

# Testosterone supplementation for older men appears to have limited benefit

2 January 2008

Older men with low testosterone levels who received testosterone supplementation increased lean body mass and decreased body fat, but were no stronger and had no improvement in mobility or cognition compared with men who did not use the supplement, according to a study in the January 2 issue of JAMA.

“Male aging is associated with a gradual but progressive decline in serum levels of testosterone, occurring to a greater extent in some men than in others. Decline in testosterone is associated with many symptoms and signs of aging such as a decrease in muscle mass and muscle strength, cognitive decline, a decrease in bone mass, and an increase in (abdominal) fat mass,” the authors write. Clinical trials examining whether testosterone supplementation provides benefits or adverse effects have yielded mixed findings.

Marielle H. Emmelot-Vonk, M.D., of University Medical Center Utrecht, the Netherlands, and colleagues conducted a randomized, placebo-controlled study to assess the effects of testosterone supplementation on functional mobility, cognition, bone mineral density, body composition, lipids, quality of life, and safety parameters in older men with testosterone levels less than 13.7 nmol/L (less than the average level in this age group) during a period of six months. The trial, conducted from January 2004 to April 2005, included 207 men between the ages of 60 and 80 years. Participants were randomly assigned to receive 80 mg of testosterone undecanoate or a matching placebo twice daily for six months.

The researchers found that during the study, lean body mass increased and fat mass decreased in the testosterone group compared with the placebo group but these factors were not accompanied by an increase of functional mobility or muscle strength. Cognitive function and bone mineral density did not change. Insulin sensitivity improved

but high-density lipoprotein cholesterol (the “good” cholesterol) decreased. By the end of the study, 47.8 percent in the testosterone group vs. 35.5 percent in the placebo group had the metabolic syndrome (a strong risk factor for cardiovascular disease and type 2 diabetes, a group of several metabolic components in one individual including obesity and dyslipidemia). This difference was not statistically significant.

Quality-of-life measures did not differ aside from hormone-related quality of life in the testosterone group. Adverse events were not significantly different in the two groups. Testosterone supplementation was associated with an increase in the concentrations of blood creatinine, a measure of kidney function, and hemoglobin and hematocrit, two red blood cell measures. No negative effects on prostate safety were detected (some reports have suggested that testosterone therapy could increase the risk of development or progression of prostate disease or cancer).

Source: JAMA and Archives Journals

APA citation: Testosterone supplementation for older men appears to have limited benefit (2008, January 2) retrieved 11 September 2022 from <https://medicalxpress.com/news/2008-01-testosterone-supplementation-older-men-limited.html>

*This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.*