

A new study indicates that supplementation of vitamin D3 alone in postmenopausal women is protective against muscle loss and improves measurements of muscle strength.

## Vitamin D supplementation decreases lean muscle loss and improves strength in menopausal women

There is evidence that adequate vitamin D levels can help reduce the risk of falls, loss of muscle strength and muscle loss in the elderly. A new study published in *Osteoporosis International* investigated the potential benefits of vitamin D on muscle function and health in younger postmenopausal women.

The participants in this trial included 160 Brazilian postmenopausal women who were randomized into one of two groups: treatment group receiving a vitamin D supplement providing 1,000 IU of vitamin D3 daily, or a placebo group. The researchers measured lean mass by DXA and muscle strength by handgrip strength and chair raising test. Measurements were taken at the beginning and end of the 9 month trial.

After 9 months, the average vitamin D blood levels nearly doubled in the supplemented group (15.0 ng/ml to 27.5 ng/ml, or 37.5 nmol/l to 68.75 nmol/l) and fell slightly in the placebo group. In the supplemented group, there was a significant increase (25.3%) in muscle strength in the lower body assessed by the chair raising test. There was a substantial 6.8% loss of lean muscle mass in the women receiving the placebo over the trial period.

The results of this study show that vitamin D3 supplementation in younger postmenopausal women with low vitamin D levels provides significant benefit for retention of lean muscle mass and significantly increases muscle strength.

Cangussu LM1, Nahas-Neto J, Orsatti CL, Bueloni-Dias FN, Nahas EA Effect of vitamin D supplementation alone on muscle function in postmenopausal women: a randomized, double-blind, placebo-controlled clinical trial. *Osteoporos Int.* 2015 May 9.