

The reality of 'low T'

March 12 2012, By Julie Deardorff

A middle-aged man goes to see his doctor, complaining of a host of vague symptoms: He's lethargic, somewhat depressed and feeling a little anxious about his manliness.

Could he just need a boost of [testosterone](#), the vital sex hormone produced by the testicles?

These days, watching commercials from drug companies might lead you to believe that testosterone replacement could be just what you need, but researchers say it's unclear whether the issues associated with aging - decreased sex drive, less energy, reduced [muscle mass](#) - are the result of low testosterone or other factors.

Often equated with youth, vigor and strength, testosterone is responsible for the development of the penis and testes; it also helps build muscle and [bone density](#), maintain adequate levels of red blood cells and helps keeps men confident and vibrant.

But as men age, the amount of testosterone in the body gradually declines. After age 30, a decline of about 1 percent a year begins and continues throughout the rest of a man's life.

There's substantial debate over whether decreasing testosterone levels need to be treated. Most experts say testosterone is about as effective as anti-wrinkle face cream when used to reverse the effects of aging.

Test results are hit or miss: Blood tests for testosterone are so unreliable

- and [saliva tests](#) are worse - that the federal [Centers for Disease Control and Prevention](#) has launched the "Hormone Standardization Project" to improve the accuracy and standardization of the lab data.

Nor can doctors diagnose a condition using a single measurement, because lab results vary and levels of testosterone tend to fluctuate throughout the day. The highest levels of testosterone are generally in the morning.

Meaning of "low" and "normal" is unclear: Doctors don't exactly know what "low" is. "Normal" testosterone levels for any age are over 300 [nanograms](#) per [deciliter](#). But the healthy range is large and spans between 250 and 1,100 nanograms per deciliter, said Neil Goodman, chairman of the hormone and reproductive medicine committee for the American Association of Clinical Endocrinologists.

"In general, if it's under 200, the guy really has a problem that needs to be worked on," said Goodman, a professor of medicine at the University of Miami. "It's the 200 to 300 range where no one can agree whether the symptoms are related to testosterone," said Goodman.

(Some men's bodies can't produce enough testosterone because their testes may be damaged or pituitary glands have been destroyed by infections or tumors. Chronic illness, stress, and alcoholism can also cause low testosterone. In these cases, prescription testosterone patches, injections or topical gel can help a man maintain strong muscles and bones and increase his sex drive.)

Replacement therapy to deal with expected, age-related testosterone decline is unproven: Testosterone therapy is still a "scientifically unproven method" for preventing or relieving the physical and psychological changes that men with age-appropriate testosterone levels experience later in life, according to a report by the Institute of

Medicine. The Food and Drug Administration has not approved testosterone use - or any over-the-counter products - for those who want to improve their strength, athletic performance, physical appearance or to prevent aging.

Symptoms of age-related testosterone decline are vague: "There is a lot of marketing directed at men who want to be more attractive to potential partners, more muscular and vital," said endocrinologist Bradley Anawalt, a professor and vice chairman of medicine at the University of Washington in Seattle. "But if you ask any man whether he feels tired some of the time, is a little depressed and whether his sexual prowess isn't what it used to be, you'll likely get a 'yes' to at least one of those questions."

Treatment has potential side effects: In 2009, the FDA issued strong warnings on two testosterone gel treatments after receiving reports that the children who had been exposed to the products had genitalia enlargement or aggressive behavior. Many researchers believe that supplements can put men at greater risk for prostate cancer - or stimulate the growth of the cancer if it is already present - and perhaps even greater risk for stroke, because it increases the production of [red blood cells](#).

Including irreversible testicular function in some cases: There's also the use-it-or-lose-it factor. Men who supplement with testosterone shut down their own factory. "The real risk to (those who supplement) is if it stops their own testes from working," said Goodman. "If you're taking it long enough, you don't get testosterone production or sperm back. The testes can atrophy, and it can have a serious effect on testicular function in the future."

Testosterone levels are a function of aging and health, said Anawalt, chairman of the Endocrine Society's Hormone Foundation. Some

impotent men, for example, suffer from circulatory problems, not low testosterone. "It does seem that men who are vital and healthy are much less likely to have declines in testosterone," he said.

"It's a difficult chicken and egg question: Is a healthy man vital because his testosterone levels are high? Or do testosterone levels contribute to declines in health? It's probably a little of both."

Exercise, a healthy diet and sleep are three of the best ways to naturally boost testosterone, especially if you're out of shape. Excess body fat can decrease testosterone.

But don't starve yourself; then the body thinks you don't want to reproduce in a famine and shuts down testosterone production. "If you are overweight and have low testosterone levels, losing 5 to 15 pounds will help," said Anawalt. In general, the more aerobic exercise the better, but ultra-endurance athletes can see their testosterone levels decline.

Men who suffer from sleep apnea can have low testosterone; but giving these men supplements will make the sleep apnea worse. (Instead, sleep apnea is often treated using mild air pressure to keep the airways open).

If a man has concerns about his wellness or vitality, he should speak with his doctor before buying into the latest marketing surrounding "low T."

"Much of what you see on the Internet promulgated in ads is one giant hoax," Anawalt said. "What's lost in that is there really are men with low testosterone levels who have health consequences and need to be treated."

Still, that portion is small, he said. "I would liken it to the very profitable skin cosmetics industry which sells anti-aging cream," he said. "If it really worked, the whole world would be using it."

TESTOSTERONE LEVELS THROUGHOUT A MAN'S LIFE

Before birth: Testosterone and a product of its metabolism, dihydrotestosterone, cause the male genitalia to form.

Birth to 4 months: [Testosterone levels](#) continually high

4 months to onset of puberty: Levels drop and remain low

Puberty (age 12): Giant fireworks of testosterone. Testicles begin to grow. Budding pubic hair, growth of peach fuzz above the lips and armpit hair. The rapid shift from very low testosterone to normal adult levels causes behavioral changes.

After age 30: A gradual, inexorable decline of about 1 percent a year for the rest of a man's life.

(c)2012 the Chicago Tribune
Distributed by MCT Information Services

Citation: The reality of 'low T' (2012, March 12) retrieved 24 April 2024 from <https://medicalxpress.com/news/2012-03-reality.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--