

**The effect of visual and cognitive distraction on the driving performance of older drivers
- A driving simulator study.**

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Driving is a complex task, consisting of several subtasks. Since people have limited capacity to process ongoing activities, distraction during driving may negatively affect driving performance. Especially older drivers, who experience a decline in cognitive capacity, may have difficulty to maintain safe driving while distraction. The aim of this study was to investigate the effect of visual and cognitive distraction on the driving performance of older drivers while taking into account divided attention capacity. In a fixed-based driving simulator, seventeen older drivers (mean age 78 years) drove a ride with and without visual distraction, while thirty-five older drivers (mean age 76 years) drove a ride with and without cognitive distraction. Repeated measures analyses of covariance were conducted to determine the effect of visual and cognitive distraction on several specific driving measures like Standard Deviation of Lateral Position (SDLP). The findings will be discussed.