

Overweight men can boost low testosterone levels by losing weight

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Weight loss can reduce the prevalence of low testosterone levels in overweight, middle-aged men with prediabetes by almost 50 percent, a new study finds. Results will be presented Monday at The Endocrine Society's 94th Annual Meeting in Houston.

"Doctors should first encourage overweight men with low [testosterone levels](#) to try to lose weight through diet and exercise before resorting to testosterone therapy to raise their hormone levels," said study co-author Frances Hayes, MD, professor at St. Vincent's University Hospital, Dublin.

The new study involved nearly 900 men with [prediabetes](#) (also called impaired [glucose tolerance](#)) who had participated in the Diabetes Prevention Program. That now-completed U.S. study showed that people at high risk of [Type 2 diabetes](#) could delay or avoid developing the disease through weight loss. Because overweight men are more likely to have low testosterone levels, Hayes and her colleagues studied the effect of [weight loss](#) on men's testosterone levels.

The investigators excluded men from the study who had a known diagnosis of hypogonadism or were taking medications that could interfere with testosterone levels. Hypogonadism is a condition characterized by low testosterone levels with symptoms of male hormone deficiency. Symptoms can include reduced sex drive, poor erections, enlarged breasts and low sperm counts.

The study population had 891 middle-aged men, with an average age of 54 years. The men were randomly assigned to receive one of three treatments: 293 men to lifestyle modification, 305 to the [diabetes drug](#) metformin and 293 to inactive placebo pills. Lifestyle modifications consisted of exercising for 150 minutes a week and eating less fat and fewer calories.

The results showed that low testosterone levels are common in overweight men with prediabetes, Hayes said. At the beginning of the study, nearly one in four men had low testosterone levels, considered to be below 300 nanograms per deciliter.

With lifestyle modification, the prevalence of [low testosterone levels](#) decreased from about 20 percent to 11 percent after one year, a 46 percent decrease, the authors reported. The prevalence of low testosterone was unchanged in the metformin group (24.8 versus 23.8 percent) and the placebo group (25.6 versus 24.6 percent).

Men in the lifestyle modification group lost an average of about 17 pounds (7.8 kilograms) over the one-year study, according to the abstract. The increase in testosterone levels in that group correlated with decreasing body weight and waist size.

"Losing weight not only reduces the risk of prediabetic men progressing to diabetes but also appears to increase their body's production of testosterone," Hayes said.

Provided by The Endocrine Society

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