

# Driving cessation was associated with depressive symptoms among older persons

Marottoli RA, Mendes de Leon CF, Glass TA, et al. **Driving cessation and increased depressive symptoms: prospective evidence from the New Haven EPESE.** *J Am Geriatr Soc.* 1997 Feb;45:202-6.

## Objective

To determine whether an association exists between driving cessation and increased depressive symptoms among older drivers.

## Design

Cohort study.

## Setting

Community-based study in New Haven, Connecticut, USA.

## Participants

1316 noninstitutionalized men and women  $\geq 65$  years of age drawn from the cohort of the Established Populations for Epidemiologic Studies of the Elderly (EPESE) program who were alive at the 7th annual follow-up interview in 1989.

## Assessment of risk factors

In the follow-up interview, participants were asked whether they were

## Commentary

The study by Marottoli and colleagues draws attention to the implications of driving cessation. This is particularly timely with the growing trend for mandatory reporting of the recommendation to stop driving by physicians to authorities. From a psychological perspective, the loss of autonomy and social networks and related activities are likely to impose dramatic changes on the affected persons, their relationships, and their psychological welfare. This will be particularly evident in persons without alternative transportation or other compensatory mechanisms.

Physicians and the interdisciplinary team should explore alternative transport options. In managing older patients who are depressed and who are confronted with loss of activities associated with driving, it may be necessary to initiate behavioral change through techniques of activity scheduling and graded task assignment.

still driving a car or whether they had ever driven but stopped. Participants who had stopped driving were asked when this occurred. Interviewers were blinded to the study objectives. Factors other than driving cessation that could affect the outcome were also assessed. These factors included age, sex, education level, housing type, marital status, cognitive status, and performance of basic activities of daily living. Medical conditions were updated yearly.

## Main outcome measures

Depressive symptoms assessed using the Center for Epidemiologic Studies-Depression (CES-D) scale, scored from 0 (fewer depressive features) to 60 (more depressive features) ascertained during in-home interviews in 1982, 1985, and 1988.

## Main results

Of the 1316 participants, 502 (38%) were active drivers as of 1988, 92 (7%) had stopped driving between 1982 and 1987, and 722 (55%) had never driven or had stopped before 1982. There was an overall increase in depressive symptoms for each group during the 6-year interval. The active drivers had the

lowest mean CES-D scores at all 3 interviews, whereas the participants who had stopped driving had intermediate CES-D scores at the beginning of follow-up and had the highest mean depressive symptoms at the end of follow-up. In an analysis adjusting for sociodemographic and health-related factors, driving cessation was independently associated with an increase in depressive symptoms. In a multivariable repeated measures model, driving cessation was associated with depressive symptoms ( $P = 0.001$ ). About 23% of the effect of driving cessation was explained by marital status, education, and the health-related factors.

These and related cognitive behavioral techniques offer therapeutic strategies by which a person may promote self-rewarding activities and social networks. These strategies are well tested in relatively fit older persons who are depressed and are living in the community (1) and in frail older persons who are seriously depressed and are referred to secondary psychiatric services (2). In addition to being associated with driving cessation, depression has also been correlated with increased vulnerability to injury in motor vehicle collisions. This association also applies to elderly persons who have diabetes, coronary artery disease, and dementia (3). Physicians should be sensitive to the adverse effects that sedating drugs and cyclic antidepressants have on driving when treating older patients with depression (4).

The existing research highlights the importance of driving and associated indepen-

dence for older persons. However, the increased prevalence of physical illness and associated depression and consequential medication makes this age group particularly vulnerable to accidents and personal injury.

## Conclusion

Driving cessation was associated with an increase in depressive symptoms among older, noninstitutionalized persons.

*Sources of funding:* Claude D. Pepper Older Americans Independence Center and National Institute on Aging.

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Abstract and Commentary also published in *ACP Journal Club.* 1997;127:44.

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## References

1. Yost E, Beutler L, Corbishley M, Allender J. Group Cognitive Therapy. A Treatment Approach for Depressed Older Adults. New York: Pergamon Press; 1986.
2. Wilson K, Scott M. The Cognitive Behavioural Rehabilitation of Severely Depressed Older Patients Referred to a Psychogeriatric Service. Liverpool: Institute of Human Ageing; 1995.
3. Koepsell TD, Wolf ME, McCloskey L, et al. *J Am Geriatr Soc.* 1994;42:695-700.
4. Ray WA, Thapa PB, Shorr RI. *Clin Geriatr Med.* 1993;9:413-38.