

## **Visual Impairment, Age and Driving**

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The link between good vision and driving performance is very controversial, with surprisingly little evidence that it actually exists. Some individuals have therefore argued that they could still drive safely despite their visual impairment.

The Useful Field of View (UFOV) – an indirect measurement of the area of the visual field from which information can be simultaneously processed – has been found to better predict the risk of having a traffic accident than do standard clinical tests of visual acuity, visual field or contrast sensitivity (Owsley, 1993). The UFOV was therefore used as a measure of the driving performance of young and old normal subjects with simulated visual impairment, in the form of reduced visual acuity and reduced contrast sensitivity. Both increased age and impaired vision were found to significantly affect the UFOV, especially on the test for selective attention, suggesting that both factors increase the risk of driving accidents. There was no interaction between impairment and age, however: older individuals did not appear to be disproportionately affected by equivalent levels of impairment. Nonetheless, the same level of accident risk is associated with a better level of acuity in older compared to younger individuals.

The marked inter-observer differences in performance provide further evidence that effective performance of a complex visual task such as driving is not predictable from simple clinical measures of vision. The complete range of factors which influence performance still remains to be discovered.

### Reference

Owsley, C (1993) Vision and driving in the elderly *Optom Vis Sci* 71: 727-735