Stress Fractures Reduced by Calcium and Vitamin D Supplementation

Supplementing female military recruits with vitamin D and calcium prevents stress fractures—debilitating overuse injuries that commonly affect this population, a new study reveals.* Stress fractures occur when bones are repetitively stressed over short periods of time without adequate time for repair, and are more common in women than men.

Researchers randomized 5,201 female Navy recruit volunteers to receive 2,000 mg calcium and 800 IU vitamin D daily or placebo during eight weeks of basic training. During the treatment period, 309 participants were diagnosed with a stress fracture. Women who received calcium and vitamin D had a 20% lower incidence of stress fracture than the placebo group.

Supplementing basic training recruits with calcium and vitamin D supplements may significantly reduce debility and financial costs related to stress fractures, the authors concluded. Further, "Supplementation with calcium and vitamin D provides a safe, easy, and inexpensive intervention that does not interfere with training goals."

—Dayna Dye

Pine Nut Oils Significantly Increase Satiety Hormone, Reduce Appetite

Korean pine nut oil reduces appetite by boosting key satiety hormones, according to a new placebo-controlled, double-blind study.*

Eighteen overweight, postmenopausal women randomly received 3 grams of Korean pine nut fatty acids, pine nut triglycerides, or olive oil (placebo), plus a light breakfast. Blood levels of various hunger/satiety hormones were assessed at regular intervals for four hours. Subjects also provided subjective ratings of hunger sensations at each interval. Later, subjects were rotated to receive a different test substance, and again underwent testing.

Compared with placebo, appetite sensation was 36% lower among subjects who received pine nut free fatty acids. Over the four-hour testing period, the satiety hormone, cholecystokinin, was 60% higher among subjects who took pine nut oils versus placebo.

"This study suggests that Korean pine nut may work as an appetite suppressant through an increasing effect on satiety hormones and a reduced prospective food intake," researchers concluded.

—Dale Kiefer

Pycnogenol® Improves Memory in the Elderly

The antioxidant Pycnogenol® may improve memory in the elderly, as reported in a recent Australian study.* Pycnogenol® is a pine bark extract used in many supplements.

The study evaluated the effects of Pycnogenol® on cognitive function tests in 101 individuals aged 60 to 80 years. Patients were divided into two matched groups; one group received 150 mg/day Pycnogenol® and the other took placebo. At three months, working memory was significantly better in the treated group than in the placebo group. Treated patients also had significantly lower concentrations of F2-isoprostanes, a chemical marker of lipid peroxidation.

The results support the theory that cognitive decline is due in part to oxidative damage and confirm previous findings that Pycnogenol® has positive antioxidant effects that preserve cognitive function. The possible role of Pycnogenol® in managing Alzheimer's disease and Parkinson's disease is an exciting topic for future research. The active proanthocyanidins in Pycnogenol® are also found in grapeseed extract.

—Laura J. Ninger, ELS

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