

Setting the Record Straight on Testosterone Replacement Therapy

Testosterone Replacement Therapy (TRT) has been in the news a lot as of late, and since we're not shy about the benefits of its proper and informed application, we're going to start this week's post off with just the facts about the primary male sex hormone.



- **Fact No. 1:** Testosterone use in the United States tripled between 2001 and 2011 and then started to level off until 2014 when the U.S. Food and Drug Administration (FDA) issued a warning to men that using testosterone to delay

some of the effects of aging might increase their risk of heart attack and stroke.

- **Fact No. 2:** The FDA also required a label change to inform doctors and patients of the possible increased risk.
- **Fact No. 3:** After the FDA issued its warning, testosterone use dropped dramatically. Between 2013 and 2016, testosterone prescriptions dropped 48 percent for established users and 62 percent for new users.
- **Fact No. 4:** There is no lack of evidence to support the pros or cons of testosterone replacement therapy (TRT), and research will continue. As a result, you can expect to see future waves of increased and decreased use of TRT and increasing concern and confusion in the medical community and among the general public.

Anyone who follows the medical news has become accustomed to these conflicting reports and advisories, as evidenced in a 2014 study conducted by researchers at the University of Texas Medical Branch (UTMB) at Galveston and published in the July 2 issue of the *Annals of Pharmacology*. Commenting on his team's research, Jacques Baillargeon, UTMB associate professor of epidemiology and lead author of the study, points out:

“Our investigation was motivated by a growing concern, in the U.S. and internationally, that testosterone therapy increases men’s risk for cardiovascular disease, specifically heart attack and stroke. This concern has increased in the last few years based on the results of a clinical trial and two observational studies. It is important to note, however, that there is a large body of evidence that is consistent with our finding of no increased risk of heart attack associated with testosterone use.”

Unfortunately, the whiplash effect that these studies have on the medical community and the general public leads to overuse,

underuse, and misuse of testosterone replacement therapy. Those of us in functional medicine are less prone to being influenced by the changing winds of conflicting research for several reasons, including:

- We test before we treat. Up to 25 percent of men who receive TRT start treatment without having their testosterone level tested.
- Testosterone replacement therapy is only one of many factors we address in our diagnosis and treatment of the whole male patient. With a focus on holistic health, we address many factors that contribute to heart attack and stroke, including high blood pressure, metabolic syndrome, and blood sugar dysregulation, thus reducing the potential risks of TRT if we discover that it would benefit a patient.
- We monitor our patients closely with follow-up visits, so as health is restored and testosterone levels rise, we can adjust the dosage to maintain optimal testosterone levels, which further reduces any potential risks associated with TRT.

When you read the studies, keep in mind that study participants may not be healthy overall and may or may not be receiving treatment for any underlying conditions that may make them more vulnerable to heart attack, stroke, and other conditions. Merely adding testosterone replacement therapy without addressing these underlying conditions may actually exacerbate those conditions. Our goal is to restore health, and TRT can be one of many valuable tools in achieving that goal.

Addressing the Causes of Heart Attack and Stroke

To single out testosterone replacement therapy as a contributing factor in potentially increasing the risk of heart attack and stroke is as simplistic as it is misguided. Heart disease,

including heart attacks and strokes, are most likely to occur in men with the following:

- A family history of heart attack at middle age (a genetic susceptibility)
- Lack of appropriate exercise
- Overweight or obesity
- High blood pressure
- Metabolic syndrome
- High blood sugar
- High triglycerides
- Cigarette smoking
- Excessive alcohol consumption
- Insufficient sleep or rest
- High stress (at work or home)

The good news is that restoring testosterone to healthy levels can positively impact many of these conditions, including high triglycerides, metabolic syndrome, high blood sugar, and weight. However, testosterone replacement therapy must not be the only treatment. Think of it this way: If you try to make a poorly-maintained car run better simply by filling the tank with high-octane fuel, you are likely to do more harm than good. You first have to make sure the car is tuned properly, change the oil, replace filters, and so on.

Our Approach

At BioDesign Wellness Center, we don't simply administer testosterone when the level is below the optimal range. Our approach is to work with our clients to bring down blood pressure, balance blood sugar, reduce triglycerides, and build out a healthy lifestyle plan that is easy to follow and provides the long-term solutions our male patients are looking for to balance testosterone while reducing risk factors for heart attack, stroke, and other illnesses.

To accomplish this, we run a set of lab tests before administering TRT, sorting through blood sugar, insulin levels, thyroid health, cholesterol, vitamin levels, magnesium, and more, all to determine the best plan of action. For example, low magnesium can lead to high blood pressure, poor sleep and cardiac arrhythmias.

Monitoring testosterone therapy is a key ingredient in successful and safe testosterone replacement therapy. We often hear of people taking hormones for over a year without having a lab test! We test on a regular basis, starting at four-month intervals to ensure that our patient's testosterone level is right where it should be and adjusting the level as needed.

Safe and effective therapy includes:

- Detailed lab tests not only to measure the testosterone level but also to identify underlying causes of low-T and other conditions that may require treatment.
- Working with your provider to identify any early warning signs of cardiovascular disease (elevated cholesterol, triglycerides, metabolic syndrome, elevated glucose, overweight or obesity) and address any of these conditions.
- Making lifestyle changes to promote overall health and well-being.
- Consistent monitoring and treatment adjustments as health and vitality are restored.

We also look at how other factors, such as estrogen, may be affecting your ability to feel better, look better, and perform better.

If you suspect that low-T may be preventing you from feeling your best, we encourage you to make an appointment to see a doctor who fully understands the critical role testosterone

plays in overall male health *and* takes a holistic approach to treating low-T and related conditions. Have your testosterone level tested *first* and on an ongoing basis (at least every four months) to maintain an optimal level and be sure your doctor is addressing any related conditions.

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