Vitamin D Helps Physical Activity in Elderly

By Greg Arnold, DC, CSCS, August 29, 2007, abstracted from “Effects of vitamin D supplementation and exercise training on physical performance in Chilean vitamin D deficient elderly subjects” in the 2006 issue of Experimental Gerontology

Link – http://www.nowfoods.com/HealthLibrary/HealthArticles/WeeklyNewsletter/M099814.htm

The Centers for Disease Control and Prevention estimate that 28-34% of adults aged 65 to 74 and 35-44% of adults ages 75 or older engage in no leisure-time physical activity. This inactivity can, over time, result in a condition of muscle loss called sarcopenia. This condition has been linked to an increase in falls, functional decline, osteoporosis, pose a risk for type 2 diabetes and contribute to the $17 billion each year to treat injuries in the elderly due to falling.

While vitamin E has been found to help decrease frailty in the elderly, studies in Europe report that 42% of elderly people have low vitamin D levels (blood levels less than 30 nmol/L). Building upon previous research showing that vitamin D helps reduce falls in the elderly, a new study has found that vitamin D increases physical activity levels in the elderly.

In the study, 96 patients aged 70 years or more with vitamin D levels of 16 ng/ml or less were divided into 4 groups:

Group 1: 800 mg calcium per day plus exercise
Group 2: 400 IU vitamin D and 800 mg calcium per day plus exercise
Group 3: 800 mg calcium per day but no exercise
Group 4: 800 mg calcium and 400 IU vitamin D per day but no exercise

Exercise consisted of 1.5 hours of resistance training and aerobic exercise every other week.

While vitamin D levels in the vitamin D group increased between 100-230% (12.4 ± 2.2 to 25.8 ± 6.5 ng/ml), those who exercised “had significant improvements” (as much as a 48%) in thigh muscle strength (as much as 48% increase in strength) as well as in a short physical performance test and “timed up and go” test (as much as a 48% improvement in time). These improvements were improved more in the vitamin D group but statistical significance wasn’t reached. Regarding walking speed, however, those taking vitamin D had significant improvements whether training or not (p = .02)

For the researchers, “vitamin D supplementation improved gait speed and body sway, and training improved muscle strength.”

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Reference:
1 Behavioral Risk Factor Surveillance Survey. Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. www.cdc.gov

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