except in fever where incidence of fever in Actoferon®patients was less (p-value: 0.046). Laboratory test results and injection site reactions in both groups were similar.
Conclusion: There was no significant difference between Betaferon®and Actoferon®in aspects of efficacy, safety and tolerability. This study showed the non-inferiority of Actoferon®to Betaferon®.

Disclosure
There is no conflict of interest in this study.

P789
Do multiple sclerosis drugs decrease the risk of a severe SARS-CoV-2 infection?

C. Ramo Tello[1], J. Carbonell Gisbert[2], S. Presas Rodríguez[1], S. Soler Juhe[1]
[1]Hospital Universitari Germans Trias i Pujol, Demyelinating Diseases Unit, Badalona, Spain, [2]Hospital Universitari Germans Trias i Pujol, Neurology, Badalona, Spain

Introduction: Multiple sclerosis drugs (DMTs) were expected to increase the incidence and risk of severe infection for SARS-CoV-2 and to decrease the response to the vaccine, but has it been the case?
Objectives: 1) To evaluate the relationship between the use of DMTs and the incidence and severity of SARS-CoV-2 infection. 2) To evaluate the relationship between the use of DMTs and the incidence and severity of SARS-CoV-2 infection after vaccination.
Aims: To demonstrate that treatment with DMTs does not increase the incidence and risk of severe illness or the response to vaccination due to SARS-CoV-2 infection.
Methods: Retrospective cohort study of 472 adults with MS in a MS Unit between March, 2020 and March, 2022. All DMTs were prescribed prior to COVID-19 testing. Variables: Demographics data, DMTs, SARS-CoV-2 test results, severity of the infection (hospitalized and death), infection after vaccination.
Results: Among 472 patients with MS, 120 patients (25.4%) had SARS-CoV-2 infection (Incidence in the general population of Catalonia: 22.7%); 83 (26%) were women; mean age: 49 years (44.5 yrs for infected; 50.6 yrs for not infected); there was no significant difference in the incidence of infection between 66 (29.3%) of the 213 treated and 52 (21.8 %) of the 259 untreated patients (p=0,059). There was also no significant difference in hospitalization between the 4 treated (5.9 %) and 3 untreated (2.5 %) patients. None of them died. There wasn't a significant difference between post-vaccination incidence of infection between the 26 treated (41.3%) and 16 untreated (36.4%) patients either.
Conclusions: The use of DMTs was not associated with an increase in incidence or severity of SARS-CoV-2 infection, and a favorable vaccine-induced SARS-CoV-2 response was observed. Further research is needed to determine the possible protective role of MS drugs on risk and severity of SARS-CoV-2 and the mechanisms that underlie these findings.

Disclosure
Nothing to disclose.

RIMS - Physical exercise and lifestyle changes

P790
The impact of COVID-19 pandemic on physical activity in persons with multiple sclerosis: an international RIMS-SIG Mobility study

L. Moumdjian[1,2], T. Smedal[3], E. Christin Arntzen[4], M. Van der Linden[5], Y. Learmonth[6], L. Pedullà[7], A. Tacchino[7], K. Novotna[8], A. Kalron[9], Y.Z. Yazgan[10], U. Nedeljkovic[11], D. Kos[12], J. Jonsdottir[13], C. Santoyo-Medina[14], S. Coote[15]
[1]Hasselt University, Hasselt, Belgium, [2]Gent University, Gent, Belgium, [3]Haukeland University Hospital, Bergen, Norway, [4]Nord University, Bodø, Norway, [5]Queen Margaret University Edinburgh, Edinburgh, United Kingdom, [6]Murdoch University, Perth, Australia, [7]Italian Multiple Sclerosis Foundation (FISM), Genoa, Italy, [8]Charles University and General University Hospital in Prague, Prague, Czech Republic, [9]Tel-Aviv University, Tel-Aviv, Israel, [10]Istanbul University-Cerrahpasa, Istanbul, Turkey, [11]University of Belgrade, Belgrade, Serbia, [12]National Multiple Sclerosis Center Melsbroek, Melsbroek, Belgium, [13]IRCCS Fondazione Don Carlo Gnocchi ONLUS, Milan, Italy, [14]Centre d'Esclerosi Múltiple de Catalunya (Cemcat), Barcelona, Spain, [15]Multiple Sclerosis Society of Ireland and Physical Activity for Health Research Centre, Limerick, Ireland

Introduction: Restrictions aiming to slow down the spread of COVID-19 had consequences on the amount and content of physical activity in persons with multiple sclerosis (PwMS).
Objectives & Aims: To investigate the impact of the COVID-19 pandemic on physical activity in PwMS.
Methods: An online survey was distributed during May - July 2021 in 11 countries. The survey gathered various metrics of physical activity (e.g. type, intensity, use of technology) performed prior to (2019) and during the pandemic (2021). Factors associated with stopping physical activity were also investigated.
Results: The survey was completed by 3725 PwMS. Pre-pandemic 83% of the respondents reported being physically active, whereas during the pandemic 75% reported being physically active. Concern of contracting COVID-19 and loss of support were highly predictive factors associated with stopping physical activity. The decrease in physical activity was significant for both moderate and high intensity physical activity ($p<.0001$). Prior to the pandemic, 66% of the respondents reported physical activity behaviour indicating that they met the physical activity guidelines, while during the pandemic the respondents meeting the physical activity guidelines was 50%. The proportion of respondents meeting the guidelines decreased with increasing disability (Pre/during-pandemic: mild: 64%/ 55%; moderate: 52%/ 43%; severe: 39%/ 30%). Walking was the most frequent activity pre-pandemic (27%) and during the pandemic (33%). Of the 25% respondents who were inactive during the pandemic, 31% reported no interest in changing their physical activity behaviours, and 44% expressed a preference for a face-to-face format to conduct physical activity after the pandemic. During the pandemic, the most used technology (24%) were wearables (e.g. smart watch).

Conclusions: Physical activity was reduced in PwMS from before to during the pandemic. Concerns of contracting COVID-19 and a loss of support were highly associated with reduced physical activity. There is a need to support PwMS aiming to increase physical activity. Physical activity programmes which address walking (the most frequent), disability and the use of wearable technology may be preferable.

Disclosure
Authors have nothing to disclose.

P791
Changes in sedentary behaviour and physical activity in response to an exercise intervention in persons with multiple sclerosis

I. Nieste[1,2,3], J. Spaas[1,4,3], P. Van Asch[5], B. O. Eijnde[1,3]
[1]Hasselt University, SMRC Sports Medicine Research Center, BIOMED, Biomedical Research Institute, Faculty of Medicine and Life Sciences, Hasselt, Belgium, [2]Maastricht University, Department of Nutrition and Movement Sciences; NUTRIM, School for Nutrition and Translation Research Maastricht, Faculty of Health, Medicine and Life Sciences, Maastricht, Netherlands, [3]University MS Center (UMSC) Hasselt, Pelt, Hasselt, Belgium, [4]Ghent University, Department of Movement and Sports Sciences, Faculty of Medicine and Health Sciences, Ghent, Belgium, [5]Move to Sport Foundation, Kontich, Belgium

Introduction: A substantial body of evidence supports the beneficial effects of exercise for persons with Multiple Sclerosis (PwMS). However, recent systematic reviews indicate that current exercise interventions only increase self-reported exercise participation, but fail to increase objective measures of total physical activity (PA). This could indicate that PwMS compensate for exercise training (i.e. by decreasing their non-exercise PA or increasing sedentary behaviour [SB]), which might blunt exercise effects.
Objective: To assess physical activity changes of PwMS during a structured exercise intervention, in order to optimise exercise prescription guidelines and exercise benefits.
Aim: In this non-randomised pilot study, the effects of a running exercise intervention on whole-week PA, non-exercise PA and SB are compared between PwMS and healthy controls (HC).
Methods: Twenty-nine mildly-disabled PwMS (EDSS 0-4) and 26 HC completed 10 months of home-based, periodized exercise in which high-intensity interval training and moderate-intensity continuous training sessions were alternated. PA (stand time, low-intensity PA [LIPA] and moderate-to-vigorous PA [MVPA]) and SB (total SB and time in sedentary bouts of ⩾60min) were measured by accelerometry (activPAL3) for 7 consecutive days at baseline, and after 5 and 10 months of exercise. PA and SB were calculated as percentages of waking time/day for the whole week and for exercise (EX) and non-exercise (NONEX) days separately. Secondary outcomes included changes in fatigue, cardiorespiratory fitness, blood pressure, resting heart rate and fat percentage.
Results: There were no differences in baseline PA and SB between groups. During the intervention, both groups trained at a similar mean exercise intensity (mean±SEM: 79±1% of their maximal heart rate) for a total exercise duration of 62.2±1.5h. Interestingly, whole-week MVPA only increased in HC (MS: +0.2±0.4% *vs.*HC: +1.9±0.5%, p=0.035). Moreover, on NONEX days at both 5 and 10 months, PwMS significantly increased their total SB (MS: +2.8±1.2% *vs.*HC:-0.4±1.3%, p=0.029) and time in sedentary bouts of ⩾60min (MS: +0.7±0.2h*vs.*HC: +0.1±0.2h, p=0.003), while HC did not. Fatigue, cardiorespiratory fitness, resting heart rate and fat percentage improved similarly in both groups.
Conclusion: In contrast to HC, PwMS did not show a net increase in MVPA during a structured exercise training intervention due to increases in sedentary behaviour on non-exercise days.

Disclosure
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P792
Can a seated 6-minutes knee antiphase movement test help understand walking fatigability in moderately disabled people with MS through a movement control perspective? Preliminary results

F.B. Santinelli[1,2], C. Ramari[1,2], M. Poncelet[1,3], M. Garaerts[1], P. Feys[1,2]
[1]University of Hasselt, REVAL Rehabilitation Research Center, Hasselt, Belgium, [2]UMSC, Hasselt/Pelt, Belgium, [3]University of Maastricht, Maastricht, Netherlands

Introduction: People with multiple sclerosis (pwMS) present often abnormal walking fatigability (prevalence among moderately disabled patients ~50%). Recent findings indicated that a seated 6-minute knee flexion/extension antiphase movement test (6AMT), which minimizes muscle and balance effort compared to the 6-minute walking test (6MWT), is a promising test to "isolate" and investigate central driven mechanisms. However, the feasibility and performance of moderate pwMS presenting walking fatigability on the 6AMT is not known.
Objectives: To investigate the performance in the 6AMT in moderate pwMS with and without walking fatigability and healthy people.
Methods: Twenty-four pwMS were divided into walking fatigability (MSWF: 55±7 years, EDSS 4.9±1, n=17) and non-walking fatigability (MSNWF: 58±11 years, EDSS 5.3±0.9, n=7) groups, using the distance walking index ($DWI_{6\text{-}1}$, cut-off of 10% of decline in distance), derived from the 6MWT, for allocation. Seventeen healthy people (HC- 51±6 years, n=17) composed the healthy control group. The participants performed the 6MWT at their maximum self-selected speed, recording the distance walked minute-by-minute and the total distance. After resting for 30 minutes, two trials (30 minutes apart) of a seated 6AMT were performed. Participants were asked to perform the 6AMT as fast as possible, simulating a walking pattern. Movement variability,