

Midrange testosterone levels better for older men

10 January 2014



(Medical Xpress)—Optimal levels of testosterone - meaning neither low nor high - in older men are associated with better survival, according to a study recently published by a team of UWA researchers in the *Journal of Clinical Endocrinology and Metabolism*.

Testosterone is the principle [male sex hormone](#) which regulates sexual function and body composition in men. Testosterone levels decline with age, which can lead to major health problems. But now, researchers led by Professor Bu Yeap, MBBS, FRACP, PhD, of the University of Western Australia have shown that older men who have high levels of testosterone may be as vulnerable to health concerns including a higher risk of dying.

The researchers studied 3,690 men aged 70 to 89 years living in Perth, Western Australia, as part of the Health In Men Study. Levels of testosterone and its metabolite dihydrotestosterone (DHT) were measured in blood samples collected between 2001 and 2004 and compared with survival up to December 2010.

Men with midrange levels of testosterone had

lower all-cause mortality than men with lower or higher values. Men with higher DHT levels had lower risk of dying from ischaemic heart disease (IHD).

"In conclusion," the authors wrote, "Optimal circulating total testosterone is a robust biomarker for survival in aging men. However, higher DHT levels are associated with reduced IHD mortality."

In an accompanying Editorial in the journal, Professor Bradley Anawalt (University of Washington Medical Center, Seattle, USA) commented on the importance of this study. "The authors have interpreted their data to suggest that endogenous [testosterone levels](#) have a U-shaped relationship with overall mortality in older men" and "If correct, this hypothesis has important implications for the treatment of hypogonadal men, young and old".

Professor Yeap said there needs to be more research. "Having the right amount of testosterone and DHT may be important for men's health as they grow older, but we need to conduct clinical trials to determine whether modifying levels of sex hormones would improve [health](#) outcomes in [older men](#)", he said.

Professor Anawalt supported the need for more clinical trials, noting "Until the results of such studies are available, clinicians should avoid giving high dosages of [testosterone](#) to older, frail [men](#)."

Provided by University of Western Australia

APA citation: Midrange testosterone levels better for older men (2014, January 10) retrieved 28 June 2022 from <https://medicalxpress.com/news/2014-01-midrange-testosterone-older-men.html>

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