Gait Improved With Motor-Learning Regimen

BY HEIDI SPLETE
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WASHINGTON — An exercise program designed to overcome neural deficits improved elders' walking more than physical therapy that focused on lower-body muscles did, according to results of a randomized, controlled trial.

Standard physical therapy to build strength, flexibility, balance, and endurance has been shown to improve gait in older adults, but only modestly, said Jessie Van Swearingen, Ph.D., a physical therapist and rehabilitation specialist at the University of Pittsburgh. So she and her colleagues looked for an option.

"There is evidence that the brain has a significant impact on gait," she said while presenting the study at the annual meeting of the American Geriatrics Society. "Motor-learning" exercises involve goal-oriented stepping and walking.

Dr. Van Swearingen and her colleagues randomized 25 community-dwelling adults (average age 77 years) with gait problems to each of the interventions, which then took place in small group settings under the supervision of a physical therapist. Each group participated in 40- to 60-minute activity sessions twice a week for 12 weeks. Each session included 20-30 minutes of walking. Three people dropped out of the study for reasons unrelated to either intervention.

The motor-learning group practiced walking patterns including ovals, spirals, and serpentine paths. As the participants improved, they advanced to more-challenging walking patterns with tighter turns. The group also walked on a treadmill to practice increasing speed.

The study's primary outcome was energy spent walking, measured as the average rate of oxygen consumption during 3 minutes of walking on a treadmill at a self-selected speed. The researchers also tracked the participants' walking speeds and assessed their gaits.

After 12 weeks, the 23 adults in the motor-learning group walked using significantly less energy than did the 24 adults in the standard intervention group.

Participants in both groups showed improvements in gait abnormalities and walking speed during the study, but the motor-learning group's average improvements were significantly better than those of the standard group. Neither group reported a difference in perceived exertion after the interventions, compared with what they felt at the study's beginning.

Dr. Van Swearingen stated that she had no relevant financial conflict to disclose. ■

Hydration May Not Help Prevent Pressure Ulcers

SAN DIEGO — Although fluid intake can be safely increased in nursing home residents who have, or are at risk for, pressure ulcers and do not routinely ingest the prescribed amount of fluid, levels of subcutaneous oxygen may remain low, results from a multicenter study showed.

"In the nursing home population, hydration is a serious issue," Nancy A. Stotts, R.N., Ed.D., said at the annual meeting of the Wound Healing Society.

Researchers recorded fluid intake for 5 days in 64 residents of five nursing homes in Northern California. The residents were then randomized to receive, for 5 days, the target amount of fluid prescribed by their physician or the target amount plus 10 mL/kg of body weight, said Dr. Stotts, professor of nursing at the University of California, San Francisco.

Subcutaneous oxygen levels were assessed for 3 days during treatment. The mean age of patients was 79 years. The mean baseline daily fluid intake was 1,374 cc for the group who received prescribed fluid, and 1,707 cc for those who received extra fluid. After treatment, the mean daily fluid intake increased significantly for both groups: to 1,787 cc for the group who received prescribed fluid, and to 2,380 cc for those who received the extra fluid.

The mean level of subcutaneous oxygen, however, was 40 mm Hg for patients in the target prescribed group, and 36 mm Hg for patients in the supplemental fluid group. Subcutaneous oxygen levels less than 45 mm Hg indicate tissue hypoxia, she said. The study was funded by the National Institutes of Health.

—Doug Brunk