

## Cardiovascular Benefits of Testosterone Gel

Recently I became aware of a recent study on the use of Testosterone Replacement Therapy in men, which showed a reduction in Major Adverse Cardiovascular Events (MACE) such as heart attack and stroke. This study was just presented at [ENDO 2015](#) <https://endo.confex.com/endo/2015endo/webprogram/Paper19549.html> (The Endocrine Society) and is in keeping with the large body of research that has shown that low levels of testosterone in men are correlated with an increase of cardiovascular disease (CVD), diabetes (DM) and bone fractures. Read more about this study by visiting <http://www.ncbi.nlm.nih.gov/pubmed/23035926>

I have attended numerous lectures detailing the numerous studies demonstrating the benefits of testosterone replacement therapy, including a reduction of cardiovascular risk factors. If interested, you can gain access to many of these positive studies by searching the internet on topics such as: PubMed and Testosterone. One such article: [Testosterone treatment and mortality in men with low testosterone levels](#), which shows that in a VA Medical study, testosterone replacement therapy significantly reduced mortality. Read more by visiting (<http://www.ncbi.nlm.nih.gov/pubmed/22496507>). Another is, [Testosterone and cardiovascular risk](#). (<http://www.ncbi.nlm.nih.gov/pubmed/23475207>)

The study presented at ENDO 2015 concluded that: This data "suggests that Testosterone Replacement Therapy (TRT) is not associated with an increased risk of MACE in men with well-characterized coronary heart disease. The incidence of MACE was 11.1% in non-testosterone treated males and 7.9% in males on TRT." Testosterone Replacement Therapy Not Associated with Increased Risk of Cardiovascular Events in Men.

Ever since The Journal of the American Medical Association ( JAMA) published the following 2013 study on the use of testosterone in a large number of men in the VA Healthcare system, testosterone was now suddenly viewed as increasing CVD deaths in sharp contrast to the previous data. (<https://www.research.va.gov/currents/0815-5.cfm>) The problem with the JAMA VA study is that the doctors who were treating these patients did not do necessary testing on patients to assess treatment levels of testosterone, estradiol and blood counts. The patients that did have levels tested were found to be undertreated with an average total testosterone level in the 300's. Youthful levels are up to 1,100. Testosterone was given as intramuscular shots as well. Excess testosterone (which appears to not be likely in the VA study) can increase blood cell numbers such as red blood cells (easily treated with blood donation). This is rare in my practice and seen mainly in men who already have high red blood cell levels.

More importantly, the VA study administered the testosterone via intramuscular shots which likely have side effects not seen with transdermal use. In this study, Testosterone Increases Human Platelet Thromboxane A2 Receptor Density and Aggregation Responses, intramuscular testosterone increased Thromboxane A2 which increases platelet clumping and blood vessel constriction. In my office, I use only transdermal testosterone. We know that in women, the route of administration of estrogen is important as data suggests that oral estrogens increase clotting. Transdermal human estrogens do not. In 2002, women on HRT were given a similar scare when the media spread the word of a very short study using Premarin and Provera (the WHI study). Suddenly doctors stopped prescribing hormones to their postmenopausal patients saying that hormones cause cancer, heart attacks and strokes. Many doctors still think this is the whole story and avoid much needed

hormones (HRT) with their women. In December 2014, I attended a large conventional Primary Care conference in Baltimore with hundreds of doctors in attendance, and heard a gynecologist present a lecture where she stated the same message I give my female patients: "Hormones do not increase breast cancer risk.....and if you start them within 10 years of your last menstrual period that you will decrease your risk of dying from a heart attack by 50%". This was clearly news to many of the doctors in the audience judging by their facial expression. How things change when all of the information is on the table. Too often, doctors only know what the public sees as well in the media.

I am sure that the picture regarding testosterone in men will get clearer but for now, it is prudent to see a doctor such as myself who specializes in testosterone replacement therapy and who does adequate testing to assure its safety and benefit. Additionally, I have enormous experience with prescribing and testing male patients who are on my very reliable, consistent and easy to use compounded topical testosterone.

Hope this was helpful for those of you who have been confused by the media on this issue.

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