Low Testosterone Linked to Heart Disease

Testosterone Replacement Therapy May Be Protective
By Salynn Boyles
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Contrary to popular belief, testosterone may actually help protect men from heart disease rather than increase the risk. Researchers say testosterone replacement may help prevent heart disease in men with low testosterone.

"Our study and others suggest a strong potential benefit for testosterone replacement therapy," Michiaki Fukui, MD, tells WebMD.

Fukui's study showed that men with diabetes and very low testosterone levels were more likely to develop plaque in their arteries, which can lead to heart disease and stroke. Earlier this year, research showed that men with heart disease are twice as likely to have low testosterone than men without heart disease.

Fukui looked at men with diabetes because they are two-to-four times more likely to develop heart disease and tend to have low testosterone levels.

Fukui and colleagues looked at 154 men with type 2 diabetes. After controlling for other factors that increase the risk of heart disease, such as smoking and cholesterol levels, the researchers found that the lower the testosterone levels, the higher the risk of clogged arteries. The findings are published in the June issue of the journal *Diabetes Care*.

What About Testosterone Replacement?

In an editorial accompanying the study, Shalender Bhasin, MD, and Karen Herbst, MD, PhD, called for well-designed clinical trials to study whether testosterone replacement can help prevent heart disease in men with low testosterone. But in an interview with WebMD, Herbst says she is not optimistic about government funding for such a trial because of the experience with hormone replacement therapy (HRT) in women.

Millions of women took female hormones -- estrogen and progestin -- to protect their hearts until a year ago, when a widely publicized government study reported a link between HRT and an increased risk of heart disease. But the risk was confined to women who were well past menopause. It's still not clear whether younger women -- at or around the time of menopause -- may get heart-healthy benefits from hormones.

Herbst says studies showing that testosterone helps men reduce body fat and improves the way the body handles insulin -- the hormone that regulates blood sugar levels -- argue in favor of a protective role for testosterone. In her editorial she points out that prescription sales of testosterone have grown by 1,700% in the last decade, even though the long-term risks and benefits of testosterone replacement in older men are unknown.

She says in light of the WHI findings, the National Institute on Aging is considering a hold on funding for testosterone replacement studies for men with low testosterone.

"I think that is unfortunate because the studies that have been done have tended to be small ones," she says. "There is real need for a large, well-designed study. Until we have that, we can't really make any conclusions about whether testosterone replacement therapy is protective."