smoking status, alcohol intake, PAEE and/or CRF and/or ST and/or vigorous time

Table 5.2								
<i>Data extraction: methods, analysis and results concerning measuring sedentary time</i>								
N°	Author	Expression of ST and/or breaks in ST	Device used for PA measurement	Monitoring period (days)	Accelerometer inclusion criteria	Definition of ST	Definition of non ST	Definition of 'non wear time'
1	Chastin et al.	ST (proportions/day)	Actigraph 7164 (uni-axial accelerometer) and self-reported sleep duration	7 days during waking hours	≥ 10 h/d for ≥ 5 d	< 100 cpm	LIPA: 100-1951 cpm MVPA: ≥ 1952 cpm	/
2	Franks et al.	/	Flex Heart Rate technique + Polar Electro (HR monitor)	2X4 days during waking hours (5 yrs apart)	/	/(HR below flex HR)	/(HR above flex HR)	/
3	Healy et al.	ST (hours/day) Break (# summed over valid days, mean duration)	Actigraph 7164 (uni-axial accelerometer)	7 days during waking hours except for water involved activities	≥ 10 h/d for ≥ 4 d (including at least one weekend day) that did not contain excessive high counts (> 20 000 cpm)	< 100 cpm	LIPA: 100-1951 cpm MVPA: ≥ 1952 cpm Transition from a sedentary (< 100 cpm) to an active state (≥ 100 cpm)	At least 60 consecutive minutes of 0 cpm, with allowance for up to 2 min of observations of some limited movement (< 50 cpm)
4	Honda et al.	ST (minutes/day)	Active Style Pro HJA 350-IT (tri-axial accelerometer) and JALSPAQ	10 days during waking hours except for sleeping and bathing	≥ 600 minutes of wear time for 4 d	≤ 1,5 MET (= 100 cpm)	MVPA ≥ 3 MET	60 consecutive minutes of no activity (< 1.0 MET) with allowance for up to two consecutive minutes of activities with intensity equal to 1.0 MET.
5	Kop et al.	/	Actiwatch	14 days	/	/	/	/
6	Miyashita et al.	/	Lifecorder EX (uni-axial accelerometer)	3X2 days (1 week apart)	/	/(LIPA: level 0, 0.5, 1, 2 and 3)	LIPA: level 0, 0.5, 1, 2 and 3 Moderate activities: level 4-6 Vigorous activities: level 7-9	/
7	Sonne et al.	ST (hours/day)	Actiheart (HR monitor & accelerometer)	14 days (4 + 10)	/	/(SB was supposed during BR)	/	/
8	Sonne et al.	ST (hours/day)	Actiheart (HR monitor & accelerometer)	14 days (4 + 10)	/	/(SB was supposed during BR)	/	/

9	Shiraishi et al.	/	Holter ECG (HR monitor)	120 days	/	/(SB was supposed during BR)	/	/
10	Wientzek et al.	ST (hours/day)	Actiheart (HR monitor & accelerometer)	2X4 days (4 months apart)	/	≤ 1,5 MET (= 100 cpm)	Vigorous time: > 6 MET/hour	/

Table 5.3

Data extraction: methods, analysis and results concerning cardiometabolic health measures, results and association of sedentary time with cardiometabolic health

Cardiometabolic health measures																													
N°	What was measured and how was it measured?	Significant results	Significant associations of ST with cardiometabolic health (p < 0,05)																										
1	<p><u>BMI</u>, <u>WC</u>, <u>BP</u> Non-fasting blood samples: <u>HDL-C</u> and <u>CRP</u> Fasting blood samples: <u>LDL-C</u>, <u>TRI</u>, <u>GLU</u> and <u>INS</u>. The latter two were used to determine the <u>HOMA-IR</u>.</p>	<p>Level of significance p < 0,05 Sleep and SB: highest (proportional) co-dependence; MVPA is the least co-dependent on the other behaviours.</p> <p>Linear regression models</p> <table border="1"> <tr> <td colspan="2"><u>SINGLE models:</u></td> </tr> <tr> <td>Sleeping time:</td> <td>Higher TRI, CRP Lower BMI, DBP</td> </tr> <tr> <td>SB:</td> <td>Higher BMI, WC, TRI, INS, HOMA-IR Lower HDL-C</td> </tr> <tr> <td>LIPA:</td> <td>Lower WC, TRI, INS, HOMA-IR</td> </tr> <tr> <td>MVPA:</td> <td>Higher HDL-C Lower BMI, WC, TRI, CRP, INS, HOMA-IR</td> </tr> <tr> <td colspan="2"><u>CODA models:</u></td> </tr> <tr> <td>Sleeping time:</td> <td>Higher TRI, CRP, GLU Lower BMI, DBP</td> </tr> <tr> <td>SB:</td> <td>Higher BMI, WC</td> </tr> <tr> <td>LIPA:</td> <td>Higher BMI Lower TRI, INS, HOMA-IR</td> </tr> <tr> <td>MVPA:</td> <td>Higher HDL-C Lower BMI, WC, CRP</td> </tr> </table> <p>Effect of time re-allocation (no p-values) Effects were small and not symmetric.</p> <table border="1"> <tr> <td colspan="2"><u>Sleep displacing:</u></td> </tr> <tr> <td>Another behaviour:</td> <td>Higher LDL-C, TRI, GLU, INS, HOMA-IR Lower obesity markers</td> </tr> <tr> <td>LIPA and MVPA:</td> <td>Lower SBP and DBP</td> </tr> </table>	<u>SINGLE models:</u>		Sleeping time:	Higher TRI, CRP Lower BMI, DBP	SB:	Higher BMI, WC, TRI, INS, HOMA-IR Lower HDL-C	LIPA:	Lower WC, TRI, INS, HOMA-IR	MVPA:	Higher HDL-C Lower BMI, WC, TRI, CRP, INS, HOMA-IR	<u>CODA models:</u>		Sleeping time:	Higher TRI, CRP, GLU Lower BMI, DBP	SB:	Higher BMI, WC	LIPA:	Higher BMI Lower TRI, INS, HOMA-IR	MVPA:	Higher HDL-C Lower BMI, WC, CRP	<u>Sleep displacing:</u>		Another behaviour:	Higher LDL-C, TRI, GLU, INS, HOMA-IR Lower obesity markers	LIPA and MVPA:	Lower SBP and DBP	<p>Linear regression models SINGLE models: Time spent sedentary was deleteriously associated with BMI, WC, HDL-C, TRI, INS and HOMA-IR. CODA models: SB was associated with worse outcomes for obesity markers (BMI, WC).</p> <p>Effect of time re-allocation SB replacing MVPA, has detrimental effects on obesity markers, HDL-C, TRI, GLU, INS, and HOMA-IR.</p> <p>Mapping the effect of behaviour compositions on cardiometabolic outcomes The proportion of time spent in SB: negative effects on BMI, WC, SBP, HDL-C, CRP, TRI, INS and HOMA-IR when it replaced MVPA time. The magnitude of these effects appeared to depend on the proportion of LIPA. When SB replaced LIPA time, detrimental effects for INS, HOMA-IR and, to a lesser extent, TRI.</p>
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Another behaviour:	Very small effect (most noticeable on lipids)																	
<p>2 <u>Height</u>: rigid stadiometer <u>Weight</u>: calibrated scales (Height and weight for BMI) <u>Fat mass & FFM</u>: standard impedance technique Bodystat <u>Fasting leptin</u>: DELFIA in-house two-site immunometric assay <u>GLU, INS (fasting, 30', 2h, HOMA-IR)</u>: blood samples <u>PAEE</u>: Flex Heart Rate technique (total daily energy expenditure – resting energy expenditure as kJ/min)</p>	<p>Level of significance p < 0,05 Participant characteristics</p> <table border="1"> <tr> <td>After 5 years:</td> <td>Higher BMI, fat mass, fasting/2h INS concentrations, HOMA-IR, PAEE Lower FFM</td> </tr> <tr> <td>High leptin compared with low leptin group:</td> <td>BMI, fat mass, FFM, leptin, fasting INS, 30' INS, 2h INS, HOMA-IR</td> </tr> <tr> <td>Correlations between:</td> <td>Leptin, fasting INS, 30' INS, 2h INS, HOMA-IR</td> </tr> </table> <p>Leptin and IR</p> <table border="1"> <tr> <td>One unit increase in leptin at baseline:</td> <td>+ correlation with follow-up measures of log fasting INS, log INS 30', log INS 2h, and HOMA-IR</td> </tr> </table> <p>Leptin and energy expenditure</p> <table border="1"> <tr> <td>One unit increase in leptin at baseline:</td> <td>0,1 unit ± 0,04 SD PAEE decrease at follow-up</td> </tr> <tr> <td>PA:</td> <td>35% greater increase at follow-up in individuals with below-median leptin concentrations at baseline than those with above-median leptin concentrations</td> </tr> </table> <p>Leptin, PA, and IR</p> <p>PAEE mediates the relationship between leptin and INS (because adjustment for PAEE, in the models where leptin was the predictor variable, reduced the magnitude of the effect estimates and the level of statistical significance).</p>	After 5 years:	Higher BMI, fat mass, fasting/2h INS concentrations, HOMA-IR, PAEE Lower FFM	High leptin compared with low leptin group:	BMI, fat mass, FFM, leptin, fasting INS, 30' INS, 2h INS, HOMA-IR	Correlations between:	Leptin, fasting INS, 30' INS, 2h INS, HOMA-IR	One unit increase in leptin at baseline:	+ correlation with follow-up measures of log fasting INS, log INS 30', log INS 2h, and HOMA-IR	One unit increase in leptin at baseline:	0,1 unit ± 0,04 SD PAEE decrease at follow-up	PA:	35% greater increase at follow-up in individuals with below-median leptin concentrations at baseline than those with above-median leptin concentrations	<p>(Baseline leptin concentrations relate prospectively with the tendency to move around and expend energy via PA. Those with the lowest leptin concentrations became more active and developed less IR. The relationship between baseline leptin and worsening fasting INS concentrations was modified by baseline PAL.)</p>				
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<p>3 <u>WC</u> measured at the level of the iliac crest</p>	<p>Level of significance p < 0,05 for main effects and p < 0,1 for interactions Full sample</p>	<p>Independent of exercise time and other potential confounders, total ST was detrimentally</p>																

<p><u>Resting SBP, DBP</u> measured three to four times with a mercury sphygmomanometer (reported as averages excluding the first reading and questionable values)</p> <p><u>Non-fasting serum HDL-C:</u> Roche/Boehringer-Mannheim Diagnostics direct HDL method</p> <p><u>Non-fasting CRP:</u> latex-enhanced nephelometry on a Behring Nephelometer</p> <p><u>Fasting subsample (N = 2118):</u></p> <p><u>Fasting TRI:</u> enzymatic measurements</p> <p><u>Fasting GLU:</u> hexokinase method</p> <p><u>Fasting INS:</u> Tosoh AJA-PACK IRI immunoenzymometric assay and the Merocodia Insulin ELISA immunoassay</p> <p><u>HOMA-%B & HOMA-%S:</u> corrected values of 2 measurements of fasting GLU & INS</p> <p><u>2h plasma GLU values:</u> OGTT</p>	<table border="1"> <tr> <td>Exercise:</td> <td>Moderate inverse correlation with ST Weak correlation with breaks</td> </tr> <tr> <td>ST and breaks:</td> <td>Weak overall correlations</td> </tr> <tr> <td colspan="2">Cardiometabolic risk biomarkers</td> </tr> <tr> <td>ST:</td> <td>Detrimental linear associations with WC, HDL-C, CRP, TRI, INS, HOMA-%B, HOMA-%S</td> </tr> <tr> <td>Clinical meaningful average differences between top and bottom quartiles of ST for:</td> <td>TRI, INS, HOMA-%B, HOMA-%S</td> </tr> <tr> <td>Breaks in ST:</td> <td>Detrimental association with WC, CRP</td> </tr> <tr> <td>Clinical meaningful average differences between top and bottom quartiles of ST for:</td> <td>Quartiles 2, 3 and 4 were all significantly different from quartile 1 for WC</td> </tr> <tr> <td colspan="2">Including potential confounders</td> </tr> <tr> <td colspan="2"><u>Sex</u></td> </tr> <tr> <td>Association of ST and sex in:</td> <td>BP, HDL-C, TRI, INS, HOMA-%B, HOMA-%S</td> </tr> <tr> <td>Association of breaks and sex in:</td> <td>BP, HDL-C, TRI, INS, HOMA-%S and 2h plasma GLU</td> </tr> <tr> <td colspan="2"><i>HDL-C: Association with ST in men, association with breaks in women</i></td> </tr> <tr> <td>Females:</td> <td>Higher ST, number of breaks More favourable cardiometabolic profile</td> </tr> <tr> <td colspan="2"><u>Racial/ethnic</u></td> </tr> <tr> <td>Association of ST and race in:</td> <td>WC, SBP, INS, HOMA-%B, HOMA-%S</td> </tr> <tr> <td colspan="2"><i>Association of ST with WC: detrimental in non-Hispanic whites, null in Mexican Americans, and beneficial in non-Hispanic blacks</i></td> </tr> <tr> <td colspan="2"><i>Association of ST with INS, HOMA-%B, HOMA-%S: detrimental in all racial groups</i></td> </tr> <tr> <td colspan="2"><i>Association of breaks with HDL-C: beneficial in non-Hispanic whites</i></td> </tr> <tr> <td>Mexican Americans:</td> <td>Higher TRI Lowest ST</td> </tr> <tr> <td colspan="2"><u>Age differences ('each additional year of age')</u></td> </tr> <tr> <td>Association of ST and age in:</td> <td>WC, HDL-C, CRP</td> </tr> <tr> <td>Association of breaks and age in:</td> <td>SBP</td> </tr> </table>	Exercise:	Moderate inverse correlation with ST Weak correlation with breaks	ST and breaks:	Weak overall correlations	Cardiometabolic risk biomarkers		ST:	Detrimental linear associations with WC, HDL-C, CRP, TRI, INS, HOMA-%B, HOMA-%S	Clinical meaningful average differences between top and bottom quartiles of ST for:	TRI, INS, HOMA-%B, HOMA-%S	Breaks in ST:	Detrimental association with WC, CRP	Clinical meaningful average differences between top and bottom quartiles of ST for:	Quartiles 2, 3 and 4 were all significantly different from quartile 1 for WC	Including potential confounders		<u>Sex</u>		Association of ST and sex in:	BP, HDL-C, TRI, INS, HOMA-%B, HOMA-%S	Association of breaks and sex in:	BP, HDL-C, TRI, INS, HOMA-%S and 2h plasma GLU	<i>HDL-C: Association with ST in men, association with breaks in women</i>		Females:	Higher ST, number of breaks More favourable cardiometabolic profile	<u>Racial/ethnic</u>		Association of ST and race in:	WC, SBP, INS, HOMA-%B, HOMA-%S	<i>Association of ST with WC: detrimental in non-Hispanic whites, null in Mexican Americans, and beneficial in non-Hispanic blacks</i>		<i>Association of ST with INS, HOMA-%B, HOMA-%S: detrimental in all racial groups</i>		<i>Association of breaks with HDL-C: beneficial in non-Hispanic whites</i>		Mexican Americans:	Higher TRI Lowest ST	<u>Age differences ('each additional year of age')</u>		Association of ST and age in:	WC, HDL-C, CRP	Association of breaks and age in:	SBP	<p>associated with several biomarkers, whereas breaks, independent of ST, were beneficially associated with WC and CRP.</p>
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<p>4 <u>WC:</u> using standard protocols, measured to the nearest 0,1 cm</p> <p><u>BMI:</u> weight divided by height squared (kg/m²)</p> <p><u>SBP and DBP:</u> at rest by an automated sphygmomanometer</p> <p>Fasting blood samples: <u>TRI</u>, <u>total cholesterol</u>, <u>HDL-C</u>, and <u>GLU</u> by enzymatic methods and <u>HbA1c</u> by latex agglutination</p>	<p>Level of significance p < 0,05</p> <p>Characteristics of the study participants</p> <p>Higher <u>objective</u> ST: older age, higher proportion of men, being married, higher educational level, increased level of total and occupational ST and MVPA measured by self-report, and decreased levels of MVPA measured by accelerometry</p> <p>Higher total <u>subjective</u> ST: greater saturated fat consumption, longer leisure time and occupational ST, and less objective MVPA</p> <p>Association of accelerometer-derived and self-reported ST with cardiometabolic risk factors</p> <table border="1"> <tr> <td>Accelerometer-derived ST:</td> <td>Higher BMI, TRI, total:HDL-C ratio, HbA1c Lower HDL-C</td> </tr> <tr> <td>Self-reported ST:</td> <td>Higher TRI, total:HDL-C ratio, HbA1c, GLU Lower HDL-C</td> </tr> </table>	Accelerometer-derived ST:	Higher BMI, TRI, total:HDL-C ratio, HbA1c Lower HDL-C	Self-reported ST:	Higher TRI, total:HDL-C ratio, HbA1c, GLU Lower HDL-C	<p>Association of accelerometer-derived and self-reported ST with cardiometabolic risk factors</p> <p>Accelerometer derived ST showed a significant trend with BMI, HbA1c, higher TRI, higher GLU, higher total:HDL-C ratio, and lower HDL-C.</p> <p>After adjusting for potential confounders (model 3), accelerometer-derived ST showed detrimental associations</p>																																								
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<p>methods or high performance liquid chromatography. <u>Total:HDL-C ratio</u>: calculated using the above determined data <u>LDL-C</u>: calculated using the Friedewald formula</p>	<table border="1"> <tr> <td colspan="2"><u>Considering the associations of ST during occupation and leisure time</u></td> </tr> <tr> <td>Leisure ST:</td> <td>Higher total:HDL-C ratio</td> </tr> <tr> <td>Occupational ST:</td> <td>Higher TRI, HbA1c, GLU Lower HDL-C</td> </tr> </table> <p>Correlations between:</p> <table border="1"> <tr> <td>Accelerometer-determined and self-reported ST:</td> <td>Spearman's rho = 0,401 (moderate correlation)</td> </tr> <tr> <td>Correlation of accelerometer-determined and occupational ST:</td> <td>Spearman's rho = 0,486</td> </tr> <tr> <td>Correlation of self-reported and occupational and leisure ST:</td> <td>Spearman's rho = 0,711 and 0,601 respectively</td> </tr> </table>	<u>Considering the associations of ST during occupation and leisure time</u>		Leisure ST:	Higher total:HDL-C ratio	Occupational ST:	Higher TRI, HbA1c, GLU Lower HDL-C	Accelerometer-determined and self-reported ST:	Spearman's rho = 0,401 (moderate correlation)	Correlation of accelerometer-determined and occupational ST:	Spearman's rho = 0,486	Correlation of self-reported and occupational and leisure ST:	Spearman's rho = 0,711 and 0,601 respectively	<p>with BMI, TRI, HDL-C, total:HDL-C ratio, and HbA1c. Considering the associations of ST during occupation and leisure time with risk factors, leisure ST was only associated with total:HDL-C ratio, while occupational ST was associated with higher TRI, higher GLU, and higher HbA1c, and lower concentrations of HDL-C, after adjustment for all covariates.</p>		
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<p>5 <u>IL6</u>: ELISA <u>CRP</u>: high sensitivity analyser Behring Nephelometer Analyzer 2 <u>Plasma fibrinogen</u>: rate of clot formation by using a semiautomated modified method described by Claus and a BBL Fibrometer <u>sICAM-1</u>: Parameter Human sICAM-1 Immunoassay <u>Negative mood</u>: POMS total mood disturbance score <u>Depressive symptoms</u>: BDI-II <u>Fatigue</u>: MFI <u>PA level</u>: Aerobics Center Longitudinal Study Physical Activity Questionnaire with conversion of level of exercise participation per week into kcal or energy expenditure estimates, by METs. ECG: autonomic nervous system activity (<u>baseline HR</u>, <u>exercise HR</u>, <u>recovery HR</u>, <u>rMSSD</u>, <u>pNN50</u>, <u>LF-HRV</u>, <u>HF-HRV</u>, <u>LF/HF ratio</u>)</p>	<p>Level of significance p < 0,05 Participant characteristics Ambulatory actigraph data to control the study adherence: less peak activity in EX-W compared with CON. Changes in inflammatory markers <u>Significant changes over time and/or between the 2 groups:</u></p> <table border="1"> <tr> <td>IL6:</td> <td>Day 7 - 14: decrease in EX-W and CON</td> </tr> <tr> <td>CRP:</td> <td>Baseline – day 7: decrease in EX-W. CRP concentrations were and stayed higher in CON compared with EX-W</td> </tr> <tr> <td>Fibrinogen:</td> <td>Baseline – day 7: decrease in EX-W</td> </tr> <tr> <td>sICAM-1:</td> <td>Day 7 – 14: Decrease in EX-W and CON</td> </tr> </table> <p>Baseline and measures at 14 days follow-up: highly correlated (Inflammatory markers tended to decrease)</p> <p>Associations of inflammatory markers and negative mood, fatigue</p> <table border="1"> <tr> <td>Negative mood symptoms (POMS & BDI):</td> <td>Baseline - day 14: increase in EX-W No associations with changed inflammatory markers</td> </tr> <tr> <td>Fatigue (MFI):</td> <td>Increase in EX-W No associations with changed inflammatory markers</td> </tr> </table> <p>Association of inflammatory markers and indices of autonomic nervous system activity</p> <table border="1"> <tr> <td>Exercise & recovery HR:</td> <td>Lower in EX-W due to exercise protocol</td> </tr> </table>	IL6:	Day 7 - 14: decrease in EX-W and CON	CRP:	Baseline – day 7: decrease in EX-W. CRP concentrations were and stayed higher in CON compared with EX-W	Fibrinogen:	Baseline – day 7: decrease in EX-W	sICAM-1:	Day 7 – 14: Decrease in EX-W and CON	Negative mood symptoms (POMS & BDI):	Baseline - day 14: increase in EX-W No associations with changed inflammatory markers	Fatigue (MFI):	Increase in EX-W No associations with changed inflammatory markers	Exercise & recovery HR:	Lower in EX-W due to exercise protocol	<p>EX-W for 2 weeks does not result in a low-grade inflammatory response. Statistically significant decreases were observed in fibrinogen and sICAM-1, but these decreases were similar in the two groups. EX-W resulted in negative mood symptoms, but these symptoms were not related to changes in inflammatory markers.</p>
IL6:	Day 7 - 14: decrease in EX-W and CON															
CRP:	Baseline – day 7: decrease in EX-W. CRP concentrations were and stayed higher in CON compared with EX-W															
Fibrinogen:	Baseline – day 7: decrease in EX-W															
sICAM-1:	Day 7 – 14: Decrease in EX-W and CON															
Negative mood symptoms (POMS & BDI):	Baseline - day 14: increase in EX-W No associations with changed inflammatory markers															
Fatigue (MFI):	Increase in EX-W No associations with changed inflammatory markers															
Exercise & recovery HR:	Lower in EX-W due to exercise protocol															
<p>6 <u>Weight</u>: digital scale to the nearest 1 kg</p>	<p>Level of significance p < 0,05 Fasting serum/plasma concentrations measured on days 1 and 2</p>	<p>Postprandial serum TAG concentrations do not appear to</p>														

<p><u>Height</u>: stadiometer to the nearest 0,1 cm <u>BMI</u>: measured weight and height <u>WC</u>: flexible tape at level of the umbilicus to the nearest 1 cm <u>BP</u>: mercury sphygmomanometer at the right arm in sitting position (mean of 2 measures).</p> <p>Venous blood samples: concentrations of <u>TAG</u>, <u>inactive monomeric LPL protein</u>, <u>Apo C-II</u>, <u>Apo C-III</u>, <u>NEFA</u>, <u>3-OHB</u>, <u>INS</u> and <u>GLU</u> Enzymatic, colorimetric assays: <u>TAG</u>, <u>NEFA</u>, <u>3-OHB</u> and <u>GLU</u>. Turbidometric immunoassay: <u>Apo C-II</u> and <u>Apo C-III</u> ELISA: <u>INS</u> and <u>serum inactive monomeric LPL protein</u></p>	<p>No significant differences measured on both days. Postprandial serum/plasma concentrations measured on day 2 <u>Effect of time</u>: serum TAG, serum inactive monomeric LPL protein, Apo C-III, serum NEFA, 3-OHB, INS <u>Effect of trial</u>: serum TAG (lower on the walking trial than the sitting and standing trials), AUC for TAG (lower on the walking trial than the sitting and standing trials), GLU concentrations (lower on the walking than the sitting trial) <u>Trial x time interaction</u>: serum TAG</p>	<p>be reduced after experimentally-induced standing compared with sitting. An acute bout of low-volume walking equivalent to an amount of exercise at the current minimum recommendation reduced the lipaemic response to the test meals compared with the control sitting condition.</p>												
<p>7 <u>SBP</u>: Sphygmomanometer <u>HR</u>: Holter ECG Fukuda <u>Phase</u>: nonlinear least squares method <u>Amplitude</u> and <u>acrophase</u>: obtained in low-frequency components less than 1 Hz of the time series data of BP <u>Slope of 1/f spectrum</u>: estimated by a log-log scale</p>	<p>Level of significance p < 0,05</p> <table border="1"> <tr> <td>HR at daytime:</td> <td>Higher after BR compared with other measuring times</td> </tr> <tr> <td>SBP amplitude:</td> <td>Higher after BR (24h period) compared with other measuring times</td> </tr> <tr> <td>Slope of 1/f:</td> <td>Lower after BR compared with other measuring times</td> </tr> </table>	HR at daytime:	Higher after BR compared with other measuring times	SBP amplitude:	Higher after BR (24h period) compared with other measuring times	Slope of 1/f:	Lower after BR compared with other measuring times	<p>SB = Tendency to decrease 24h cyclic amplitude of SBP. This appeared to be the rhythmic modulation related to cardiovascular deconditioning.</p>						
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<p>8 DEXA scanning: <u>weight</u>, <u>BMI</u>, <u>total fat mass</u>, <u>total lean mass</u>, <u>% body fat</u>, <u>trunk fat mass/total fat mass</u>, <u>leg fat mass/total fat mass</u> <u>WC</u>, <u>waist-to-hip ratio</u> Actiheart recordings: <u>PA score</u>, <u>total number of heart beats per day</u> Test on a bicycle ergometer: <u>VO_{2max}</u></p>	<p>Level of significance p < 0,05 Anthropometrics and PAL</p> <table border="1"> <tr> <td>FDR & LBW:</td> <td>Higher ratio between trunk and total fat mass compared with CON before and after BR</td> </tr> <tr> <td>FDR, LBW & CON:</td> <td>Decrease in average PA score and heart beats/day from control period to BR Increase in HR at a given workload after BR</td> </tr> </table> <p>Hyperinsulinemic clamp</p> <table border="1"> <tr> <td>Fasting INS & C-peptide:</td> <td>Higher before and after BR in FDR compared with CON</td> </tr> <tr> <td>HDL-C:</td> <td>Decrease in all groups after BR</td> </tr> <tr> <td>TRI:</td> <td>Increase in CON and FDR</td> </tr> <tr> <td>BDNF:</td> <td>Decrease in LBW and increase in FDR after BR</td> </tr> </table>	FDR & LBW:	Higher ratio between trunk and total fat mass compared with CON before and after BR	FDR, LBW & CON:	Decrease in average PA score and heart beats/day from control period to BR Increase in HR at a given workload after BR	Fasting INS & C-peptide:	Higher before and after BR in FDR compared with CON	HDL-C:	Decrease in all groups after BR	TRI:	Increase in CON and FDR	BDNF:	Decrease in LBW and increase in FDR after BR	<p>All groups responded to the 10-day BR with a decrease in <u>whole body INS sensitivity</u>, which was statistically significant in the CON and LBW groups. In line with the findings on the whole body level, <u>INS sensitivity of the forearm</u> (forearm INS-stimulated GLU clearance) also decreased in the CON and LBW groups in response to BR, whereas no changes were observed in the FDR group. <u>Vascular INS action</u> was also</p>
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<p><u>SBP & DBP</u>: arterial catheters were inserted for monitoring BP</p> <p>Blood samples: <u>fasting GLU</u> (analysed on an automatic analyser) and <u>INS</u> (measured with the ELISA technique)</p> <p>HPLC: <u>HbA1c</u></p> <p>ELISA technique: <u>C-peptide</u>, <u>BDNF</u></p> <p>Enzymatic colorimetric test: <u>total cholesterol</u>, <u>HDL-C</u></p> <p>Friedewald formula: <u>LDL-C</u> [TRI] divided by 2.2: <u>VLDL-C</u></p> <p>Triglyceride GPO-PAP: <u>TRI</u></p> <p><u>Average GLU infusion rate (per lean body mass)</u> were averaged over 10-min periods (<u>INS-stimulated</u>) <u>forearm GLU clearance</u> was calculated as GLU extraction multiplied by blood flow</p> <p><u>Whole body INS-stimulated GLU uptake rates</u> were calculated as the mean of steady-state GLU infusion rates from time = 90 min to time = 120 min (<u>INS-stimulated</u>) <u>GLU extraction fraction</u></p> <p>Venous occlusion plethysmography: (<u>INS-stimulated</u>) <u>FBF</u></p>	<table border="1"> <tr> <td>M-value before BR:</td> <td>Before BR: Higher in CON compared with FDR, with the same result when the M-value is expressed per lean body mass</td> </tr> <tr> <td>M-value after BR:</td> <td>Decreased in all groups, with the same result when the M-value is expressed per lean body mass Lower in FDR compared with CON with higher % decrease in CON compared with FDR</td> </tr> <tr> <td colspan="2">N.B.</td> </tr> <tr> <td>M-value before BR:</td> <td>+ correlation with the change of the M-value due to BR</td> </tr> <tr> <td>Slope of the relationship:</td> <td>Different in FDR than CON</td> </tr> <tr> <td colspan="2">Forearm GLU clearance</td> </tr> <tr> <td>Baseline:</td> <td>Higher in CON compared with FDR before BR, no changes after BR</td> </tr> <tr> <td>INS-stimulated forearm GLU clearance:</td> <td>Diminished after BR in CON and LBW</td> </tr> <tr> <td>Baseline GLU extraction fraction:</td> <td>Higher in CON compared with FDR before BR, no changes after BR</td> </tr> <tr> <td>INS-stimulated GLU extraction:</td> <td>Decreased in LBW after BR</td> </tr> <tr> <td>M-value:</td> <td>Correlates with INS-stimulated forearm GLU uptake</td> </tr> <tr> <td colspan="2">INS-stimulated FBF</td> </tr> <tr> <td>Baseline:</td> <td>Higher in CON compared with LBW and FDR before BR</td> </tr> <tr> <td>Effect of INS to stimulate FBF between groups:</td> <td>Higher in CON compared with LBW and FDR before BR. Effect decreased in CON after BR.</td> </tr> <tr> <td>Effect of INS to stimulate FBF within groups:</td> <td>Increase in CON and LBW before BR. Effect only remained in CON after BR.</td> </tr> </table>	M-value before BR:	Before BR: Higher in CON compared with FDR, with the same result when the M-value is expressed per lean body mass	M-value after BR:	Decreased in all groups, with the same result when the M-value is expressed per lean body mass Lower in FDR compared with CON with higher % decrease in CON compared with FDR	N.B.		M-value before BR:	+ correlation with the change of the M-value due to BR	Slope of the relationship:	Different in FDR than CON	Forearm GLU clearance		Baseline:	Higher in CON compared with FDR before BR, no changes after BR	INS-stimulated forearm GLU clearance:	Diminished after BR in CON and LBW	Baseline GLU extraction fraction:	Higher in CON compared with FDR before BR, no changes after BR	INS-stimulated GLU extraction:	Decreased in LBW after BR	M-value:	Correlates with INS-stimulated forearm GLU uptake	INS-stimulated FBF		Baseline:	Higher in CON compared with LBW and FDR before BR	Effect of INS to stimulate FBF between groups:	Higher in CON compared with LBW and FDR before BR. Effect decreased in CON after BR.	Effect of INS to stimulate FBF within groups:	Increase in CON and LBW before BR. Effect only remained in CON after BR.	<p>affected by inactivity in the CON and LBW groups, whereas the FDR group demonstrated impairment already before BR.</p>
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<p>9 Test on a bicycle ergometer: <u>VO_{2max}</u></p> <p><u>SBP & DBP</u>: arterial catheters were inserted for monitoring <u>Fasting GLU & INS</u>: blood samples</p> <p>DEXA scanning: <u>weight</u>, <u>BMI</u>, <u>% body fat</u></p> <p><u>PA score</u>, <u>total number of heart beats/day</u>: Actiheart recordings</p> <p><u>WC</u>, <u>Conductance</u></p> <p><u>FBF</u>: venous occlusion plethysmography</p>	<p>Level of significance p < 0,05</p> <table border="1"> <tr> <td>BR:</td> <td>Lower PA score, total number of heart beats per day, INS-stimulated uptake rates in all groups</td> </tr> </table> <p>Blood-borne biomarkers of inflammation and endothelial function</p> <table border="1"> <tr> <td>ICAM-1 & VCAM-1:</td> <td>Increased in FDR after BR</td> </tr> <tr> <td>ICAM-1:</td> <td>Increased in LBW after BR</td> </tr> <tr> <td>hsCRP:</td> <td>Higher before and after BR in FDR compared to CON and LBW (but no changes after BR in all groups)</td> </tr> <tr> <td>Homocysteine:</td> <td>Higher before BR in FDR compared to CON</td> </tr> </table> <p>Vasodilator responses</p> <table border="1"> <tr> <td colspan="2"><u>Adenosine and acetylcholine responses at baseline</u></td> </tr> <tr> <td>FBF:</td> <td>Dose-dependent increase before and after BR in all groups</td> </tr> </table>	BR:	Lower PA score, total number of heart beats per day, INS-stimulated uptake rates in all groups	ICAM-1 & VCAM-1:	Increased in FDR after BR	ICAM-1:	Increased in LBW after BR	hsCRP:	Higher before and after BR in FDR compared to CON and LBW (but no changes after BR in all groups)	Homocysteine:	Higher before BR in FDR compared to CON	<u>Adenosine and acetylcholine responses at baseline</u>		FBF:	Dose-dependent increase before and after BR in all groups	<p>Reduced vasodilator responses to adenosine or acetylcholine during hyperinsulinemia in LBW. BR impaired INS-mediated vasodilatation in CON and LBW and increased endothelial activation markers in FDR and LBW but not in CON. So, early functional abnormality of the arterial vessel is related to effects of INS.</p>																
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<p><u>hsCRP</u>: CRP (Latex) HS Kit <u>Homocysteine</u>: Axis-Shield Enzymatic Homocysteine <u>ICAM-1 & VCAM-1</u>: ELISA immunoassays <u>vWF</u>: ELISA</p>	<p><u>Adenosine and acetylcholine responses during hyperinsulinemia</u> FBF: Dose-dependent increase before BR in CON and LBW compared to the increase at baseline <u>INS-mediated vasodilatation</u> FBF baseline: Higher in CON before and after BR compared with LBW and FDR FBF INS: Increased before BR in CON and LBW stimulation:</p>																										
<p>10 <u>Serum metabolite concentrations</u>: blood sample, AbsoluteIDQp150kit for serum concentration determination by FIA-MS/MS (analysis of 127 metabolites, whom show robust measurements & 2 metabolites who were previously linked to T2DM)? <u>CRF</u>: 8 min. ramped step test was performed for individual calibration of heart rate (HR) response to exercise and to determine CRF via a submaximal exercise test with VO₂max estimation.</p>	<p>Level of significance p < 0,05 CRF: + association with cluster of PC PAEE: - association with 5 metabolites (methionine, lyso-PC C14:0, diacyl-PC C34:4, diacyl-PC C32:2 & diacyl-PC C34:3) ST: - association with 6 metabolites (diacyl-PC C32:2, diacyl-PC C34:3, diacyl-PC, C34:2, C34:4 & lyso-PC C14:0) Vigorous time: No association with metabolites PAEE & ST together: 5 associated metabolites, independent of the other exposures (methionine, diacyl-PC C32:2, C34:3, C34:4 & lyso-PC C14:0)</p> <p><u>T2DM metabolites</u>: CRF: + association with metabolite factor 1 (T2DM protective factor) Vigorous time: Association with metabolite factor 2 (T2DM risk factor 2) (But with low precision (wide CI))</p> <p><u>Spearman Correlation Coefficients</u>:</p> <table border="1" data-bbox="647 805 1615 999"> <thead> <tr> <th></th> <th>CRF (ml/kg/min)</th> <th>PAEE (kJ/kg/day)</th> <th>Vigorous time (hr/day)</th> <th>Sedentary time (hr/day)</th> </tr> </thead> <tbody> <tr> <td>CRF (ml/kg/min)</td> <td>1</td> <td>0,39</td> <td>0,31</td> <td>-0,30</td> </tr> <tr> <td>PAEE (kJ/kg/day)</td> <td></td> <td>1</td> <td>0,46</td> <td>-0,93</td> </tr> <tr> <td>Vigorous time (hr/day)</td> <td></td> <td></td> <td>1</td> <td>-0,33</td> </tr> <tr> <td>Sedentary time (hr/day)</td> <td></td> <td></td> <td></td> <td>1</td> </tr> </tbody> </table>		CRF (ml/kg/min)	PAEE (kJ/kg/day)	Vigorous time (hr/day)	Sedentary time (hr/day)	CRF (ml/kg/min)	1	0,39	0,31	-0,30	PAEE (kJ/kg/day)		1	0,46	-0,93	Vigorous time (hr/day)			1	-0,33	Sedentary time (hr/day)				1	<p>There is a fair association of CRF with sedentary time. The spearman correlation coefficient between maximal oxygen uptake and sedentary time is -0,30 which is a fair relationship.</p>
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Abbreviations: N.a., not applicable; PA(L), physical activity (level); ST, sedentary time; SB, sedentary behaviour; LIPA, light intensity physical activity; MVPA, moderate to vigorous physical activity; BR, bed rest; HDBR, head-down bed rest; BMI, body mass index; WC, waist circumference; TRI, triglyceride; GLU, plasma glucose; INS, plasma insulin; HDL-C, high-density lipoprotein-cholesterol; (V)LDL-C, (very) low-density lipoprotein-cholesterol; HOMA-IR, homeostasis model assessment-insulin resistance; (hs)CRP, (high-sensitive) C-reactive protein; BP, blood pressure; SBP, systolic blood pressure; DBP, diastolic blood pressure; HbA1c, glycosylated haemoglobin; FFM, fat free mass; CRF, cardiorespiratory fitness; TAG, triacylglycerol; LPL, lipoprotein lipase; Apo C-II, apolipoprotein C-II; Apo C-III, apolipoprotein C-III; NEFA, non-esterified fatty acids; 3-OHB, 3-hydroxybutyrate; HOMA-%B, homeostasis model assessment-beta cell function; HOMA-%S, homeostasis model assessment-insulin sensitivity; FBF, forearm blood flow; (s)ICAM-1, (soluble) intercellular adhesion molecule 1; VCAM-1, vascular cell adhesion molecule 1; vWF, von Willebrand factor; BDNF, brain-derived neurotrophic factor; IL6, interleukin-6; HR, heart rate; rMSSD, root mean square successive difference of RR intervals; pNN50, percent of successive RR interval differences > 50 ms; LF-HRV, low-frequency heart rate variability; HF-HRV, high-frequency heart rate variability; LF/HF ratio, low frequency/high frequency ratio; POMS, Profile of Mood States; BDI, Beck Depression Inventory; MFI, Multidimensional Fatigue Inventory; JALSPAQ, Japan Arteriosclerosis Longitudinal Study Physical Activity Questionnaire; PAEE, physical activity energy expenditure; IR, insulin resistance; DM, diabetes mellitus; OGTT, oral glucose tolerance test; FIA-MS/MS, flow injection analysis tandem mass spectrometry; ECG, electrocardiogram; IPAQ, International Physical Activity Questionnaire; ELISA, enzyme-linked immunosorbent assays; MET, metabolic equivalent of task; cpm, counts per minute; PC, phosphatidylcholine; AUC, area under the curve; FDR, first-degree relative group; LBW, low birth weight group; CON, control group; EX-W, exercise-withdrawn group; LL, low leptin group; HL, high leptin group.

Table 6*Overview of the included reviews*

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PART 2: RESEARCH PROTOCOL

“Healthy patterns of physical activity in sedentary occupations” – “Gezond bewegingsgedrag bij sedentaire beroepen”

The university of Hasselt, out of the research group REVAL and IMOB (Instituut voor Mobiliteit, university of Hasselt), provides a parallel research project with starting students who spend most of their time sedentary while studying or following colleges.

This project creates the opportunity to follow students on medical level who start at the university, to gain a deeper insight in the consequences of their student lives (where sedentarism is imposed), as well to investigate the effects of appropriate advices on healthy patterns of physical activity (protocol 1). On the other hand, this creates the opportunity to examine the relationship between physical activity levels and health in students who start studying for a longer period, as they remain in the research during their whole study career (protocol 2).

As part of the whole research project, protocol 1 will be investigated in another MP2.

1. Introduction

Protocol 1:

Multiple studies evince that sedentary behaviour (i.e. large amounts of sitting during the day) is associated with negative consequences on a person's health (e.g. development of a cardiovascular risk, reduction of muscle strength and endurance, development of musculoskeletal complaints, etc.) (Lewis, Napolitano, Buman, Williams, & Nigg, 2017). To date, it remains unclear which negative consequences develop early and which negative consequences are expressed later. Though, this knowledge is important to understand better which risk factors should specifically be influenced to prevent further disadvantages of a person's health. Furthermore, there should be examined profoundly whether the progression of these negative consequences of sedentarism is dependent of certain personal characteristics (e.g. age, gender, fitness, etc.). This knowledge is important to understand which persons should have a stricter preventive policy to achieve a higher degree of cost efficiency. Furthermore, it is important to know whether preventive advices on healthy patterns of physical activity at the beginning of the academic years, could have an impact on the development of negative health consequences.

Protocol 2:

In protocol 1, there is an attempt to acquire a clearer insight in the aetiology of health complaints in students, as well to evaluate the possibilities for prevention through advice with regard to posture, exercises and healthy patterns of physical activity. In protocol 2, there will be an investigation of the associations between the degree and duration of sedentarism, personal characteristics and cardiometabolic health. To investigate the associations between health and the degree/duration of sedentarism, it is desired to apply this protocol on first-year students at the university of Hasselt and to follow them during their education program.

2. Aim of the study

Protocol 1:

To follow up commencing students at the university who are supposed to spent many hours sedentary (e.g. while studying or following colleges) on a regular basis and to acquire knowledge about which persons should have a stricter preventive policy to achieve a higher degree of cost efficiency.

Protocol 2:

To follow up commencing students at the university who are supposed to spent many hours sedentary (e.g. while studying or following colleges) on a regular basis and to acquire knowledge about the associations between the degree and duration of sedentarism, personal characteristics and cardiometabolic health.

2.1. Research questions

Protocol 1:

1. To what extent are there changes in the activity levels of students at the start and during the first two years of their study career?
2. To what extent is there a development of musculoskeletal complaints in the neck, shoulder girdle and lower back during the first two years of their study career?
3. To what extent is there an association between the activity level, cardiovascular risk, endurance and body composition on the one hand and the development of musculoskeletal complaints on the other hand? And to what extent is there a difference in those parameters between student who did or did not receive advices on posture and exercises at the start of their study career and at different measurement occasions?
4. To what extent is there a possibility to give advices and exercises with regard to posture and the desired healthy patterns of physical activity, to favourably influence a student's posture and patterns of physical activity?
5. To what extent is there a change in the circadian rhythm of students at the start and during the first two years of their study career?
6. To what extent are there changes in the heart rate variability, blood pressure and weight of the students during the first two years of their study career?
7. To what extent are there favourable consequences of the interventions on the alertness, heart rate variability, blood pressure and weight of the students?

Protocol 2:

1. To what extent are there associations between the degree and duration of sedentary behaviour (amount of physical activity) and the present cardiovascular risk, endurance and body composition?
2. To what extent are there associations between personal characteristics (weight, blood pressure, body composition) and the present cardiovascular risk, endurance and body composition?

2.2. Hypotheses

No clear hypotheses could be made. However, it is expected that the students will have lowered levels of physical activity as they follow colleges and have to sit a lot while studying. On the other hand, there is a possibility that some of the students break up their sedentary time with some activity of a certain intensity level while others do not interrupt their sedentary behaviour. Except study time, there is also leisure time. It is

expected that some of the students will be physically active during their leisure time while others may prefer some less active leisure time (e.g. watching television). Therefore, it is expected that there will be a lot of variability in daily physical activity patterns in students and their associated health. Until now, it is expected that more physical activity and more breaks in sedentary time will result in a more favourable health profile, examined through the presence of musculoskeletal complaints (protocol 1) and cardiometabolic parameters (protocol 2).

3. Methods

3.1. Research design

Protocol 1:

An observational, prospective design will be set up to investigate the formulated research questions. After recruitment during the first year of college, several measurements will be executed and these will be repeated every six months until the end of their study career to gain a clear insight about the following parameters:

- Physical activity pattern
- Body composition
- Cardiovascular risk profile
- Cardiorespiratory fitness
- Muscle force
- Musculoskeletal complaints

Participants will be divided in two groups after baseline measurements. The randomisation will be executed by someone who is not involved in the whole research project. The distribution of participants will be done by block randomisation wherein names will be taken out of envelopes. The participants of the experimental group will receive advices with regard to posture, exercises and healthy patterns of physical activity in combination with the planned measurements, while the control group only takes part in the measurements. The advices will be given at the beginning and during each measurement occasion during the study.

Protocol 2:

An observational, prospective, cross-sectional design will be set up to investigate the formulated research questions. After recruitment during the first year of college, several measurements will be executed and these will be repeated every six months until the end of their study career to gain a clear insight about the following parameters:

- Physical activity pattern
- Body composition
- Cardiovascular risk profile
- Cardiorespiratory fitness
- Muscle force

The measurements of protocol 1 and 2 will be executed at the research centre REVAL in Diepenbeek, Belgium.

3.2. Participants

3.2.1. Inclusion criteria

Students (18 years or older) who start their first year at college and who are healthy. With healthy defined as not suffering from chronic diseases.

3.2.2. Exclusion criteria

Persons who are diagnosed with metabolic, cardiorespiratory or musculoskeletal complaints or who cannot perform a cardiorespiratory exercise test. At last, pregnant women will be excluded.

3.2.3. Recruitment

Participants will be recruited through an information letter of the study by mail or through flyers which are distributed at the university. Participation in the study is voluntarily. The aim is to obtain a sample size of 500 participants.

3.3. Medical ethics

The study is evaluated by two independent ethical commissions, the 'Ethische Toetsingcommissie' of the Jessa Hospital and 'CME UHasselt', who gave a favourable advice. These commissions have the task to protect participants in clinical studies and to control if the rights of patients and participants in a study are respected. The ethical commissions gave an advice in agreement with the Belgian law of the 7th of May 2004. The study has already begun and all participants signed an informed written consent. The informed consent is written in Dutch, as the participants are Belgian. The participants who need to be recruited in the study at the start of the next academic year, obviously have not signed this informed consent.

3.4. Intervention

As this study is an observational trial, no intervention will be executed. However, in protocol 1 there will be a randomisation of the participants in the control group or the experimental group. The participants of the experimental group will receive advices with regard to posture, exercises and healthy patterns of physical activity.

- *Advice regarding a correct posture:* The focus is put on the ergonomic recommendations in general and a correct sitting position for the lumbar spine (O'Sullivan, O'Sullivan, O'Sullivan, & Dankaerts, 2012), the cervical spine (Beer, Treleaven, & Jull, 2012) and the shoulder complex (Cools et al., 2007) while studying and following colleges.
- *Advice regarding the remaining of full joint mobility:* The student should move through the full range of motion of the cervical spine, lumbar spine and shoulder girdle at least twice a day to prevent and/or counteract muscle shortenings and capsular adhesions. The participants will receive stretching techniques for muscles who are at risk for shortening, e.g. M. Levator Scapulae, M. Pectoralis Major, M. Quadriceps Femoris, Hamstrings, M. Triceps Surae.
- *Advice regarding healthy patterns of physical activity:* To be and stay healthy, participants will receive the advice to engage in at least 20 minutes of moderate intensity physical activity for at least five times a week (e.g. brisk walking). They can also choose to engage in at least 20 minutes of high intensity physical activity for at least three times a week (e.g. jogging). Further, it is recommended that they

execute activities which maintain or improve muscle power and muscle endurance at least two times a week (Haskell et al., 2007).

3.5. Outcome measures

The outcome measures are relatively the same in protocol 1 and 2. As protocol 1 is part of another MP2, the primary and secondary outcome measures will be listed as recorded in protocol 2. The subdivision of the outcomes as primary or secondary is the only difference between both protocols. None of the results are communicated to the participants, unless there are clinical relevant anomalies. Only then, the participants are directly contacted.

The measurements will take place at the research centre REVAL in Diepenbeek.

3.5.1. Primary outcome measures

- *Personal characteristics*: Total amount of sedentary hours a day.
- *Cardiovascular risk profile*: This will be determined through a fasting blood sample collection to measure the fasting blood glucose concentration, fasting insulin concentration, total cholesterol concentration, LDL-cholesterol and HDL-cholesterol concentrations. Blood pressure and heart rate will be measured in a supine position. The time investment is estimated around 15 minutes.
- *Weight*: This will be measured with a scale.
- *Body composition*: This will be determined using the waist circumference and body weight. The fat mass and fat free mass will be measured for the full body, the legs, the trunk and the gynoid/android regions. The 'waist-to-hip' fat ratio and 'fat mass trunk/fat mass legs' ratio will be measured through a Dual Energy X-ray Absorptiometry (DEXA) scan. The time investment is estimated around 15 minutes.
- *Activity monitoring*: The Actigraph GT3X accelerometer will be used to measure the physical activity pattern as the participants attach it on their belt and wear it at home. The Actigraph GT3X is a tri-axial accelerometer and will be worn during seven days. Thereby, the registration can take place during one week including weekend days (Verbunt, Huijnen, & Seelen, 2012). The participants should wear the accelerometer during waking hours and at least for 12 hours a day. The obtained data will be synchronised in time with the most important GPS locations where the participant is located. This will be done to obtain a more sensitive monitoring of the activity level (e.g. physical activity during hobbies/sports, physical activity during household tasks, etc.). To make an inventory of this displacement behaviour, the Sparrows-app (IMOB, university of Hasselt) which is developed by IMOB, will be utilized. In combination with the accelerometer data, the app will evaluate the participation level. The app will be activated through a personal code on the participants smartphone after contacting IMOB. The route of the participant will be registered based on the GPS signal. Every location where the participant remains for a period longer than 15 minutes, will automatically be registered as a 'stop' by the application. The participant will be asked to log in on the website of IMOB every evening where an overview of the stop-locations will be shown. At these locations, the participant can declare which type of activity they were doing (e.g. work, social activity, rehabilitation,...) and for each translocation, the mode of transport will be asked. The data will be stored anonymously in the server of IMOB (university of Hasselt).

- *ALMA Fit (Alma Care, BE)*: This consists of a wearable sensor (chest- or wristband) and it uses the accelerometer of the smartphone to monitor the heart beat and activity patterns of the participant continuously. The heart rate variability will be measured by an algorithm based on the interbeat-interval. Afterwards, this data will be used to obtain a real-time insight with regard to stress, alertness/tiredness and the risk for burnout. This will also be worn for a period of seven days.

3.5.2. Secondary outcome measures

- *Cardiorespiratory fitness*: After a standardised breakfast, every participant will undergo a maximal exercise test on a bicycle (eBike Basic, General Electric GmbH, Bitz, Germany) with measurements of oxygen uptake (VO₂), expiratory volume (VE), respiratory quotient (RQ) and heart rate during the test. An ECG will be monitored continuously. A Jaeger Oxycon apparatus will be utilized to analyse the pulmonary gas exchanges. The aerobic and anaerobic thresholds will be determined from the ventilation data. The time investment is estimated around 30 minutes.
- *Muscle force*: The maximal voluntary isometric and dynamic muscle force of the back and abdominal muscles will be measured using an isokinetic dynamometer (System 3, Biodex, ENRAF-NONIUS, New York). The time investment is estimated around 20 minutes.
- *Orthopaedic/musculoskeletal complaints*: The participants will be screened based on clinical measurements/tests of the neck, lower back and shoulders. The body position during studying will be visualised via video-analysis and afterwards analysed and scored based on the Rapid Upper Limb Assessment (RULA). Specifically, the position of the head, the shoulder girdle and the lower back will be analysed during sitting. The RULA is a postural screening instrument based on observation which is developed for ergonomic purposes. It maps the exposure of an individual to posture-related loading factors (McAtamney & Nigel Corlett, 1993). The numeric pain rating scale (NPRS) will be questioned in every participant who experiences pain complaints for each painful location (Von Korff, Jensen, & Karoly, 2000). The NPRS is a scale from zero to ten, where zero means 'no pain' and ten is equal to 'the worst pain you can imagine'. Further, specific questionnaires are utilized to map physical impairments near the neck, back and/or shoulders, if these are present. When the participants indicate pain near their upper body, the Disabilities of Arm, Shoulder and Hand (DASH) questionnaire will be used (Beaton et al., 2001). If their pain is localised near the shoulder (and not in the entire arm or hand), the Shoulder Pain And Disability Inventory (SPADI) will be preferred (Bot et al., 2004; Roach, Budiman-Mak, Songsiridej, & Lertratanakul, 1991). If the pain is near the neck region or the lower back, the Neck Disability Index (NDI) (Vernon & Mior, 1991) or the Roland Morris Disability Questionnaire (RMDQ) (Roland & Morris, 1983) will be used respectively. All these questionnaires are found to be valid and reliable to evaluate pain and impairments in these specific regions (upper body, shoulder, neck and lower back respectively) during activities of daily living. The DASH (Beaton et al., 2001) questions impairments in the arm, shoulder and hand during activities (30 items). The SPADI (Bot et al., 2004; Roach et al., 1991) is a 12-item questionnaire about shoulder pain and functioning. The NDI (Vernon & Mior, 1991) is a measurement tool to evaluate pain and impairments during the performance of daily living activities. Items are scored from zero (no pain or impairment) to five (maximal pain and/or impairment). The RMDQ questionnaire consist of 24 items which evaluate the

functioning on the activity level of a person with low back pain. In this population, there are no specific complaints expected near the lower limbs.

- *Food diary*: After the measurements at REVAL, the participants receive a ‘three-day food diary’ to evaluate their dietary pattern. The diary will be returned after seven days to the research centre together with the ALMA Fit system and the accelerometer.
- *The Physical Activities Scale for Individuals with Physical Disabilities (PASIPD)*: This questionnaire (Washburn, Zhu, McAuley, Frogley, & Figoni, 2002) will be administered every month to measure the physical activity of the participants. It provides information about their leisure time, household and school related physical activities of the last seven days.

3.6. Data-analysis

As the study design is observational, descriptive statistics will be used for the data-analysis. First, the normal distribution of the data needs to be checked to determine whether parametric or non-parametric analyses should be executed. If the data will be normally distributed as expected, repeated measures ANOVA will be executed to compare between the different groups (protocol 1). For the comparison between two measurement occasions, a paired t-test will be executed. If necessary, there will be a post-hoc analysis (Bonferroni correction) executed. Relations between parameters will be measured by a Pearson correlation coefficient.

4. Time planning

After the participants signed the informed written consent, baseline measurements will be executed and these measurements will be repeated every six months afterwards until the end of their academic career. In protocol 1, participants will be divided in two groups, a control group and an experimental group, and they will be followed as explained above.

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6. Appendices part II: research protocol

- Appendix 1: Patient information and informed consent
- Appendix 2: Disabilities of the Arm, Shoulder and Hand (The DASH)
- Appendix 3: Neck Disability Index (NDI)
- Appendix 4: Roland Disability Questionnaire
- Appendix 5: Shoulder Pain and Disability Index (SPADI)

Patiëntinformatie en toestemmingsformulier

Titel van de studie: **Gezond bewegingsgedrag bij sedentaire beroepen**

Opdrachtgever van de studie: *Universiteit Hasselt*

Onderzoeksinstelling: Universiteit Hasselt – Jessa Ziekenhuis

Ethisch comité: *UHasselt en Jessa Ziekenhuis*

Plaatselijke onderzoekers:

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Dit document bestaat uit **2 delen**:

1. essentiële informatie die u nodig heeft voor het nemen van uw beslissing (het **informatiedocument**)
2. uw schriftelijke toestemming (de **toestemmingsverklaring**)

Dit document zal worden opgemaakt in tweevoud, waarvan u een exemplaar van ontvangt.

Geachte heer/mevrouw,

U wordt uitgenodigd om deel te nemen aan een observationele klinische studie waarbij de risicofactoren voor uw gezondheid en uw bewegingsgedrag tijdens uw beroepsactiviteit in kaart worden gebracht.

Voordat u akkoord gaat om aan deze studie deel te nemen, vragen wij u om kennis te nemen van wat deze studie zal inhouden op het gebied van organisatie, zodat u een welbewuste beslissing kunt nemen. Dit wordt een "geïnformeerde toestemming" genoemd.

Wij vragen u de volgende pagina's met informatie aandachtig te lezen.

Hebt u vragen, dan kan u terecht bij de arts-onderzoeker of zijn of haar vertegenwoordiger.

Als u aan deze studie deelneemt, moet u weten dat:

- Deze klinische studie opgesteld is na evaluatie door één of meerdere ethische comités.
- Uw deelname is vrijwillig; er kan op geen enkele manier sprake zijn van dwang. Voor deelname is uw ondertekende toestemming nodig. Ook nadat u hebt getekend, kan u de arts-onderzoeker laten weten dat u uw deelname wilt stopzetten.
- De gegevens die in het kader van uw deelname worden verzameld, zijn vertrouwelijk. Bij de publicatie van de resultaten is uw anonimiteit verzekerd.
- Er is een verzekering afgesloten voor het geval dat u schade zou oplopen in het kader van uw deelname aan deze klinische studie.
- Indien u extra informatie wenst, kan u altijd contact opnemen met de arts-onderzoeker of een medewerker van zijn of haar team.

Deel I - Informatiedocument

Wanneer de werknemer het grootste gedeelte van de dag zittend doorbrengt, spreekt men van een sedentair beroep. Het in stand houden van de cardiorespiratoire en musculoskeletale gezondheid van personen met een sedentair beroep wordt een uitdaging in de toekomst, vooral omdat sedentarisme zich in een groot deel van de bevolking manifesteert tijdens zowel beroepsactiviteit als tijdens de vrije tijd.

Het begrijpen en in kaart brengen van de risicofactoren voor onze gezondheid, zowel op cardiovasculair als op musculoskeletaal vlak, die gepaard gaan met dit sedentair gedrag, vormen een belangrijke uitdaging voor wetenschappelijk onderzoek.

Eenzijds is het doel van deze studie om startende werknemers uit sedentaire beroepen (administratie, vrachtwagenchauffeurs) nauwgezet van bij de start van het beroep (para)medisch op te volgen voor 24 maanden (metingen bij de start van de studie en om de 6 maanden) om een dieper inzicht te verwerven in de consequenties van het sedentarisme dat werknemers beroepshalve ondergaan, evenals de effecten te onderzoeken van adviezen voor gezond bewegingsgedrag (protocol 1).

Anderzijds is het een opportuniteit om werknemers (administratie, vrachtwagenchauffeurs) die reeds langer beroepsactief zijn te onderzoeken betreffende de relaties tussen hun beroep en hun gezondheid. Het onderzoeken van deze verbanden gebeurt op basis van metingen (zie protocol 1) bij al de deelnemers aan dit tweede deel van de studie. Bij aanwezigheid van musculoskeletale problemen ter hoogte van schouder, nek, en/of lage rug zullen gepersonaliseerde oefeningen en adviezen met betrekking tot gezond bewegingsgedrag aangereikt worden (programma 12 weken). Hierbij wordt geëvalueerd in welke mate dit programma de aanwezige klachten kan verbeteren (metingen cfr protocol 1: voor de interventie, na 6 weken, en na 12 weken) (protocol 2).

Doelstellingen en beschrijving van de studie

Langdurig zitgedrag, ook wel 'sedentair gedrag' genoemd, heeft een belangrijk effect op de gezondheid en verhoogt het risico op ziekte. Het in stand houden van de cardiorespiratoire en musculoskeletale gezondheid van personen met een sedentair beroep wordt een uitdaging in de toekomst, vooral omdat sedentarisme zich in een groot deel van de bevolking manifesteert tijdens zowel beroepsactiviteit als vrije tijd. Het begrijpen en in kaart brengen van de risicofactoren voor onze gezondheid, zowel op cardiovasculair als op musculoskeletaal vlak, die gepaard gaan met dit sedentair gedrag, vormt een belangrijk werkpunt voor wetenschappelijk onderzoek.

Deze klinische studie is georganiseerd voor **twee doelgroepen** van **werknemers uit sedentaire beroepen** (werknemers die het grootste gedeelte van de dag zittend doorbrengen):

- Doelgroep 1: startende werknemers.

Zij zullen nauwgezet worden opgevolgd van bij de start van het beroep gedurende **24 maanden** (metingen bij de start van de studie en om de 6 maanden) om een dieper inzicht te verwerven in de ontstaanswijze van gezondheidsklachten en negatieve effecten gerelateerd aan hun 'zittend' beroep.

Daarnaast zullen de effecten worden onderzocht van adviezen in verband met houding en gezond bewegingsgedrag op uw gezondheid.

Deze effecten zullen worden beoordeeld aan de hand van volgende onderzoeken en metingen (**protocol 1**):

- 1) een **nuchter** bloedstaal (bloedsuikerspiegel, cholesterolprofiel, ...),
- 2) het meten van uw **bloeddruk** en **hartfrequentie**,
- 3) het meten van uw **buikomtrek** en **lichaamsgewicht**,
- 4) het bepalen van uw **lichaamsamenstelling** aan de hand van eenvoudige klinische parameters zoals **lengte**, **gewicht**, **buikomtrek**; maar ook via een **DEXA-scan** die een onderscheid maakt tussen vetmassa en vetvrije massa (spiermassa),
- 5) uw **uithoudingsvermogen** aan de hand van een maximale en submaximale **inspanningsproef op een fiets** waarbij hart- en longfunctie continu worden gevolgd,
- 6) het evalueren van uw **lichaamshouding**,
- 7) het bepalen van uw **spierkracht** aan de hand van een isokinetische dynamometer,
- 8) een maandelijks in te vullen **vragenlijst** (PASIPD) waarin wordt geïnformeerd naar uw fysieke activiteit (vrije tijd, huishouden, werk-gerelateerd)
- 9) een registratie van uw **bewegingsgedrag** via een sensor (accelerometer) bevestigd aan de broeksriem (meten van uw activiteitsniveau) en via de een app (registratie van een gps-signaal) op uw smartphone (meten van het verplaatsingsgedrag),
- 10) een 3-dagen **eetdagboek**

- Doelgroep 2: werknemers die reeds langer beroepsactief zijn.

Bij deze doelgroep zullen de relaties worden onderzocht tussen hun activiteitsniveau (duurtijd/graad sedentarisme), persoonskenmerken (cardiovasculair risico, uithoudingsvermogen, lichaamsamenstelling) en de gezondheid (musculoskeletale klachten), ongeacht de carrière duur. Daarnaast zal worden nagegaan of het mogelijk is om de musculoskeletale klachten te beïnvloeden door een 12 weken durende interventie die bestaat uit het aanmoedigen van gezond bewegingsgedrag, een goede lichaamshouding en oefeningen ter bevordering van mobiliteit, spierkracht en motorische controle.

Beschrijving van de risico's en van de voordelen

Uw deelname aan deze studie houdt geen enkel gezondheidsrisico in. Ook moet u niet verwachten dat uw deelname aan deze studie u persoonlijke voordelen zal opleveren. U moet begrijpen dat uw deelname aan deze studie ervoor zal zorgen dat wij de risicofactoren voor onze gezondheid die gepaard gaan met "sedentair" gedrag beter begrijpen en bijgevolg in de toekomst betere behandelingen kunnen voorstellen en/of preventieve acties kunnen ondernemen om schadelijke effecten te voorkomen.

Intrekking van uw toestemming

U neemt vrijwillig deel aan deze studie en u hebt het recht om uw toestemming voor gelijk welke reden in te trekken. U hoeft hiervoor geen reden op te geven. Als u uw toestemming intrekt, zullen de gegevens bewaard blijven die tot op het ogenblik van uw stopzetting werden verzameld. Dit om de geldigheid van de studie te garanderen. Er zal geen enkel nieuw gegeven aan de opdrachtgever worden gegeven.

Als u aan deze studie deelneemt, vragen wij om:

- Tenvolle mee te werken voor een correct verloop van de studie.
- Geen informatie over uw gezondheidstoestand, de geneesmiddelen die u gebruikt of de symptomen die u ervaart te verzwijgen.
- De hoofdonderzoeker of zijn team op de hoogte te brengen als men u voorstelt om aan een andere studie deel te nemen zodat u met hem/haar kan bespreken of u aan deze studie kunt deelnemen en of uw deelname aan de huidige klinische studie moet worden stopgezet.
- Het toestemmingsformulier te ondertekenen en terug te bezorgen aan de onderzoekers.
- De vragenlijsten zo volledig mogelijk in te vullen en terug te bezorgen aan de onderzoekers.

Goedkeuring door het ethisch comité

Deze studie werd geëvalueerd door twee onafhankelijk ethisch comités die een gunstig advies hebben uitgebracht, namelijk de Ethische Toetsingscommissie van het Jessa Ziekenhuis en de CME UHasselt. De ethische comités hebben als taak de personen die aan klinische studies deelnemen te beschermen. Ze controleren of uw rechten als patiënt en als deelnemer aan een studie gerespecteerd worden, of de studie wetenschappelijk relevant en ethisch verantwoord is. Hierover brengen de ethische comités een advies uit in overeenstemming met de Belgische wet van 7 mei 2004. U dient het positief advies van de Ethische Comités in geen geval te beschouwen als een aansporing om deel te nemen aan deze studie.

Vrijwillige deelname

Aarzel niet om alle vragen te stellen die u nuttig vindt voordat u tekent. Neem de tijd om er met een vertrouwenspersoon over te praten, als u dit wenst. U heeft het recht om niet deel te nemen aan deze studie of met deze studie te stoppen zonder dat u hiervoor een reden hoeft te geven, zelfs al hebt u eerder toegestemd om aan deze studie deel te nemen. Uw beslissing zal in geen geval uw relatie met de onderzoeker en de voortzetting van uw therapeutische behandeling veranderen. Als u aanvaardt om aan deze studie deel te nemen, ondertekent u het toestemmingsformulier. De onderzoeker zal dit formulier ook ondertekenen en zal zo bevestigen dat hij u de noodzakelijke informatie voor deze studie heeft gegeven. U zult het voor u bestemde exemplaar ontvangen.

Kosten in verband met uw deelname

U zult geen vergoeding krijgen voor uw deelname aan deze studie. Uw deelname zal echter voor u geen bijkomende kosten met zich meebrengen.

Vertrouwelijkheidgarantie

Uw deelname aan de studie betekent dat u ermee akkoord gaat dat het onderzoeker en zijn team gegevens over u verzamelt en dat de opdrachtgever van de studie die gebruikt voor onderzoek en in het kader van wetenschappelijke en medische publicaties.

U hebt het recht om aan het onderzoeker en zijn team te vragen welke gegevens hij/zij over u heeft verzameld en waarvoor ze gebruikt worden in het kader van de studie. Deze gegevens hebben betrekking op uw huidige klinische situatie maar ook op uw medische voorgeschiedenis en op de resultaten van onderzoeken die werden uitgevoerd voor de behandeling van uw gezondheid volgens de geldende zorgstandaard. U hebt het recht om deze gegevens in te kijken en om verbeteringen te laten aanbrengen indien ze foutief zouden zijn¹.

De onderzoeker en zijn team is verplicht om deze verzamelde gegevens vertrouwelijk te behandelen.

Dit betekent dat hij zich ertoe verbindt om uw naam nooit bekend te maken in het kader van een publicatie of een conferentie en dat hij uw gegevens zal coderen (uw identiteit zal worden vervangen door een identificatiecode in de studie) voordat hij ze doorgeeft aan de beheerder van de databank. De persoonlijke onderzoeksgegevens kunnen enkel door daartoe gemachtigde medewerkers van de betreffende onderzoeksinstituten (REVAL, MSK/CRI Revalidatie onderzoeksteam), de CME en het betreffende Ziekenhuis (Jessa ZH) worden ingezien.

De onderzoeker en zijn team zullen gedurende de volledige klinische studie de enige personen zijn die een verband kunnen leggen tussen de overgedragen gegevens en uw medisch dossier².

De overgedragen persoonlijke gegevens omvatten geen combinatie van elementen waarmee het mogelijk is u te identificeren³.

De door de opdrachtgever aangestelde beheerder van de onderzoeksgegevens kan u niet identificeren op basis van de overgedragen gegevens. Deze persoon is verantwoordelijk voor het verzamelen van de gegevens die door alle artsen-onderzoekers die deelnemen aan de studie zijn verzameld en voor de verwerking en de bescherming van die gegevens in overeenstemming met de Belgische wet betreffende de bescherming van de persoonlijke levenssfeer.

Om de kwaliteit van de studie te controleren, kan uw medisch dossier worden ingekeken door personen die gebonden zijn aan het beroepsgeheim zoals vertegenwoordigers van de ethische comités, van de opdrachtgever van de studie of een extern auditbureau. Dit kan enkel gebeuren onder strikte voorwaarden, onder de verantwoordelijkheid van de arts-onderzoeker en onder zijn/haar toezicht (of van één van zijn/haar onderzoeksmedewerkers).

De (gecodeerde) onderzoeksgegevens kunnen doorgegeven worden aan Belgische of andere regelgevende instanties, aan de ethische comités, aan andere artsen en/of instellingen die samenwerken met de opdrachtgever.

Ze kunnen ook doorgegeven worden aan andere sites van de opdrachtgever in België en in andere landen waar de normen inzake de bescherming van persoonsgegevens verschillend of minder strikt kunnen zijn. Dit gebeurt dan steeds in gecodeerde vorm zoals hierboven uitgelegd⁴.

Uw toestemming om aan deze studie deel te nemen betekent dus ook dat u akkoord gaat dat uw gecodeerde medische gegevens gebruikt worden voor doeleinden die in dit

¹ Deze rechten zijn bepaald door de wet van 8 december 1992 tot bescherming van de persoonlijke levenssfeer ten opzichte van de verwerking van persoonsgegevens en door de wet van 22 augustus 2002 betreffende de rechten van de patiënt.

² De wet verplicht om voor klinische studies dit verband met uw dossier gedurende 20 jaar te bewaren.

³ De database met de resultaten van de studie zal dus geen elementen bevatten zoals uw initialen, uw geslacht en uw volledige geboortedatum (dd/mm/jjjj).

⁴ De opdrachtgever verbindt zich ertoe om het bindend karakter van de Europese richtlijn en van de Belgische wetgeving inzake bescherming van de persoonlijke levenssfeer te respecteren.

informatieformulier staan beschreven en dat ze worden overgedragen aan bovenvermelde personen en/of instellingen.

De opdrachtgever verbindt zich ertoe om de verzamelde gegevens enkel in het kader van deze studie te gebruiken.

Indien u uw toestemming tot deelname aan de studie intrekt, zullen de gecodeerde gegevens die al verzameld waren vóór uw terugtrekking, bewaard worden. Hierdoor wordt de geldigheid van de studie gegarandeerd. Er zal geen enkel nieuw gegeven aan de opdrachtgever worden doorgegeven.

Verzekering

In een observationele studie is het enige mogelijke risico een probleem met de maatregelen die werden genomen om de vertrouwelijkheid van uw persoonsgegevens te beschermen. De opdrachtgever is, ook indien er geen sprake is van fout, aansprakelijk voor de schade die u als deelnemer - of in geval van overlijden uw rechthebbenden - oplopen en die rechtstreeks of onrechtstreeks te wijten is aan de deelname aan deze studie. Hiervoor heeft de opdrachtgever een verzekeringscontract afgesloten (Ethias NV, Prins-Bisschopsingel 73 te 3500 Hasselt, polisnummer XXXXXXXX)⁵.

Contact

Als u bijkomende informatie wenst, maar ook ingeval van problemen of als u zich zorgen maakt, kan u contact opnemen met de hoofdonderzoeker, Prof. Dr. Frank Vandenabeele (email: frank.vandenabeele@uhasselt.be; telefoon: +32(0)1126 93 01).

⁵ Conform artikel 29 van de Belgische wetgeving inzake experimenten op de menselijke persoon (7 mei 2004)

Deel II - Geïnformeerde toestemming

Deel enkel bestemd voor de deelnemer

Hierbij bevestig ik, ondergetekende (*naam en voornaam van de deelnemer, voluit*) dat ik over de studie ben ingelicht en een exemplaar van het 'informatiedocument' en het 'toestemmingsverklaringsdocument' ontvangen heb. Ik heb de informatie gelezen en begrepen.

- Ik verklaar dat ik geïnformeerd ben over de aard, het doel, de duur, de eventuele voordelen en risico's van de studie en dat ik weet wat van mij wordt verwacht. Ik heb kennis genomen van het informatiedocument en de bijlagen ervan.
- Ik heb voldoende tijd gehad om na te denken en met een door mij gekozen persoon, zoals mijn huisarts of een familielid, te praten.
- Ik heb alle vragen kunnen stellen die bij me opkwamen en ik heb een duidelijk antwoord gekregen op mijn vragen.
- Ik begrijp dat mijn deelname aan deze studie vrijwillig is en dat ik vrij ben mijn deelname aan deze studie stop te zetten zonder dat dit mijn relatie schaadt met het therapeutisch team dat instaat voor mijn gezondheid.
- Ik begrijp dat er tijdens mijn deelname aan deze studie gegevens over mij zullen worden verzameld en dat de arts-onderzoeker en de opdrachtgever de vertrouwelijkheid van deze gegevens verzekeren overeenkomstig de Belgische wetgeving ter zake.
- Ik stem in met de verwerking van mijn persoonlijke gegevens volgens de modaliteiten die zijn beschreven in de rubriek over het verzekeren van de vertrouwelijkheid. Ik geef ook toestemming voor de overdracht naar en verwerking van mijn gecodeerde gegevens in andere landen dan België.
- Ik ga ermee akkoord / Ik ga er niet mee akkoord (doorhalen wat niet van toepassing is) dat de studiegegevens die voor de hier vermelde studie worden verzameld, later zullen worden verwerkt, op voorwaarde dat deze verwerking beperkt blijft tot de context van de hier vermelde studie voor een betere kennis van de ziekte en de behandeling ervan.
- Ik ga ermee akkoord / Ik ga er niet mee akkoord (doorhalen wat niet van toepassing is) dat mijn huisarts of andere specialisten die zich met mijn gezondheid bezighouden, indien nodig worden gecontacteerd om aanvullende informatie over mijn gezondheid te verkrijgen.

Naam, voornaam van de deelnemer:

Datum: .../.../.....

Handtekening van de deelnemer:

Deel enkel bestemd voor het onderzoeksteam

- Ik ondergetekende bevoegde onderzoeksmedewerker, verklaar de benodigde informatie inzake deze studie mondeling te hebben verstrekt evenals een exemplaar van het informatiedocument aan (*naam van de deelnemer, voluit*) te hebben verstrekt.
- Ik bevestig dat geen enkele druk op de deelnemer is uitgeoefend om hem/haar te doen toestemmen met deelname aan de studie en ik ben bereid om op alle eventuele bijkomende vragen te antwoorden.
- Ik bevestig dat ik werk in overeenstemming met de ethische beginselen zoals vermeld in de "Verklaring van Helsinki", de "Goede klinische praktijk" en de Belgische wet van 7 mei 2004 inzake experimenten op de menselijke persoon.

Naam, voornaam van de onderzoeker:

Datum: .../.../.....

Handtekening van de onderzoeker:

DISABILITIES OF THE ARM, SHOULDER AND HAND

The DASH

Dutch Language Version

Door Dr. A. H Schuurman, UMC Utrecht

Beperkingen van arm, schouder en hand

Deze vragenlijst heeft betrekking op zowel uw symptomen als uw mogelijkheid om bepaalde handelingen te verrichten. Beantwoord alle vragen door het juiste cijfer te omcirkelen, gebaseerd op uw conditie van de afgelopen week.

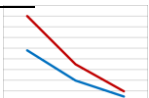
Als u de afgelopen week geen activiteiten heeft uitgevoerd, schat dan het meest nauwkeurige antwoord.

Het maakt niet uit welke hand of arm u gebruikt om de handeling te verrichten; baseer uw antwoord alstublieft op de mogelijkheid een opdracht uit te voeren ongeacht de manier waarop.

Bepaal alstublieft uw mogelijkheid om de volgende activiteiten uit te voeren gedurende de afgelopen week door het nummer onder het juiste antwoord te omcirkelen.

Geen moeite	Geringe moeite	Meer moeite	Zeer veel moeite	Niet in staat
----------------	-------------------	----------------	------------------------	---------------------

- 1 Een dichte of een nieuwe pot openen
- 2 Schrijven
- 3 Een sleutel omdraaien
- 4 Koken
- 5 Een zware deur openen
- 6 Een voorwerp op een plank boven uw hoofd plaatsen
- 7 Zwaar huishoudelijk werk doen (bv. tegels afwassen, vloeren schrobben)
- 8 Tuinieren
- 9 Bed opmaken
- 10 Boodschappentas of aktetas dragen
- 11 Zeen zwaar voorwerp dragen (meer dan 5 kg)
- 12 Een lamp boven uw hoofd verwisselen
- 13 Haren wassen of föhnen
- 14 Uw rug wassen
- 15 Een trui aantrekken
- 16 Met een mes eten snijden
- 17 Recreatieve activiteiten die weinig moeite kosten (bv. kaarten, breien, etc.)
- 18 Recreatieve activiteiten die kracht of druk uitoefenen op arm, schouder of hand (bv. golfen, timmeren, tennissen, etc.)
- 19 Recreatieve activiteiten waarbij je de arm vrij beweegt (bv. frisbeeën, badmintonnen, etc.)
- 20 Van de ene naar de andere plaats gaan
- 21 Seksuele activiteiten

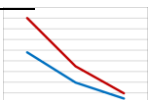


Naam:

Geb.datum:

Datum:

	Hele- maal niet	In geringe mate	Matig	Aardig wat	Zeer veel
22 Heeft uw probleem aan uw arm, hand of schouder u de afgelopen week belemmerd in uw normale sociale activiteiten met familie, vrienden, buren of groepen?					
	Hele- maal niet beperkt	In geringe mate beperkt	Matig beperkt	Erg beperkt	Niet in staat
23 Was u in de afgelopen week beperkt in uw werk of andere dagelijkse activiteiten als gevolg van uw probleem aan uw hand, arm of schouder?					
	Geen	Licht	Matig	Ernstig	Extreem
24 Pijn aan arm, schouder of hand					
25 Pijn aan arm, schouder of hand bij welke activiteit dan ook					
26 Tintelingen (slapend gevoel) in arm, schouder of hand					
27 Zwakheid in uw arm, schouder of hand					
28 Stijfheid in uw arm, schouder of hand					
	Geen moeite	Geringe moeite	Meer moeite	Zeer veel moeite	Niet in staat
29 Hoeveel moeite heeft u de afgelopen week gehad met slapen vanwege de pijn in uw arm, schouder of hand?					
	Sterk mee oneens	Oneens	Niet eens, niet oneens	Mee eens	Sterk mee eens
30 Ik voel me minder bekwaam, minder zeker of minder nuttig door de problemen aan mijn arm, schouder of hand					



Sport/podiumkunsten module (naar keuze)

De volgende vragen hebben betrekking op de impact die het probleem aan uw arm, schouder of hand heeft op het bespelen van een muziekinstrument of het beoefenen van een sport, of beide.

Als u meer dan één sport beoefent of instrument bespeelt (of beide), antwoordt dan uitgaande van de activiteit die het belangrijkste voor u is.

Geeft u alstublieft aan welke sport of welk instrument het belangrijkste voor u is.

.....

Ik beoefen geen sport, of bespeel geen instrument (U mag dit gedeelte overslaan).

Omcirkel het getal dat uw fysieke vermogen van de afgelopen week het best beschrijft. Had u moeite met:

	Geen moeite	Geringe moeite	Meer moeite	Zeer veel moeite	Niet in staat
1 Het toepassen van uw gebruikelijke techniek om uw instrument te bespelen of uw sport te beoefenen?					
2 Het bespelen van uw instrument of het beoefenen van uw sport vanwege uw pijn aan arm, schouder of hand?					
3 Het bespelen van uw instrument of het beoefenen van uw sport zo goed als u zou willen?					
4 Het besteden van uw gebruikelijke hoeveelheid aan het bespelen van uw instrument of beoefenen van uw sport?					

Werkmodule (naar keuze)

De volgende vragen gaan over de invloed van uw probleem aan arm, schouder of hand op uw mogelijkheid om te werken (inclusief huishouden als dat uw hoofdtaak is).

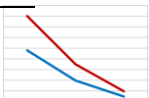
Geeft u alstublieft aan wat uw beroep/werk is:

.....

Ik werk niet (U mag dit gedeelte overslaan).

Omcirkel het getal dat uw fysieke vermogen van de afgelopen week het beste beschrijft. Had u moeite met:

	Geen moeite	Geringe moeite	Meer moeite	Zeer veel moeite	Niet in staat
1 Het toepassen van uw gebruikelijke techniek voor uw werk?					
2 Het doen van uw normale werk door de pijn aan arm, schouder of hand?					
3 Het doen van uw werk zo goed als u dat zou willen?					
4 Het doen van uw werk binnen de normale tijd?					



Naam:

Geb.datum:

Datum:

Interpretatie

DASH-DLV beperkingen/klachten score = $\left[\frac{\text{som van } n \text{ antwoorden}}{n} - 1 \right] \times 25$

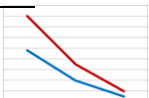
n is gelijk aan het aantal beantwoorde vragen.

De DASH score mag niet berekend worden als er meer dan 3 vragen niet beantwoord zijn.

Score van de optionele modules:

Tel de toegekende score voor ieder antwoord op; deel dit door 4 (aantal vragen per module); minus 1; vermenigvuldig met 25.

Een optionele module mag niet berekend worden als één van de vragen niet beantwoord is.



Neck Disability Index

Vernon 1991

1. Pijn

- Ik heb nu geen pijn
- Ik heb nu weinig pijn
- Ik heb nu matige pijn
- Ik heb nu vrij hevige pijn
- Ik heb nu zeer hevige pijn
- Ik heb nu de slechts denkbare pijn

2. Persoonlijke verzorging (wassen, aan- en uitkleden)

- Ik kan goed voor mezelf zorgen zonder dat de pijn toeneemt
- Ik kan goed voor mezelf zorgen hoewel dat de pijn doet toenemen
- Voor mezelf zorgen is pijnlijk en gaat langzaam en voorzichtig
- Voor mezelf zorgen lukt goed maar vaak met enige hulp
- Elke dag voor mezelf zorgen lukt meestal alleen met hulp
- Ik kan mezelf niet aankleden; mezelf wassen gaat moeilijk en ik blijf in bed

3. Tillen

- Ik kan een zwaar gewicht tillen zonder dat de pijn toeneemt
- Ik kan een zwaar gewicht tillen, maar dat doet de pijn toenemen
- De pijn weerhoudt mij van het optillen van een zwaar gewicht van de grond, maar zou dat wel kunnen wanneer dat gewicht hoger (bijv. op een tafel) gelegen is
- De pijn weerhoudt mij ervan om zware dingen op te tillen, maar het lukt me wel om lichte tot middelzware gewichten te tillen als ze makkelijk geplaatst zijn
- Ik kan alleen zeer lichte gewichten tillen
- Ik kan helemaal niets tillen of dragen

4. Lezen

- Ik kan zo veel lezen als ik wil zonder pijn in mijn nek
- Ik kan zo veel lezen als ik wil met weinig pijn in mijn nek
- Ik kan zo veel lezen als ik wil met matige pijn in mijn nek
- Ik kan niet zo veel lezen als ik zou willen vanwege de matige pijn in mijn nek
- Ik kan bijna niet meer lezen vanwege de hevige pijn in mijn nek
- Ik kan helemaal niet meer lezen

5. Hoofdpijn

- Ik heb helemaal geen hoofdpijn
- Ik heb af en toe lichte hoofdpijn
- Ik heb af en toe matige hoofdpijn
- Ik heb vaak matige hoofdpijn
- Ik heb vaak hevige hoofdpijn
- Ik heb bijna altijd hoofdpijn

6. Concentratie

- Ik kan mij goed concentreren zonder moeite wanneer ik dat wil
- Ik kan mij goed concentreren met enige moeite wanneer ik dat wil
- Het kost mij duidelijk moeite om te concentreren wanneer ik dat wil
- Het kost mij veel moeite om te concentreren wanneer ik dat wil
- Het kost mij zeer veel moeite om te concentreren wanneer ik dat wil
- Ik kan mij helemaal niet concentreren

7. Werk

- Ik kan zo veel werk doen als ik wil
- Ik kan alleen mijn gewone werk doen, maar niet meer
- Ik kan het grootste deel van mijn gewone werk doen, maar niet meer
- Ik kan mijn gewone werk niet doen
- Ik kan bijna geen enkel werk meer doen
- Ik kan helemaal niet meer werken

8. Autorijden

- Ik kan autorijden zonder enige nekpijn
- Ik kan autorijden zo lang als ik wil met weinig pijn in mijn nek
- Ik kan autorijden zo lang als ik wil met matige pijn in mijn nek
- Ik kan niet autorijden zo lang als ik wil vanwege de matige pijn in mijn nek
- Ik kan bijna niet meer autorijden vanwege de hevige pijn in mijn nek
- Ik kan helemaal niet meer autorijden

9. Slapen

- Ik heb geen moeite met slapen
- Mijn slaap is heel licht gestoord (minder dan 1 uur wakker)
- Mijn slaap is licht gestoord (1 tot 2 uur wakker)
- Mijn slaap is matig gestoord (2 tot 3 uur wakker)
- Mijn slaap is fors gestoord (3 tot 5 uur wakker)
- Mijn slaap is volledig gestoord (5 tot 7 uur wakker)

10. Vrije tijd

- Ik kan aan alle activiteiten meedoen zonder enige pijn in mijn nek
- Ik kan aan alle activiteiten meedoen met enige pijn in mijn nek
- Vanwege de pijn in mijn nek kan ik aan de meeste, maar niet alle, gebruikelijke activiteiten meedoen
- Vanwege de pijn in mijn nek kan ik aan maar weinig gebruikelijke activiteiten meedoen
- Vanwege de pijn in mijn nek kan ik nagenoeg aan geen activiteiten meedoen
- Ik kan aan geen enkele activiteit meer meedoen

Roland Disability Questionnaire

Roland 1983

Nederlandse vertaling G.J. van der Heijden 1991

Naam patiënt:

.....

Datum:

Uw rugklachten kunnen u belemmeren bij uw normale dagelijkse bezigheden. Deze vragenlijst bevat een aantal zinnen waarmee mensen met rugklachten zichzelf en hun situatie beschrijven. Mogelijk beschrijven deze zinnen ook situaties zoals u die vandaag ervaart. Als u de vragenlijst leest, denk dan aan uzelf vandaag. Kruis het vakje onder **ja** aan indien de zin vandaag op u van toepassing is. Kruis het vakje onder **neen** aan indien de zin vandaag niet op u van toepassing is. Lees de zinnen aandachtig en bepaal of de zin vandaag op u van toepassing is voordat u een antwoord geeft.

	Ja	Neen
Het grootste gedeelte van de tijd blijf ik thuis omwille van mijn rugklachten	<input type="radio"/>	<input type="radio"/>
Wegens mijn rugklachten verander ik vaak van positie om een prettige houding te vinden	<input type="radio"/>	<input type="radio"/>
Door mijn rugklachten loop ik langzamer dan gewoonlijk	<input type="radio"/>	<input type="radio"/>
Door mijn rugklachten kan ik de gebruikelijke werkzaamheden in en rond mijn huis niet doen	<input type="radio"/>	<input type="radio"/>
Wegens mijn rugklachten gebruik ik de trapleuning bij het naar boven lopen via de trap	<input type="radio"/>	<input type="radio"/>
Wegens mijn rugklachten ga ik vaker dan gewoonlijk liggen	<input type="radio"/>	<input type="radio"/>
Wegens mijn rugklachten moet ik mij vastpakken en optrekken uit een leunstoel om op te staan	<input type="radio"/>	<input type="radio"/>
Wegens mijn rugklachten probeer ik andere mensen dingen voor me te laten doen	<input type="radio"/>	<input type="radio"/>
Ik kleed me trager dan gewoonlijk aan omwille van mijn rugklachten	<input type="radio"/>	<input type="radio"/>
Omwille van mijn rugklachten sta ik alleen voor korte perioden op	<input type="radio"/>	<input type="radio"/>
Wegens mijn rugklachten vermijd ik bukken of knielen	<input type="radio"/>	<input type="radio"/>
Door mijn rugklachten is het moeilijk om van een stoel op te staan	<input type="radio"/>	<input type="radio"/>
Ik heb bijna de gehele dag last van rugpijn	<input type="radio"/>	<input type="radio"/>
Door mijn rugklachten kan ik mij in bed moeilijk omdraaien	<input type="radio"/>	<input type="radio"/>

Door mijn rugklachten heb ik gebrek aan eetlust	<input type="radio"/>	<input type="radio"/>
Ik heb moeite met het aantrekken van sokken (of kousen) wegens mijn rugklachten	<input type="radio"/>	<input type="radio"/>
Wegens mijn rugklachten loop ik alleen korte afstanden	<input type="radio"/>	<input type="radio"/>
Ik slaap slecht door mijn rugklachten	<input type="radio"/>	<input type="radio"/>
Ik krijg hulp bij het aankleden in verband met mijn rugklachten	<input type="radio"/>	<input type="radio"/>
Ik zit het grootste gedeelte van de dag wegens mijn rugklachten	<input type="radio"/>	<input type="radio"/>
Ik verband met mijn rugklachten vermijd ik zwaar werk in en rond het huis	<input type="radio"/>	<input type="radio"/>
Door mijn rugklachten raak ik sneller door mensen geïrriteerd dan anders	<input type="radio"/>	<input type="radio"/>
Door mijn rugklachten loop ik de trap langzamer op dan gewoonlijk	<input type="radio"/>	<input type="radio"/>
Ik lig bijna de hele dag in bed in verband met mijn rugklachten	<input type="radio"/>	<input type="radio"/>

Shoulder Pain and Disability Index (SPADI)

K.E. Roach et al. (1991)

DOEL(GROEP):	Inventariserend en evaluatief De SPADI meet symptomen en functionele beperkingen in de schouderregio gedurende de laatste week
OPBOUW:	Vragenlijst bestaande uit 13 items Subcategorieën: Pijn (5 items); Beperking in activiteiten (8 items)
DUUR:	5-7 minuten
BENODIGDHEDEN:	Invulformulier
RANDVOORWAARDEN:	
UITVOERING/INSTRUCTIE:	Gesloten vragen in te vullen door patiënt
SCORING:	<u>Per item:</u> De items worden gescoord op een VAS-schaal. Om de score te bepalen wordt de VAS-schaal verdeeld in 12 gelijke vakken. Ieder vak krijgt een nummer van 0-11 toegekend. Om de score per categorie te berekenen worden de scores van de items opgeteld en gedeeld door de maximumscore. Dit getal wordt vermenigvuldigd met 100. <u>Totaalscore:</u> het gemiddelde van de 2 categorieën wordt berekend, zodat ook de totale score zich tussen 0 en 100 bevindt.
INTERPRETATIE:	Hoe hoger een patiënt scoort op de SPADI des te groter is de pijn/ beperking in activiteiten Normgegevens: niet bekend

Literatuur:

1. Roach KE, Budiman-Mak E, Songsiridej N, Lertratanakul Y. Development of a shoulder pain and disability index. *Arthritis Care Res* 1991; 4(4):143-9
2. [Bot SD](#), [Terwee CB](#), [van der Windt DA](#), [Bouter LM](#), [Dekker J](#), [de Vet HC](#). Clinimetric evaluation of shoulder disability questionnaires: a systematic review of the literature. *Ann Rheum Dis*. 2004;63(4):335-41.

1.

SHOULDER PAIN AND DISABILITY INDEX (SPADI)

(Roach et al, vertaalde versie)

Wilt u a.u.b. de onderstaande vragenlijst invullen.

De vragen gaan over uw schouder en hebben betrekking op de afgelopen week.

PIJN SCHAAL

Hoe erg is uw pijn?

Omcirkel het getal dat het best uw pijn weergeeft.

0 = geen pijn en **10** = de ergst bedenkbare pijn

De pijn op zijn hevigst.	0	1	2	3	4	5	6	7	8	9	10
Wanneer u op de pijnlijke zijde ligt.	0	1	2	3	4	5	6	7	8	9	10
Reikend naar iets op een hoge plank	0	1	2	3	4	5	6	7	8	9	10
Het aanraken van de achterkant van de nek	0	1	2	3	4	5	6	7	8	9	10
Duwen met de pijnlijke arm	0	1	2	3	4	5	6	7	8	9	10

Totaal pijn score _____

BEPERKING SCHAAL

Hoeveel moeite heeft u om het volgende uit te voeren?

Omcirkel het getal dat het best uw ervaring weergeeft.

0 = geen enkele moeite en **10** = zo moeilijk dat hulp hiervoor nodig is

Uw haar wassen.	0	1	2	3	4	5	6	7	8	9	10
Uw rug wassen.	0	1	2	3	4	5	6	7	8	9	10
Een hemd aantrekken.	0	1	2	3	4	5	6	7	8	9	10
Een shirt met knopen aantrekken.	0	1	2	3	4	5	6	7	8	9	10
Uw broek aantrekken.	0	1	2	3	4	5	6	7	8	9	10
Een object op een hoge plank plaatsen.	0	1	2	3	4	5	6	7	8	9	10
Een zwaar object dragen van 5 kg.	0	1	2	3	4	5	6	7	8	9	10
Iets pakken uit uw achterzak.	0	1	2	3	4	5	6	7	8	9	10

Totaal pijn score _____

Totaal SPaDI score _____

Masterproefcoördinatie Revalidatiewetenschappen en Kinesithherapie
marleen.vanvuchelen@uhasselt.be
Agoralaan Gebouw A, Room 0.01
Tel. 011 29 21 28

BEOORDELING VAN DE WETENSCHAPPELIJKE STAGE-DEEL 1

Wetenschappelijke stage deel 1 (Masterproef deel 1- MP1) van de Master of Science in de revalidatiewetenschappen en de kinesithherapie bestaat uit **twee delen**:

- 1) De literatuurstudie volgens een welomschreven methodiek.
- 2) Het opstellen van het onderzoeksprotocol ter voorbereiding van masterproef deel 2.

Omschrijving van de **evaluatie**:

- 1) 80% van het eindcijfer wordt door de promotor in samenspraak met de copromotor gegeven op grond het product en van het proces dat de student doorliep om de MP1 te realiseren, met name het zelfstandig uitvoeren van de literatuurstudie en het zelfstandig opstellen van het onderzoeksprotocol, alsook de kwaliteit van academisch schrijven.
- 2) 20% van het eindcijfer wordt door de interne jury gegeven op grond van het ingeleverde product en de mondelinge presentatie waarin de student zijn/haar proces toelicht.

In de beoordeling dient onderscheid gemaakt te worden tussen studenten die, in samenspraak met de promotor, een nieuw onderzoek uitwerkten en studenten die instapten in een lopend onderzoek of zich baseren op voorgaande masterproeven of onderzoeksprojecten. Van deze laatste worden bijkomende inspanningen verwacht zoals bv. het bijsturen van de eerder geformuleerde onderzoeksvraag, de kritische reflectie over het onderzoeksdesign, het uitvoeren van een pilotexperiment.

Beoordelingskader:

Beoordelingskader: criteria op 20	
18-20	Excellente modelmasterproef
16-17	Uitmuntende masterproef
14-15	Zeer goede masterproef die zich onderscheidt van de andere masterproeven
12-13	Goede masterproef
10-11	Voldoende masterproef die op een aantal vlakken zwak scoort
8-9	Onvoldoende masterproef die niet aan de minimumnormen voldoet
6-7	Ernstig onvoldoende masterproef of een masterproef die slechts één van beide bevat
≤ 5	Ernstig onvoldoende en onvolledige masterproef

ZELFEVALUATIERAPPORT

Onderstaand zelfevaluatie rapport is een hulpmiddel om je wetenschappelijke stage -deel 1 zelfstandig te organiseren. Bepaal zelf je deadlines, evalueer en reflecteer over je werkwijze en over de diepgang van je werk. Check de deadlines regelmatig. Toets ze eventueel af bij je (co)promotor. Succes!

Prof. M. Vanvuchelen, coördinerende verantwoordelijke wetenschappelijke stages

ZELFEVALUATIERAPPORT

WETENSCHAPPELIJKE STAGE - DEEL 1

RWK

Naam & Voornaam STUDENT: Van Oeckel Veerle, Eysermans Emmy





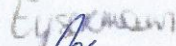





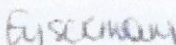





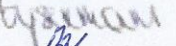

Naam & Voornaam (CO)PROMOTOR & PROMOTOR: Prof. Hansen Dominique

TITEL masterproef (Nederlandstalig of Engels): The impact of sedentary professional activity on cardiometabolic health

LITERATUURSTUDIE	Gestelde deadline	Behaald op	Reflectie
De belangrijkste concepten en conceptuele kaders van het onderzoeksdomein uitdiepen en verwerken	05/12/2016	05/12/2016	Goed
De belangrijkste informatie opzoeken als inleiding op de onderzoeksvraag van de literatuurstudie	05/12/2016	05/12/2016	Goed
De opzoekbare onderzoeksvraag identificeren en helder formuleren in functie van de literatuurstudie	10/01/2017	10/01/2017	Goed
De zoekstrategie op systematische wijze uitvoeren in relevante databanken	01/02/2017	17/02/2017	Owv grote literatuursearch & aanpassing inclusiecriteria owv te weinig inclusie artikels
De kwaliteitsbeoordeling van de artikels diepgaand uitvoeren	26/03/2017	27/03/2017	Lange tijd nodig gehad owv zelf samenstellen checklist en mindere kwaliteit studies.
De data-extractie grondig uitvoeren	30/04/2017	02/05/2017	Met uitschrijven, uiteenlopende data.
De bevindingen integreren tot een synthese	15/05/2017	15/05/2017	Goed
ONDERZOEKSPROTOCOL	Gestelde deadline	Behaald op	Reflectie
De onderzoeksvraag in functie van het onderzoeksprotocol identificeren	25/05/2017	23/05/2017	Vlot
Het onderzoeksdesign bepalen en/of kritisch reflecteren over bestaande onderzoeksdesign	25/05/2017	24/05/2017	Vlot
De methodesectie (participanten, interventie, uitkomstmaten, data-analyse) uitwerken	30/05/2017	24/05/2017	Vlot
ACADEMISCHE SCHRIJVEN	Gestelde deadline	Behaald op	Reflectie
Het abstract tot he point schrijven	30/05/2017	29/05/2017	Vlot
De inleiding van de literatuurstudie logisch opbouwen	25/05/2017	20/05/2017	Vlot
De methodesectie van de literatuurstudie transparant weergegeven	10/04/2017	11/04/2017	Oké
De resultatensectie afstemmen op de onderzoeksvragen	10/05/2017	10/05/2017	Oké
In de discussiesectie de bekomen resultaten in een wetenschappelijke tekst integreren en synthetiseren	15/05/2017	17/05/2017	Oké, owv inconsistentie tekst en figuren 1 inclusie artikel
Het onderzoeksprotocol deskundig technisch uitschrijven	30/05/2017	28/05/2017	Vlot
Referenties correct en volledig weergeven	31/05/2017	03/06/2017	Oké, moeilijkheden EndNote
ZELFSTUREND EN WETENSCHAPPELIJK DENLEN EN HANDELEN	Aanvangsfase	Tussentijdse fase	Eindfase
Een realistische planning opmaken, deadlines stellen en opvolgen	Moeilijk, owv grote omvang literature search.	Oké, vlottere werking vanaf kwaliteitsbeoordeling.	Goed, gegroeid doorheen de thesis.

Initiatief en verantwoordelijkheid opnemen ten aanzien van de realisatie van de wetenschappelijke stage	Oké.	Oké.	Oké.
Kritisch wetenschappelijk denken	Nog wat terughoudend.	Verbeterd.	Oké, gegroeid doorheen de thesis.
De contacten met de promotor voorbereiden en efficiënt benutten	Oké, nog zoekend hoe de contacten verlopen.	Goed voorbereide contacten.	Goed voorbereide contacten.
De richtlijnen van de wetenschappelijke stage autonoom opvolgen en toepassen	Nog zoekend.	Veel en goede ondersteuning van de richtlijn.	Idem tussentijdse fase.
De communicatie met de medestudent helder en transparant voeren	Nog zoekend.	Vlot, goede sturing van elkaar en concrete afspraken gemaakt.	Idem tussentijdse fase.
De communicatie met de promotor/copromotor helder en transparant voeren	Nog zoekend.	Communicatie van de stand van zaken en concrete oplisting van de vragen.	Idem tussentijdse fase.
Andere verdiensten:	/	Vlot contact en hulp bij onderzoek van 2 ^{de} master studenten in het lopende onderzoeksproject, bij verwijzing naar hen door promotor.	Idem tussentijdse fase.

VOORTGANGSFOMULIER WETENSCHAPPELIJKE STAGE DEEL 1

DATUM	INHOUD OVERLEG	HANDTEKENINGEN
14/11/2016	Algemene instructies (zelf deadlines opstellen, prof. Hansen mailen als je klaar bent met een bepaalde stap zodat hij de volgende stap kan geven, vragen mogen altijd gemaïld worden...), duiding van het onderwerp en hoe we de PICO van ons onderzoek moeten opstellen	Promotor:  Student(e):  Student(e): 
23/12/2016	<u>Volgende stappen:</u> - Een algemene onderzoeksvraag opstellen - Ook artikels zoeken op Web of Science - Alle dubbele artikels tussen de verschillende zoekstrategieën en verschillende databanken eruit halen - Dan moeten we studies gaan in-/excluderen. Prof. Hansen heeft enkele in- en exclusiecriteria meegegeven.	Promotor:  Student(e):  Student(e): 
11/01/2017	<u>Aanleiding samenkomst:</u> Met de huidige zoekstrategie komen we te veel artikels uit. <u>Wat nu?</u> Zoekstrategie/onderzoeksvraag verfijnen We gaan ons specifiek focussen op de invloed van sedentarisme op cardiovasculaire parameters. In de artikels moeten we ook nakijken welke methodes gebruikt worden om vaartfysiologie te meten. Ook de in- en exclusiecriteria en de filters van de zoekstrategie werden overlopen.	Promotor:  Student(e):  Student(e): 
13/02/2017	<u>Aanleiding samenkomst:</u> Onze artikels die we zouden willen includeren, hebben we genoteerd. <u>Wat nu?</u> - Deze artikels, onafhankelijk van elkaar, nog een keer screenen - Cochrane checklists zoeken/ombineren om onze artikels te kunnen beoordelen. - Tabel maken met alle studies die we uiteindelijk geïnccludeerd hebben. Er werd besproken wat in de tabel moet staan. - Flowchart maken van onze exclusieprocedure. - Extra artikels die we nu uitkomen ook nog meenemen in onze thesis. We mogen zelf een "stop"-datum kiezen.	Promotor:  Student(e):  Student(e): 
12/04/2017	<u>Aanleiding samenkomst:</u> Het willen laten nakijken van ons huidige werk, namelijk: - De huidige formulering van onze onderzoeksvraag - De flowchart met de exclusieprocedure en onze tabel met geïnccludeerde studies - De kwaliteitsbeoordeling van onze artikels en wat moeten we hier nu mee doen? - Zijn we goed bezig met de data-extractie? - Onze eerste stukjes geschreven tekst (methode) - De inhoud van de discussie en de inleiding werden besproken, die nog geschreven moeten worden. Hierbij werden ook steeds de vragen die we nog hadden gesteld en kregen we de nodige feedback. Ook werd het protocol vluchtig besproken.	Promotor:  Student(e):  Student(e): 
22/05/2017	<u>Aanleiding samenkomst:</u> Enkele concrete vragen over de huidige literatuur review omtrent o.a. de context, tabellen/stukjes tekst die al dan niet ergens toegevoegd moeten worden, het vermelden van referenties, de opbouw van de geschreven discussie. Ook werd het protocol concreet besproken.	Promotor:  Student(e):  Student(e): 

Logboek Emmy Eysermans

Datum	Omschrijving	Uren
24 okt 2016	Mail prof. Hansen + ondertekening goedkeuring.	9.00-9.15
14 nov 2016	Eerste bespreking MP in gebouw Reval.	18.00-18.30
28 nov 2016	Samen zitten met Veerle - bespreking aanpak.	Online
5 dec 2016	Opzoeken Mesh-termen	15.30-16.30
19 dec 2016	Samen zitten met Veerle - verdere bespreking aanpak + Mesh-termen	11.30-12.30
22 dec 2016	Opzoeken Hits per Mesh-termen + combinaties	11.00-13.00
9 januari 2017	Bespreking met Veerle + verder bekijken zoekstrategie	12.00-13.00 17.00-19.00
11 jan 2017	Samenkomst prof. Hansen Hits aanpassen en herbekijken	14.00-14.20 16.00-19.00
13 jan 2017	Artikelselectie samenstellen	15.00-17.00
14 jan 2017	Installatie + import artikels EndNote Start artikelselectie Pubmed	12.00-18.00
17 jan 2017	Import artikels EndNote Artikelselectie	12.00-19.00
18 jan 2017	Artikelselectie	09.30-17.00
19 jan 2017	Artikelselectie	12.00-19.00
20 jan 2017	Artikelselectie	11.00-19.00
21 jan 2017	Artikelselectie	7.30-13.00
23 jan 2017	Artikelselectie	17.00-19.00
25 jan 2017	Artikelselectie	11.00-21.00
26 jan 2017	Artikelselectie	12.30-19.30
27 jan 2017	Artikelselectie	10.00-12.00 12.30-18.00
28 jan 2017	Artikelselectie	8.00-12.30
13 feb 2017	Afspraak prof Hansen - inclusie artikels, flow chart, checklist.	13.00-13.30
14 feb 2017	Dubbele check artikelselectie Cochrane checklist opzoeken	11.00-12.00 13.00-18.00

16 feb 2017	Artikelselectie - aanpassing exclusie van minstens 1 jaar follow up naar 6 maanden	9.00-12.00
17 feb 2017	Onderzoek REVAL (2e master) Artikelselectie - 3de screening inclusie artikels	9.30-12.00 13.30-18.00
20 feb 2017	Overleg Veerle artikelselectie	15.00-15.30
21 feb 2017	Checklist zoeken + eind inclusie artikels	19.00-20.00
22 feb 2017	Flow chart Ordering artikelselectie	12.30-17.30
23 feb 2017	Aanpassing artikelselectie	9.00-22.30
24 feb 2017	Checklist zoeken + mail ter bevestiging Prof. Hansen	8.00-13.00
28 feb 2017	Gepaste checklist per artikel	11.00-14.00
1 ma 2017	Aanpassen file Checklist Kwaliteitsbeoordeling	10.00-18.00
2 ma 2017	Kwaliteitsbeoordeling	8.30-12.00 12.30-15.30
3 ma 2017	Kwaliteitsbeoordeling : Artikels lezen + samenvatten	8.00-12.00 14.00-18.30
4 ma 2017	Kwaliteitsbeoordeling : Artikels lezen + samenvatten	8.00-12.00
7 ma 2017	Kwaliteitsbeoordeling	08.00-12.00 13.00-19.00
9 ma 2017	Kwaliteitsbeoordeling	08.00-12.00 13.00-19.00
10 ma 2017	Metingen REVAL Kwaliteitsbeoordeling	07.00-12.30 13.30-21.00
14 ma 2017	Kwaliteitsbeoordeling : Artikels lezen + samenvatten	08.00-12.00 13.00-19.00
15 ma 2017	Kwaliteitsbeoordeling	08.00-12.00 12.30-17.30
16 ma 2017	Kwaliteitsbeoordeling Extra onderdelen kwaliteitsbeoordeling	08.00-13.00 13.30-16.00 16.30-19.30 21.30-22.30
17 ma 2017	Kwaliteitsbeoordeling	8.00-12.30
27 ma 2017	Kwaliteitsbeoordeling	8.00-12.30 13.00-18.00
4 apr 2017	Afspreken Veerle writing & data extractie Opmaak data extractie	9.30-11.00 11.00-12.00 13.00-18.00

5 apr 2017	Opmaak data extractie FaceTime Veerle : kwaliteitsbeoordeling samen leggen en afwerken + opmaak data-extractie + taakverdeling	8.00-10.00 10.00-12.30
	Opmaak writing literature search	14.00-17.30
6 apr 2017	Data extractie	8.30-12.00 13.00-20.00
7 apr 2017	Data extractie	8.00-12.00 13.00-18.00
8 apr 2017	Data extractie	7.00-12.00 12.30-16.00
	Schrijven	16.15-17.30
11 apr 2017	Schrijven	17.00-22.00
12 apr 2017	Bespreking Prof. Hansen: kwaliteitsbeoordeling, data- extractie, schrijven, reflectie, discussie, inleiding, protocol	18.00-19.00
15 apr 2017	Aanpassing resultaten data- extractie	8.00-12.00 13.00-16.00
16 apr 2017	Aanpassing resultaten data- extractie	7.00-11.30
18 apr 2017	Data-extractie vergelijking	18.00-20.00
19 apr 2017	Samenvoegen data-extractie	18.00-21.00
20 apr 2017	Samenbrengen data-extractie	18.00-20.00
22 apr 2017	Samenbrengen data-extractie	8.00-12.30
24 apr 2017	Uitwerken manier van schrijven data-extractie	18.00-19.00
25 apr 2017	Afwerken data-extractie tabel	18.00-22.00
26 april 2017	Afwerking data-extractie tabel	16.30-18.00
27 april 2017	Uitschrijven methode data- extractie	17.00-19.00
28 april 2017	Opbouw uitschrijven resultaten data-extractie	17.00-19.00
1 mei 2017	Uitschrijven resultaten data- extractie	12.00-18.30
2 mei 2017	Uitschrijven resultaten data- extractie	17.00-21.00
3 mei 2017	Uitschrijven resultaten data- extractie + Geschreven verbeteren met Veerle	17.30-22.30
4 mei 2017	Discussie bespreking	16.30-19.00

5 mei 2017	Discussie opmaak	16.30-18.00
6 mei 2017	Discussie uitschrijven	8.00-11.00 15.00-19.00
7 mei 2017	Discussie uitschrijven Opmaak discussie aanbevelingen & inleiding	15.00-18.30
8 mei 2017	Context uitschrijven Bespreking discussie resultaten en aanbevelingen + inleiding	07.30-11.30 19.00-22.00
9 mei 2017	Context uitschrijven Bespreking discussie resultaten Opmaak recommendations	17.30-20.30
10 mei 2017	Recommendations uitschrijven Opzoeken literatuur inleiding	19.00-21.30
11 mei 2017	Opzoeken literatuur inleiding	17.00-19.30
13 mei 2017	Opzoeken literatuur inleiding	08.00-12.00 15.00-18.30
14 mei 2017	Opbouw Inleiding	18.00-19.00
19 mei 2017	Samenzitten Veerle-overlopen geschreven en geplande samenkomst promotor Uitschrijven inleiding	12.30-16.00 16.30-21.00
20 mei 2017	Inleiding uitschrijven Literatuursearch: eind check-up	8.00-14.00
22 mei 2017	Literatuursearch	14.00-18.00
23 mei 2017	Afspraak Veerle protocol	18.00-19.00
24 mei 2017	Protocol inlezen + aanpassingen	18.00-20.00
25 mei 2017	Protocol uitschrijven	15.00-19.00
26 mei 2017	Protocol uitschrijven	10.00-12.30 13.00-18.00
27 mei 2017	Protocol uitschrijven	10.00-12.30
28 mei 2017	Protocol uitschrijven Inleiding aanpassen Context aanpassen	12.30-19.00
29 mei 2017	Samenzitten Veerle Ondertekenen inschrijvingsformulier verdediging Abstract schrijven	12.00-14.00 16.00-18.00 19.00-21.00
30 mei 2017	Nakijken volledige thesis + aanpassingen	16.30-20.00
2 juni 2017	Bellen Veerle: overleg mail + afspraken afwerking	19.30-20.15

3 juni 2017	Nakijken opmaak, bijlagen protocol	18.30-21.00
4 juni 2017	Bijlagen protocol Bijvoegen zelfevaluatie Opnieuw nalezen volledige thesis	14.00-19.00
5 juni 2017	Nalezen volledige thesis (met richtlijn er nog eens langs)	12.30-16.30
8 juni 2017	Aanpassen verbeteringen Prof. Hansen	17.00-20.00 21.30-23.30
9 juni 2017	Aanpassen verbeteringen Prof. Hansen Nalezen thesis	17.00-23.00
10 juni 2017	Nalezen thesis + opzoeken extra literatuur discussie	08.00-10.00 15.30-18.00
11 juni 2017	Nalezen thesis Laatste aanpassingen met Veerle	12.00-19.00

Logboek Veerle Van Oeckel

Datum	Activiteit	Tijd
19/10/2016	Mail gestuurd naar prof. Hansen i.v.m. een afspraak om de opstart van onze masterproef te bespreken.	06:00u - 06:15u
14/11/2016	Opstart MP besproken: Er moeten MeSH-termen gezocht worden en PICO's opgesteld worden. Deze moeten we naar hem doormailen. Hij geeft ons bijgevolg de volgende stap. Samenvatting bespreking: Zie bijlage 1.	17:30u – 18:00u
05/12/2016	MeSH-termen gezocht en PICO's opgesteld en doorgestuurd naar Emmy.	10:45u – 12:00u
19/12/2016	Feedback van prof. Hansen toegepast om onze PICO lichtjes aan te passen samen met Emmy. Dit werd opnieuw doorgestuurd naar prof. Hansen.	12:15u - 12:30u
20/12/2016	Zoekstrategie voorbereid: <ul style="list-style-type: none"> - Powerpoint omtrent het 'stappenplan' doorgenomen en enkele belangrijke mee te nemen zaken genoteerd of opgezocht - Mindmap aangevuld 	19:45u – 20:30u
21/12/2016	<ul style="list-style-type: none"> - Document gemaakt om onze zoekstrategie schematisch uit te kunnen schrijven en de eerste helft MeSH-termen gecombineerd op Pubmed. Dit werd doorgestuurd naar Emmy, die de andere helft doet. - Mail gestuurd met enkele vragen naar prof. Hansen waarop ik antwoord kreeg dat ik op 23/12/2016 mocht langskomen om dit te bespreken. 	16:00u – 19:30u
23/12/2016	Bespreking met promotor over stand van zaken en wat verder dient te gebeuren. Onze vragen werden eveneens beantwoord. Samenvatting bespreking: Zie bijlage 1.	14:00u – 14:15u
26/12/2016	Alle topics (= MeSH-termen in PubMed) gecombineerd in 'Web of Science' (Boolean: AND) en alle combinaties gecombineerd om uiteindelijk het aantal unieke artikels te bekomen (Boolean: OR). Dit stuurde ik door naar Emmy. Zij zal het aantal unieke artikels op 'PubMed' zoeken. Dit sturen we dan opnieuw door naar prof. Hansen.	11:30u – 15:00u 20:00u – 22:00u
11/01/2017	<ul style="list-style-type: none"> - Bespreking met promotor over de stand van zaken en wat verder dient te gebeuren. Samenvatting: Zie bijlage 1. - De nieuwe zoekstrategie volledig invoeren in 'Web of Science'. Emmy deed hetzelfde voor PubMed en ik zette beide samen en stuurde het door naar prof. Hansen. - Ik maakte ook een samenvatting voor mezelf van de bijeenkomst eerder die dag. - Ik deed een poging tot het noteren van de hoofdonderzoeksvraag. - Endnote geïnstalleerd - Sjabloon gemaakt om onze artikelselectie te kunnen uitvoeren o.b.v. onze in- en exclusiecriteria. 	14:00u – 14:20u 15:30u – 18:30u 21:00u – 22:30u
12/01/2017	- Sjabloon artikelselectie vertaald naar het Engels (want we beslisten om onze MP in het Engels te schrijven).	09:30u – 10:00u
13/01/2017 tot 01/02/2017	- 362 artikels screenen (includeren of excluderen en waarom). Dit werd meteen in een document verwerkt waarin per artikel de reden van exclusie werd aangeduid.	Totaal: 11 441 minuten
13/02/2016	- Bespreking met prof. Hansen van onze geïnccludeerde artikels. We moeten deze artikels eens opnieuw screenen. Daarnaast moeten we ook een tabel maken met onze geïnccludeerde artikels en een checklist kiezen om onze artikels te screenen. Samenvatting bespreking: Zie bijlage 1.	13:00u – 13:30u

	<ul style="list-style-type: none"> - Sjabloon gemaakt om de geïnccludeerde artikels opnieuw te screenen. + De eerste artikels opnieuw gescreend. Ik heb hiervoor ook onze lijst met geïnccludeerde artikels aangevuld met 1 review* en deze lijst wat gedetailleerder bijgewerkt. - Van lijstje met "Artikels waarvan ik niet goed weet wat ik ermee moet doen"*, nog enkele artikels geïnccludeerd en geëxcludeerd en zo het lijstje verkleind (en deze artikels in de andere documenten aangevuld) 	17:00u – 20:00u
14/02/2016	<ul style="list-style-type: none"> - Helpen met metingen van Nele Willems (Masterproef 2) - Geïnccludeerde artikels opnieuw screenen: Af - Verslagje bijeenkomst met prof. Hansen maken 	08:00u – 11:00u 14:00u – 16:00u & 19:00u – 20:00u
15/02/2016	<ul style="list-style-type: none"> - Mail gestuurd naar prof. Hansen dat we vast zitten. We hebben maar 1 artikel dat voldoet aan alle inclusiecriteria en geen exclusiecriteria heeft. 	11:00u – 11:30u
17/02/2016	<ul style="list-style-type: none"> - We mogen het exclusie criterium "Follow-up van minstens 1 jaar" laten vallen. Ik maak een sjabloon met alle artikels die aan deze vereisten voldoen om deze artikels een tweede maal te kunnen screenen (Zowel Emmy, als ik, onafhankelijk van elkaar). Ik start met de screening van de artikels. 	08:00u – 11:30u
19/02/2016	<ul style="list-style-type: none"> - Artikelscreening waar ik vrijdag mee begonnen was afwerken en doorsturen naar Emmy. 	14:30u – 18:00u
20/02/2016	<ul style="list-style-type: none"> - Overleg met Emmy over de gescreende artikels en welke we ervan zullen in- en excluseren. Daarnaast bespraken we ook welke vragen we nog hadden voor prof. Hansen. Hiervoor stuurde ik een tamelijk uitgebreide mail. Ik sprak ook af met Emmy dat: <ul style="list-style-type: none"> o Ik nog een lijstje zal maken met onze reviews die we kunnen gebruiken o Ik al start met een tabel te maken met onze geïnccludeerde referenties o We allebei op zoek gaan naar een goede checklist om onze artikels te beoordelen o We een tweede artikelselectie doen in april (voor de artikels die er tegen dan bijgekomen zijn) 	15:00u – 17:00u
21/02/2016	<ul style="list-style-type: none"> - Mail prof. Hansen gekregen met antwoord op alle vragen. - Tabel maken met alle artikels die we includeren. 	09:30u – 16:30u 20:00u – 22:00u
22/02/2017	<ul style="list-style-type: none"> - Tabel met alle artikels die we includeren afgewerkt (ruwe versie) en alle full teksten gezocht en opgeslagen. - Gebeld met Emmy om verder af te spreken wat de volgende stappen zijn en hoe we die verdelen. <ul style="list-style-type: none"> o We verfijnen allebei onze tabel met alle studies die we excludeerden en Emmy zet dit samen. Zij maakt ook een flowchart over onze exclusieprocedure (We hebben ook besproken hoe ze dat gaat doen). Ik verfijn de tabel met alle studies die we includeren nog verder e.d. 	08:00u – 10:30u 11:30u – 12:30u 13:30u – 14:00u 14:00u – 14:15u
23/02/2017	<ul style="list-style-type: none"> - Artikelselectie Pubmed verfijnd en doorgestuurd naar Emmy - Artikelselectie Web of Science gemaakt - Reviewlijst beginnen maken - Flowchart met Emmy besproken - Exclusietabel Emmy overnemen 	15:00u – 17:30u 18:30u – 19:15u 20:00u – 24:00u
24/02/2017	<ul style="list-style-type: none"> - Exclusietabel Emmy overnemen 	08:30u – 09:30u 15:30 – 18:00u

25/02/2017	- Exclusietabel Emmy overnemen	10:00u – 11:00u
26/02/2017	- Exclusietabel Emmy overnemen	15:00u – 17:30u 20:00u – 23:00u
27/02/2017	- Exclusietabel Emmy overnemen: Afgewerkt en nagekeken	17:30u – 18:00u 19:15u – 20:15u 21:00u – 22:30u
28/02/2017	- Helpen met metingen van Nele Willems (Masterproef 2) - Exclusietabellen (van mezelf, Emmy en WOS) samengevoegd en nagekeken, olijsting gemaakt met de tot nu toe nieuw verschenen artikels op Pubmed, olijsting gemaakt van de te includeren reviews. - Begonnen met het opstellen van een tabel om onze kwaliteitsbeoordeling te kunnen doen van alle geïnccludeerde artikels o.b.v. 2 Nederlandse 'Cochrane Checklists' die ik naar het Engels vertaalde.	07:00u – 11:30u 14:00u – 18:00u 21:00u – 21:45u
01/03/2017	- Tabel kwaliteitsbeoordeling afgewerkt - Flow-chart Emmy verbeterd - Mail naar prof. Hansen gestuurd met enkele vragen en om te vragen of onze flowchart en de exceltabel om onze artikels te beoordelen in orde zijn. - Artikels lezen en beoordelen	09:00u – 11:00u 11:00u – 11:30u 13:30u – 14:00u 16:00u – 19:30u 22:00u – 23:00u
02/03/2017	- Artikels lezen en beoordelen - 2 artikels geëxcludeerd, 1 artikel geïnccludeerd en alle bijhorende documenten aangepast i.f. hiervan.	07:30u – 11:45u
03/03/2017	- Artikels lezen en beoordelen (= Ook eventueel artikels nog excluderen en dit aanpassen in de andere documenten)	15:00u – 16:00u
04/03/2017	- Artikels lezen en beoordelen	08:30u – 09:30u 10:15u – 13:00u
07/03/2017	- Artikels lezen en beoordelen	07:45u – 08:30u 09:15u – 11:15u 12:15u – 17:00u 19:00u – 22:30u
08/03/2017	- Artikels lezen en beoordelen	08:00u – 10:00u 10:30u – 13:00u
09/03/2017	- Artikels lezen en beoordelen	07:30u – 09:30u 12:00u – 12:30u 16:00u – 16:30u
10/03/2017	- Artikels lezen en beoordelen	08:00u – 09:45u 14:45u – 15:30u 16:00u – 17:00u
11/03/2017	- Artikels lezen en beoordelen	22:30u – 23:30u
12/03/2017	- Artikels lezen en beoordelen	07:30u – 09:00u
13/03/2017	- Artikels lezen en beoordelen	21:00u – 21:30u
14/03/2017	- Artikels lezen en beoordelen	06:30u – 07:45u 08:30u – 12:30u 13:00u – 18:15u
15/03/2017	- Artikels lezen en beoordelen	08:30u – 12:00u 13:00u – 18:00u 19:30u – 22:00u
16/03/2017	- Artikels lezen en beoordelen - Nieuwe checklist opstellen om onze artikels opnieuw te beoordelen aangezien de vorige checklist ons toch niet optimaal leek	08:30u – 12:00u 13:00u – 18:00u 21:00u – 23:00u

27/03/2017	- Artikels lezen en beoordelen	14:15u – 16:30u
28/03/2017	- Artikels lezen en beoordelen	07:00u – 08:30u 10:00u – 13:00u 13:30u – 16:30u 21:30u – 22:30u
29/03/2017	- Artikels lezen en beoordelen	07:15u – 09:00u 10:00u – 11:00u
30/03/2017	- Artikels lezen en beoordelen	10:30u – 11:45u 15:00u – 17:30u 20:00u – 00:30u
31/03/2017	- Artikels lezen en beoordelen	07:15u – 08:00u
01/04/2017	- Artikels lezen en beoordelen	09:00u – 13:00u 14:00u – 16:00u
02/04/2017	- Artikels lezen en beoordelen	07:00u – 08:00u 09:30u – 11:30u
03/04/2017	- Artikels lezen en beoordelen: Klaar en doorgestuurd naar Emmy samen met alle documenten waarin dingen zijn aangepast. - Voortgangsformulier gemaakt	09:30u – 11:30u 11:45u – 12:30u
04/04/2017	- Overleg met Emmy over de volgende stappen - Reviews doornemen en kijken hoe in die artikels de data-extractie werd uitgevoerd	09:30u – 11:00 11:00u – 12:30u
05/04/2017	- Reviews doornemen en kijken hoe in die artikels de data-extractie werd uitgevoerd - Facetime met Emmy: Stand van zaken besproken (= Mail sturen naar prof. Hansen met al onze vragen,...), besproken hoe we de data-extractie aanpakken en kwaliteitsbeoordelingen samenvoegen - Sjabloon data-extractie gemaakt en doorgestuurd	07:00u – 08:00u 09:30u – 10:30u 10:30u – 12:30u 17:30u – 19:30u
06/04/2017	- Kwaliteitsbeoordelingen samengevoegd en nodige richtlijnen opnieuw nagelezen - Begonnen met het uitvoeren van de data-extractie	10:30u – 12:30u 14:30u – 18:00u
07/04/2017	- Data-extractie verder uitwerken	08:30u – 13:00u
08/04/2017	- Data-extractie verder uitwerken	09:30u – 11:30u 17:30u – 19:30u 21:30u – 22:00u
09/04/2017	- Data-extractie verder uitwerken	06:00u – 09:00u 09:30u – 11:30u 19:30u – 21:00u
10/04/2017	- Data-extractie verder uitwerken	19:30u – 21:00u
11/04/2014	- 'Study selection process' aangepast en doorgestuurd naar Emmy -	21:30u – 22:00u
12/04/2014	- Afspraak prof. Hansen - Data-extractie verder uitwerken	17:30u - 18:15u 20:30u - 23:15u
14/04/2014	- Facetime met Emmy: Data-extractie samenvoegen en verdere taakverdeling opstellen om de rest van de tabel te kunnen samenvoegen	18:00u – 20:00u
15/04/2014	- Data-extractie verder uitwerken	19:00u – 22:30u
16/04/2014	- Data-extractie verder uitwerken	10:00u - 13:00u 13:45u – 16:00u 19:00u – 21:15u
17/04/2014	- Data-extractie verder uitwerken	10:00u - 13:00u 13:45u – 15:30u
18/04/2014	- Data-extractie samenvoegen	21:30u – 22:30u
19/04/2014	- Facetime met Emmy: Afwerken tabel data-extractie	18:00u – 20:00u

20/04/2014	- Data-extractie samenvoegen	18:00u – 19:30u
23/04/2014	- Data-extractie samenvoegen	14:00u – 16:00u 16:45u – 18:30u 20:45u – 22:30u
25/04/2014	- Facetime met Emmy: Afwerken tabel data-extractie	19:30u – 20:00u
26/04/2014	- Data-extractie samenvoegen	20:30u – 21:45u
27/04/2017	- Data-extractie samenvoegen	21:00u – 22:00u
28/04/2017	- Data-extractie samenvoegen	17:45u – 18:30u
29/04/2017	- Data-extractie samenvoegen klaar	07:00u - 12:00u
30/04/2017	- Kwaliteitsbeoordeling aanpassen	15:00u – 16:00u
01/05/2017	- Kwaliteitsbeoordeling aanpassen - Onderzoeksvraag en (resultaten) kwaliteitsbeoordeling uitschrijven - Literatuursearch en selectiecriteria nagelezen en verbeterd	07:00u – 08:00u 09:30u – 13:30u 16:00u – 17:30u
03/05/2017	- Bellen met Emmy: Verbeteren resultaten data-extractie	18:30u – 19:45u
04/05/2017	- Bellen met Emmy: Verbeteren resultaten data-extractie	18:00u – 18:45u
06/05/2017	- Resultatensectie en discussie over de kwaliteitsbeoordeling uitschrijven	08:30u – 10:00u 11:30u – 13:30u 18:30u – 21:00u
07/05/2017	- Resultatensectie en discussie over de kwaliteitsbeoordeling uitschrijven	14:00u – 18:00u 20:30u – 22:00u
08/05/2017	- Facetime met Emmy: Individueel geschreven tekst verder aanpassen, taakverdeling opstellen en elkaar op gang helpen (bv. besproken welke puntjes in de inleiding moeten komen en hoe die inleiding opgebouwd moet worden), vragen noteren om in een mail naar prof. Hansen te sturen,... - Gedeeld Gogledocument aangemaakt	20:00u – 22:30u
09/05/2017	- Bellen met Emmy: Besprekingen resultaten discussie	18:00u – 19:00u
10/05/2017	- Discussie i.f.v. onderzoeksvraag uitschrijven	21:15u – 22:15u
11/05/2017	- Discussie i.f.v. onderzoeksvraag uitschrijven	20:30u – 22:00
13/05/2017	- Discussie i.f.v. onderzoeksvraag uitschrijven	10:00u – 12:00u 16:30u – 17:00u
19/05/2017	- Samengezeten met Emmy: Context nagelezen en aangepast, volledige thesis doorlopen en eventuele zaken aangepast, vragen genoteerd voor prof. Hansen, verdere 'to do-list' en taakverdeling opgemaakt. - Eerste versie discussie afgewerkt	12:00u – 15:30u 20:00u – 22:00u
20/05/2017	- Nalezen en aanpassen huidige versie thesis (o.a. context en inleiding nalezen,...)	13:30u – 16:00u
22/05/2017	- Gesprek met Hansen: Enkele korte vragen omtrent de huidige versie van onze thesis en de bespreking van het protocol - Nalezen en aanpassen huidige versie thesis (o.a. inleiding nalezen, onderzoeksvraag bijwerken,...)	16:30u – 17:15u 14:15u – 16:00u 20:30u – 22:30u
23/05/2017	- Bellen met Emmy: Gesprek met prof. Hansen overlopen - Nalezen en aanpassen huidige versie thesis (o.a. referenties toevoegen,...)	17:30u – 18:15u 20:30u – 23:00u
25/05/2017	- Facetime met Emmy: Stand van zaken bespreken, verbeteren van de inleiding en context, verder bespreken van het protocol, verdere taakverdeling opstellen - Discussie schrijven	15:30u – 16:15u 14:00u – 15:30u
26/05/2017	- Discussie schrijven	09:00u – 11:30u 14:00u – 16:15u
27/05/2017	- Discussie afgewerkt - Outline schrijven	10:30u – 13:00u 17:00u – 17:30u
28/05/2017	- Outline schrijven	09:45u – 10:30u

	- Sterkte-zwakke tabel maken	11:00u – 13:30u 19:00u – 20:30u 22:15u – 23:00u
29/05/2017	- Afgesproken met Emmy: Aanvraagformulier laten tekenen, tweede artikelselectie doorgenomen, flowchart aangepast, begonnen met schrijven van het abstract, finale taakverdeling opgesteld,... - Sterkte-zwakke tabel maken - Exclusietabel aangepast na tweede artikelscreening	12:00u – 13:45u 17:30u – 18:30u 19:00u - 22:00u
30/05/2017	- Afwerking (referenties/referentielijst invoegen)	19:00u – 23:00u
31/05/2017	- Afwerking (referenties/referentielijst invoegen, inhoudstafels maken, opmaak, tekst aanpassen,...)	19:00u – 23:00u
01/06/2017	- Afwerking (opmaak, tekst aanpassen)	19:00u – 22:30u
02/06/2017	- Bellen met Emmy: Details die nog niet in orde waren besproken i.f.v. de thesis die werd doorgestuurd op 1/6/'17 naar prof. Hansen. - Afwerking (voortgangsformulier maken, review list maken)	19:30u – 20:00u 20:00u – 22:00u
03/06/2017	- Afwerking (Tabellen in alfabetische volgorde zetten, opmaak, tekst aanpassen,...)	09:30u – 11:00u 17:00u – 20:00u
04/06/2017	- Afwerking (Web of Science voor een tweede keer screenen, twee referenties toevoegen, opmaak, nalezen thesis,...)	09:30u – 13:00u 15:00u – 19:00u
05/06/2017	- Afwerking (Nalezen thesis, stukje tekst uitgeschreven, opmaak in de tekst en van het document), bijlagen onderzoeksprotocol in orde gemaakt,...)	09:30u – 11:30u 11:45u – 13:30u 15:30u – 17:30u 19:00u – 20:30u 21:00u – 23:45u
06/06/2017	- Afwerking (Opmaak, aanpassen van enkele zinnen,...)	18:00u – 18:45u
07/06/2017	- Afwerking (Opmaak, aanpassen van enkele zinnen,...)	19:00u – 22:15u
08/06/2017	- Bellen met Emmy: Gekregen feedback bespreken en taakverdeling maken om de feedback te verwerken - Afwerking (Opmaak, aanpassen van enkele zinnen,...)	19:00u – 22:30u
09/06/2017	- Afspraak met Dr. Giuliani om feedback te krijgen omtrent de thesis	19:00u – 20:00u
10/06/2017	- Afwerking (Opmaak, aanpassen van enkele zinnen, feedback verwerken,...)	09:00u – 13:00u 15:00u – 18:00u 20:30u – 23:00u
11/06/2017	- Bellen met Emmy: Afwerken thesis - Afwerking (Opmaak, aanpassen van enkele zinnen, nalezen, feedback verwerken,...) - Alles samengevoegd en thesis ingediend samen met Emmy	17:00u – 17:30u 06:00u – 08:30u 13:30u – 18:30u 19:30u – 21:00u 21:00u – 21:30u

Auteursrechtelijke overeenkomst

Ik/wij verlenen het wereldwijde auteursrecht voor de ingediende eindverhandeling:
Impact of sedentary professional activity on cardiometabolic health: a longitudinal study.

Richting: **master in de revalidatiewetenschappen en de kinesitherapie-revalidatiewetenschappen en kinesitherapie bij musculoskeletale aandoeningen**

Jaar: **2017**

in alle mogelijke mediaformaten, - bestaande en in de toekomst te ontwikkelen - , aan de Universiteit Hasselt.

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Voor akkoord,

Eysermans, Emmy

Van Oeckel, Veerle