

# Study finds testosterone supplementation reduces heart attack risk in men with heart disease

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A new multi-year study from the Intermountain Medical Center Heart Institute in Salt Lake City shows that testosterone therapy helped elderly men with low testosterone levels and pre-existing coronary artery disease reduce their risks of major adverse cardiovascular events—including strokes, heart attacks, and death.

The study showed that patients who received [testosterone](#) as part of their follow-up treatment fared much better than patients who didn't. Non-testosterone-therapy patients were 80 percent more likely to suffer an adverse event.

"The study shows that using testosterone replacement therapy to increase testosterone to normal levels in androgen-deficient men doesn't increase their risk of a serious heart attack or stroke," said cardiologist Brent Muhlestein, MD, co-director of cardiovascular research at the Intermountain Medical Center Heart Institute. "That was the case even in the highest-risk men—those with known pre-existing heart disease."

The Intermountain Medical Center research team will present results of the study at the American College of Cardiology's 65th Annual Scientific Session on Sunday, April 3 at 12:15 p.m., CDT.

The research team studied 755 male patients at Intermountain Healthcare hospitals. The men were between the ages of 58 and 78, and

all had severe [coronary artery disease](#). They were split into three different groups, which received varied doses of testosterone administered either by injection or gel.

The conclusions:

- After one year, 64 patients who weren't taking testosterone supplements suffered major adverse cardiovascular events, while only 12 who were taking medium doses of testosterone and nine who were taking high doses did.
- After three years, 125 non-[testosterone-therapy](#) patients suffered major adverse cardiovascular events, while only 38 medium-dose and 22 high-dose patients did.

"Although this study indicates that hypo-androgenic men with [coronary artery](#) disease might actually be protected by testosterone replacement, this is an observational study that doesn't provide enough evidence to justify changing treatment recommendations," Dr. Muhlestein said. "It does, however, substantiate the need for a randomized clinical trial that can confirm or refute the results of this study."

The new Intermountain Medical Center Heart Institute study corroborates the findings of a 2015 Intermountain study, which found that taking supplemental testosterone didn't increase the risk of experiencing a heart attack or stroke for men who had [low testosterone levels](#) and no prior history of heart disease.

Both Intermountain Healthcare studies address a recent mandate by the U.S. Food and Drug Administration. Last year, the FDA required manufacturers of all approved testosterone products to add labels outlining the coronary risks of the testosterone supplementation.

"The FDA's warning was based on the best clinical information available

at the time," Dr. Muhlestein said. "As further information, like our research, becomes available—and especially after a large randomized clinical outcomes trial can be accomplished—hopefully the FDA will be able to change its warning."

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Provided by Intermountain Medical Center

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