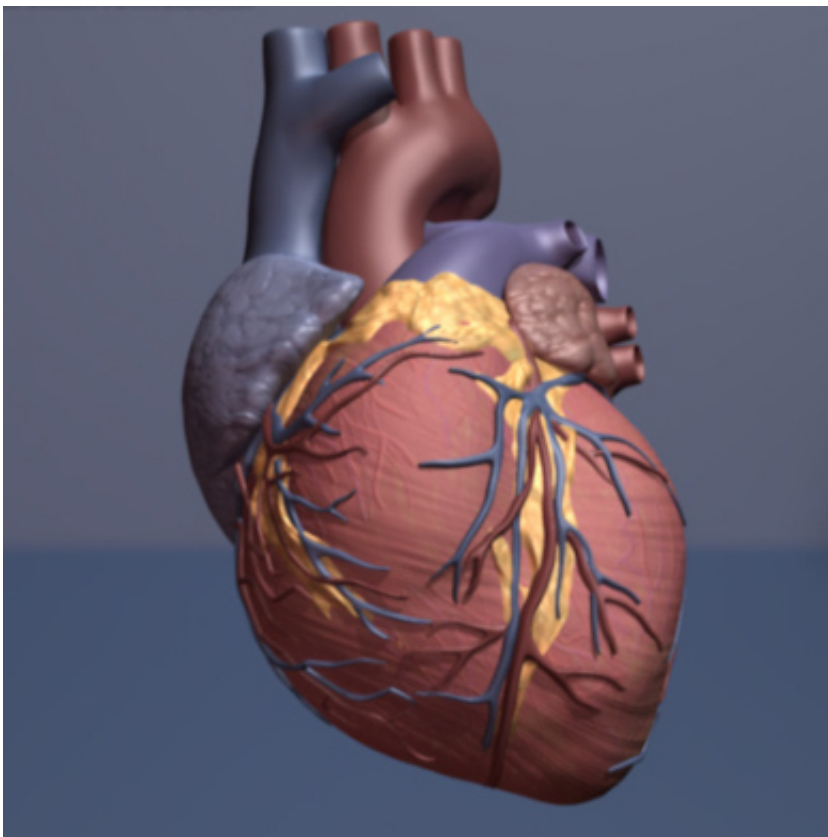


# Testosterone therapy provides protection against cardiovascular disease in men with low testosterone

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Human heart. Credit: copyright American Heart Association

Despite the continued controversy surrounding the use of testosterone in men who have testosterone deficiency (hypogonadism), a new study has found that long-term use of testosterone therapy not only improves vigor

and vitality, but may reduce the risk of death due to cardiovascular (CV) disease.

These findings appear online in the *Journal of Cardiovascular Pharmacology and Therapeutics*.

Testosterone (T) is the primary male sex hormone. In men, T plays a key role in the development of male reproductive tissues as well as promoting [secondary sexual characteristics](#) such as increased muscle and bone mass and growth of body hair. In addition, T is essential for overall health and well-being and for the prevention of osteoporosis. Insufficient levels of circulating T in men, contributes to frailty and bone loss.

In the absence of large, prospective, placebo-controlled clinical trials of longer duration, substantial evidence regarding the safety and risk of [testosterone therapy](#) (TTh) with regard to cardiovascular outcomes can only be gleaned from observational studies. To date, there are limited studies comparing the effects of long-term TTh in hypogonadal men who were treated or remained untreated with T.

Researchers at Boston University Schools of Medicine (BUSM) and Public Health (BUSPH), along with researchers in Germany, established a registry to assess long-term effectiveness and safety of T in men. For this study, they sought to compare its effects on a host of parameters (obesity, cholesterol levels, diabetes, liver function) considered to contribute to cardiovascular disease.

The researchers followed a group of men for eight years who had been on TTh and compared them with another group of men who remained untreated for the same time period. They found there were only two deaths in the TTh group and neither was related to CV events. In the non-treated control group, there were 21 deaths, 19 of which were related to CV events. Furthermore, there were 26 non-fatal myocardial infarctions

and 30 non-fatal strokes in the [control group](#) but none in the T-treated group.

According to the researchers, long-term TTh in men with hypogonadism appears to be an effective approach to achieve sustained improvements in cardiometabolic function and reduces the risk of CV events. "The low CV events observed in the T-group compared to the untreated (control) group strongly suggest that TTh is protective. We believe that the protective effect of T on the CV system provides clinicians with the opportunity to utilize this approach for secondary prevention for hypogonadal men with a history of CV events," explained corresponding author Abdulmaged M. Traish, PhD, professor of biochemistry and urology at BUSM.

Provided by Boston University Medical Center

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