

Older Motorists Improve Driving Performance with Physical Conditioning

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Older people who performed a physical conditioning program developed by researchers at Yale School of Medicine were able to maintain or enhance their driving performance, potentially leading to a safer and more independent quality of life.

As the number of older drivers increases, concern about the safety implications have been raised and was a motivator for the study. Flexibility, coordination and speed of movement have been linked with older drivers' on road performance.

Published in the May issue of Journal of General Internal Medicine, the study of 178 Greater New Haven area drivers age 70 and older, was led by Internal Medicine Associate Professor Richard Marottoli, M.D., and colleagues at the VA Connecticut Healthcare System in West Haven and the Department of Rehabilitation Services at Yale-New Haven Hospital.

Participants in the intervention group received weekly visits for 12 weeks by a physical therapist who guided them through a graduated exercise program directed at physical abilities potentially relevant to driving based on earlier studies. They exercised for seven days a week for 15 minutes, focusing on the hips, ankles, knees, shoulders, hands and feet. Therapists noted gait abnormalities and made recommendations to correct unsafe or inefficient gait patterns. They encouraged walking for exercise.

The control group received monthly in-home education that reviewed

general safety issues about home safety, fall prevention and vehicle care. The intervention group also received these materials.

Participants completed an on-road driving evaluation on a mix of highway driving, parking lot maneuvers and low, medium and high traffic density areas. Either a specially trained occupational therapist or a former Connecticut Department of Motor Vehicles (DMV) assessor evaluated participants. Driving performance was rated on a 36-item scale that evaluated a number of driving maneuvers and traffic conditions based on the driving evaluation form used by the CT DMV. Each item was scored zero for major problem, one for minor problem and two for no problem. Total scores ranged from zero (worst) to 72 (best).

Participants who received the intervention increased their road test scores after three months. Intervention drivers also committed 37 percent fewer critical errors.

“We found that this was a safe, well-tolerated intervention that maintained driving performance,” said Marottoli, who is also Medical Director of the Dorothy Adler Geriatric Assessment Center at Yale-New Haven Hospital. “Having interventions that can maintain or enhance driving performance may allow clinician-patient discussions about driving to adopt a more positive tone, rather than focusing on limiting driving or stopping patients from driving.”

Other authors on the study included Heather Allore, Katy L.B. Araujo, Lynne P. Iannone, Denise Acampora, Margaret Gottschalk, Peter Charpentier, Stanislav Kasl and Peter Peduzzi.

Source: Yale University

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