

- Health

DOES LOW TESTOSTERONE MEAN TROUBLE?

The truth about testosterone and men's health

If you think testosterone is just sex hormone, think again. More than its role in one's sex drive, it can also affect a man's overall health and well-being, including obesity, diabetes, metabolic syndrome, and cardiovascular disease.

How is testosterone linked to these conditions, and how much do we know about testosterone anyway?

What is testosterone?

Testosterone is present from fetal development, where it is responsible for the development of male sex organs and also in the development of other male characteristics during puberty, such as the growth of facial hair and voice tone. Most testosterone is produced in the testes, signaled by the brain's hypothalamus, communicated to the pituitary gland, and then to the testes.

More than the development of sexual characteristics and sex-related functions such as sperm production and sex drive, testosterone also helps in other male body functions such as fat distribution, muscle strength, and even mood. Testosterone peaks its production at puberty and declines with age. According to the US Food and Drug Administration, normal levels in males are between 300 nanograms per deciliter (ng/dL) to 1000 ng/dL. A blood test can determine one's level of testosterone. High levels of testosterone may result in adrenal disorder and must be treated. Lower levels of testosterone, on the other hand, affects men too, including

a lower sex drive, mood swings, lower energy levels, hair loss, fatigue, and decreased muscle mass, among others.

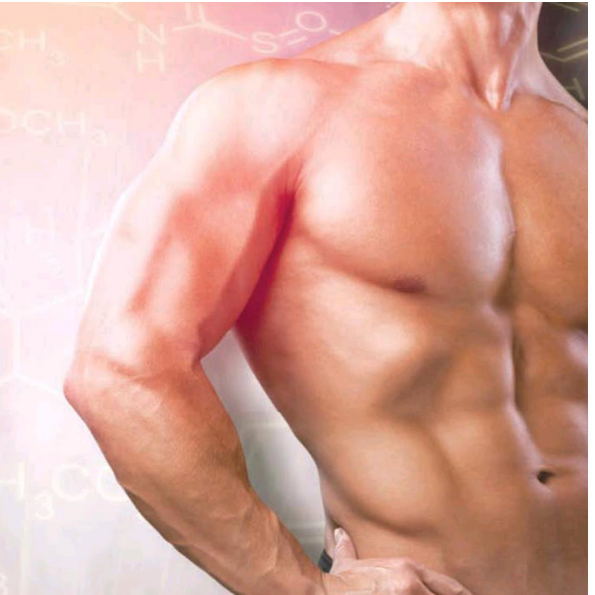
Age, illness-related treatments, and diseases may cause testosterone levels to drop. Strong treatments such as chemotherapy, diseases such as AIDS, kidney or liver disease, and conditions such as male hypogonadism (congenital or acquired condition where there is not enough production of testosterone and/or sperm) may decrease levels of testosterone.

Now, studies report that even testosterone levels have a link to obesity, Type 2 diabetes, cardiovascular disease, and metabolic syndrome. For diabetes, testosterone helps in insulin response, which is why it has been studied that men with low T levels have a higher risk of developing diabetes, and those with diabetes are more likely to have low T. Which causes which is not yet determined and more studies are needed to confirm this. With obesity, because testosterone helps in muscle development, men naturally burn more fat than females. But when there is too much fat, fat cells produce an enzyme called aromatase that turns testosterone to estrogen, and too much fat cells can lead to lower T levels. Therefore, more fat, less testosterone. Low testosterone is also linked to heart disease such as obesity and diabetes are linked to low T levels, and these conditions promote cardiovascular disease. Metabolic syndrome, on the other

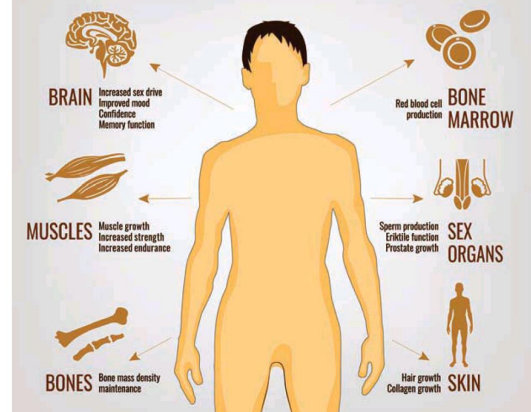
hand, combines high blood pressure, high cholesterol levels, and high blood sugar levels that increase the risk diabetes, stroke, and heart problems. It is usually linked to a sedentary lifestyle,

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being overweight or obese, and having insulin resistance. Males with low testosterone levels have an increased risk in acquiring this condition, most especially that the combination of factors such as being overweight and insulin resistance also have a cause and effect on T levels. Even depression has a link to low T levels. Since fatigue, lowered sex drive, and mood swings



THE INFLUENCE OF TESTOSTERONE



are resulted by low T levels, some men may also develop depression.

How about women? Women also produce testosterone, but in smaller amounts. Similarly, it also helps with a woman's bodily functions aside from sex drive. It is not yet studied if these conditions are also linked to testosterone levels in women.

Testosterone therapy, via topical gels, skin patches, taken orally or injected, is an option for those who have low T levels that are affecting their quality of life. Reportedly, long-term testosterone therapy has helped men

with the improvement of their condition, including those with Type 2 diabetes and cardiovascular disease. This treatment, however, is not for everyone. Moreover, these come with side effects as well, so going this route must first be discussed with a physician.

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