

# Older men with higher testosterone levels lose less muscle mass as they age

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A recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism (JCEM)* found that higher levels of testosterone were associated with reduced loss of lean muscle mass in older men, especially in those who were losing weight. In these men, higher testosterone levels were also associated with less loss of lower body strength.

Loss of muscle mass and strength contribute to frailty and are associated with falls, mobility limitations and fractures. [Men](#) lose more muscle mass and strength than women as they age, suggesting that sex steroids, and testosterone in particular, may contribute to body composition and physical function changes. This study sought to better understand the relationship between testosterone levels and healthy aging in [older men](#) and found that higher testosterone levels may help older men preserve muscle mass and delay frailty as they age.

"Our study finds that men, aged 65 years and older, with higher testosterone levels lost less [muscle mass](#), especially in their arms and legs, than men this age who had lower testosterone levels," said Erin LeBlanc, MD, of Kaiser Permanente Northwest in Portland, OR and lead author of the study. "Men who had higher testosterone levels before they lost weight also lost less leg function and could stand up more easily from a chair than men who had lower [testosterone levels](#) before they lost weight."

In this study, researchers used data from 1,183 men aged 65 years or older and tested the hypothesis that higher baseline measures of sex steroids are associated with lesser declines in lean mass and maintenance of physical performance over an average follow-up of 4.5 years. Body composition was measured using dual energy x-ray absorptiometry (DXA) scans and physical performance was measured through a series of exercises that assessed grip strength, lower

extremity power, walking speed and the ability to rise from a chair without the use of arms.

"The amount of testosterone men have in their bodies may contribute to how much muscle and strength they lose as they get older," said LeBlanc. "Our study adds evidence to the growing body of literature that suggest higher levels of endogenous testosterone may be favorably associated with some key components of healthy aging in men."

**More information:** The article, "Higher testosterone levels are associated with less loss of lean body mass in older men," appears in the December 2011 issue of *JCEM*.

Provided by The Endocrine Society

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