

Testosterone Supplements for Frail Aging Men?

In a short-term randomized trial, only a few outcomes improved.

Testosterone levels decline as men age; however, whether testosterone supplementation is beneficial in men with low levels remains uncertain. In this randomized trial, U.K. researchers enrolled 274 physically frail community-dwelling older men (mean age, 74) with total testosterone levels ≤ 345 ng/dL or free testosterone levels ≤ 7.2 ng/dL. The men received either transdermal testosterone gel or placebo gel for 6 months. Blood testosterone levels doubled in testosterone recipients, and remained unchanged in placebo recipients.

On standardized testing at 6 months, the mean increase from baseline in isometric knee extension strength was significantly greater in the testosterone group than in the placebo group. However, isokinetic knee extension strength, isometric and isokinetic knee flexion strength, hand-grip strength, and scores on several tests of general physical function did not differ significantly between the groups. Compared with placebo recipients, testosterone recipients had significantly higher somatic and sexual, but not psychological, quality-of-life scores.

Comment: According to these researchers, this is the largest double-blind placebo-controlled testosterone trial in frail older men. The authors conclude that short-term testosterone treatment in this population "prevents deterioration in muscle strength and improves . . . symptom-related quality of life." However, this endorsement seems overly enthusiastic, given the trial's somewhat mixed results. Longer-term trials of both efficacy and safety should be conducted before testosterone is prescribed routinely to men like those in this trial.

— [Allan S. Brett, MD](#)

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Citation(s):

Srinivas-Shankar U et al. Effects of testosterone on muscle strength, physical function, body composition, and quality of life in intermediate-frail and frail elderly men: A randomized, double-blind, placebo-controlled study. *J Clin Endocrinol Metab* 2010 Feb; 95:639.