Evaluation of on-road driving in people with hemianopia and quadrantanopia.

OBJECTIVE: To examine whether some drivers with hemianopia or quadrantanopia display safe driving skills on the road compared with drivers with normal visual fields.

METHOD: An occupational therapist evaluated 22 people with hemianopia, 8 with quadrantanopia, and 30 with normal vision for driving skills during naturalistic driving using six rating scales.

RESULTS: Of drivers with normal vision, > 90% drove flawlessly or had minor errors. Although drivers with hemianopia were more likely to receive poorer ratings for all skills, 59.1%-81.8% performed with no or minor errors. A skill commonly problematic for them was lane keeping (40.9%). Of 8 drivers with quadrantanopia, 7 (87.5%) exhibited no or minor errors.

CONCLUSION: This study of people with hemianopia or quadrantanopia with no lateral spatial neglect highlights the need to provide individual opportunities for on-road driving evaluation under natural traffic conditions if a person is motivated to return to driving after brain injury.