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Effects of exercise in older people with Dementia

Marieke van Heuvelen, Willem Bossers, Lianne Sanders, Marelle Heesterbeek, Eddy van der Zee, Erik Scherder and Tibor Hortobagyi
University of Groningen, Netherlands

With the aging of the population the number of people with dementia is increasing. Dementia cannot be cured. To reduce the symptoms medications are prescribed but these medications do not always work and often have adverse effects. Non-pharmacological treatments are needed. Physical exercise may be such treatment. In several studies, we investigate the effects of different types of physical exercise on cognitive function, physical function and activities of daily living (ADLs) of older people with dementia. In the first study the effects of combined aerobic and strength exercise were investigated. 109 institutionalized persons with moderate to moderate/severe dementia were randomized over three interventions: combined aerobic and strength training, aerobic training and control (social visits). Sessions lasted 30 minutes, 4 times/week during 9 weeks. The effects were measured with performance-based tests for executive functioning, memory, physical function and ADLs. The results will be presented. Two studies within the Dutch national program Deltaplan Dementia are currently running. The dose-response relationship of combined aerobic and strength exercise is investigated in people with dementia visiting daycare centers. Low intensity and high intensity exercise are compared in a 24 week intervention, 3 times/week, 30 minutes/session. Preliminary results will be presented. For institutionalized dementia patients who cannot perform active exercises we examine the effects of passive exercise in a multisensory environment in the form of Whole Body Vibration and Therapeutic Motion Simulation using a movement platform with chair. Pilot results will be presented.

Biography

Marieke van Heuvelen, PhD, is a human movement scientist working at the Center of Human Movement Sciences in Groningen, the Netherlands. Her research focuses on how to influence the aging process with physical exercise with a special focus on the exercise effects in dementia. Currently, she is collaborating in a large national program (Deltaplan Dementia) in which several exercise interventions for dementia patients are evaluated using interdisciplinary knowledge from human movement science, neuropsychology and neurobiology. She is also an experienced teacher in aging and statistics and methodology.

m.j.g.van.heuvelen@umcg.nl

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