



Testosterone **BOOSTERS**

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**Foods, Spices and Herbs That Boost
Testosterone Naturally and Invigorate
Your Sex Drive**

by David Blyweiss, M.D.

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This book is intended to give general information, not personal, one-on-one medical advice. No action should be taken based solely on the contents of this book. Instead, readers who fail to consult with appropriate health authorities assume the risk of any injuries.

TEST PATTERN

Are you the man you used to be? If you eat the average American diet, don't exercise and wage a daily battle against stress, you probably aren't. But it isn't just the way you live your life that is undermining your virility. It's the fact that you are getting older.

Most men don't notice mid-life hormonal changes until suddenly they wake up one morning and realize they look—and feel—like an old man. The culprit? Low testosterone levels. Often called andropause or male menopause, low testosterone levels can lead to irritability, weight gain in all the wrong places, loss of strength and muscle tone, inadequate erections and poor sexual performance. Low testosterone levels can also alter your bone mineral density and lead to osteoporosis. This is serious stuff, since bone loss can result in fractures.

After the age of 30, a man may lose up to two percent of testicular function each year and a corresponding decrease in testosterone level. We know that as many as half of all healthy men over the age of 50 have lower than normal levels of testosterone. This statistic indicates that up to five percent of all men are at risk for low testosterone states—a staggering number if you think about it.

THE BIG T

So what is testosterone and why is it so important? Testosterone is the primary male hormone and it is made in the testes. It's classified as an anabolic steroid because it bulks up body tissues (including muscle), encourages

the retention of protein and maintains bone density. Testosterone is also the reason men have a deeper voice, as well as facial and chest hair. Without testosterone you wouldn't be the man you are today.

Under normal circumstances, the body produces all the testosterone you need—when you're young. Yet, as I've mentioned earlier, as you age, your testosterone levels decline. Some of the more common signs of decreased testosterone levels include a lack of energy, a reduction in strength, halted muscle growth and even loss of muscle.

BIOAVAILABILITY MATTERS

What's known as your serum testosterone level is actually the total amount of testosterone floating around your system. However, from all that serum testosterone in your blood stream, only a tiny little fraction is available to the steroid hormone receptors on the cell walls.

Why can't your body use all of the testosterone flowing through it? There are certain types of carrier proteins traveling around your system called sex hormone binding globulin or SHBG. These proteins bind to serum testosterone, thus making it unavailable to the corresponding cell receptors. As a result, only one to two percent of your testosterone—called free testosterone—is actually available. Fortunately, you can not only increase the amount of total testosterone in your body, you can also boost the bioavailability of this essential male hormone.

HIGH TEST DO'S AND DON'TS

DO consider losing weight, even if you are just slightly overweight. Fat tissue causes testosterone levels to plunge.

DO practice some type of relaxation exercise like deep breathing or meditation. These practices will help lower excess stress levels. Stress promotes the release of the stress hormone cortisol which, in turn, lowers testosterone levels.

DO keep your blood pressure and cholesterol levels in check. Both of these risk factors can contribute to a narrowing of the arteries (a condition called atherosclerosis), which can prevent blood from reaching the hormone-producing organs. This can cause lower testosterone levels.

DO exercise regularly. Weight training is especially good for boosting testosterone levels. Train in the low rep range using the heaviest weights you can most of the time. Completing 5 to 8 reps will ensure that you're using enough weight to eventually stimulate elevated testosterone levels.

DO take the herbs and supplements listed in this booklet. Some of them bind to SHBG, thus freeing up testosterone; others lower the testosterone conversion to estrogen.

DON'T drink. If you want to keep your testosterone levels, limit your alcohol consumption. Alcohol decreases the rate at which your body removes estrogen from the

system. That causes a decline in testosterone levels as well.

DON'T take medication unless it is absolutely essential for your health and is prescribed by your doctor. Some medications act on the central nervous system and cause a drop in the lutenizing hormone (LH) levels—the hormone responsible for steroid hormone production. Talk to your personal physician to find out if there are any natural remedies you can use to replace your current medications.

MANLY FOODS

There's a reason men love thick steaks and juicy hamburgers. Animal protein, especially red meat, is key to ensuring higher levels of testosterone. One reason is because of the saturated fat it contains. While eating too much of this unhealthy fat can lead to a heart attack, small amounts are needed to create anabolic hormones, including testosterone.

A delicious source of healthy red meat is bison. Bison contains all the testosterone-boosting qualities of other red meats, but it is considerably lower in saturated fat. It's also lower in calories and higher in vitamin B-12 than most other types of animal protein.

Red meat, as well as oysters, crab, pork and duck, also contains zinc, which is essential for maintaining proper testosterone levels. Inadequate levels prevent the pituitary gland from releasing lutenizing and follicle stimulating hormones, both of which trigger testosterone production.

A diet rich in essential fatty acids from foods such as avocados, fatty fish like salmon, nuts, seeds and olive oil will also help drive up testosterone levels. Studies show that components in these healthy fats stimulate testosterone. Essential fatty acids are crucial for all men, whether they are trying to boost their testosterone levels, maintain their muscle mass, improve their overall health or reduce bodyfat.

HELPFUL HERBS AND SPICES

The following herbs and spices not only have a long history of use among men for increasing testosterone levels, they have credible research behind their efficacy.

Tribulus terrestris. This herb has a long history of use for sexual impotency and, more recently, to enhance muscle growth and strength. Its active ingredient is a furostanolic saponin known as protodioscin. Protodioscin influences the brain to release more LH, which travels to the testes to increase testosterone production. The typical dose is 500 to 1,000 mg., taken in two or three separate doses throughout the day. However, don't take tribulus on a constant basis as this can actually decrease your testosterone levels. Follow a five-days-on/two-days-off regimen for eight weeks, then take two weeks off before cycling back on. Look for an extract that's standardized to no less than 45 percent protodioscin.

Fenugreek. This Mediterranean herb has numerous health benefits, including increased libido, elevated testosterone levels and increased insulin release. As

with *tribulus terrestris*, this herb contains a high amount of furostanolic saponins, which means it also elevates testosterone via increases in the amount of LH the body produces. Take 500 to 2,000 mg. of fenugreek per day.

Dioscorea deltoidea. This climbing plant also contains high concentrations of furostanolic saponins, making a good supplement for boosting testosterone levels in a manner similar to *tribulus terrestris* and fenugreek. The effective dose is 500 to 2,000 mg. per day. Again, follow a five-days-on/two-days-off program for eight weeks, taking two weeks off before using the product again.

Avena sativa. More commonly known as the humble oat, *avena sativa* increases testosterone levels by enhancing LH release. However, a bowl of oatmeal probably doesn't have enough of the active avenacosides to give a noticeable boost. Avenacosides are a type of plant saponin similar to furostanolic saponins. Look for a supplement that supplies 100 to 250 mg. of 10:1 *avena sativa* extract per dose. Take it once or twice daily. Follow the same plan as for the other LH boosters: take it in a five-days-on/two-days-off cycle of eight weeks on/two weeks off.

Eurycoma longifolia Jack. Also known as tongkat ali, *Eurycoma longifolia* Jack is a small tree that grows in Southeast Asia. It has a centuries-old history of use as a medicinal herb for treating a variety of conditions, but enhancing libido is its most common use. *Eurycoma* appears to directly enhance testosterone production by the Leydig's cells in the testes. It can help release testosterone from SHBG, which enhances bioavailability. Research shows that it can lower SHBG by about 30

percent and increase testosterone levels markedly. Look for products that offer 200 to 300 mg. of 20:1 extract of Eurycoma. Take two or three doses per day. Adhere to a five-days-on/two-days-off regimen for eight weeks followed by a two-week break.

Vitex agnus-castus. The active components in vitex are known as agnusides, which lessen prolactin. Although prolactin is thought of as a female hormone, even males have some. While you sleep, prolactin levels rise. High amounts of prolactin can decrease testosterone production. Supplementing with Vitex agnus-castus can ensure that your testosterone levels aren't being blunted. Protect your testosterone levels with 200 to 400 mg. of vitex taken just before bedtime in alternating cycles of four to six weeks on and four to six weeks off.

SUPER SUPPLEMENTS FOR MORE T

These dietary supplements have also been found to enhance testosterone levels.

Carnitine. This amino acid-like substance is created in the body from the amino acids lysine and methionine, as well as vitamins C, B-3, B-6 and iron. Recent research has found that carnitine supplementation increases the amount of androgen receptors in muscles. These are the receptors that testosterone binds to for muscle growth. More receptors can increase the bioavailability of free testosterone. Take 2 to 4 grams of L-carnitine or acetyl-L-carnitine daily.

Chrysin: Chemically, chrysin is known as 5,7-dihydroxyflavone—a naturally-occurring polyphenol found in

passionflower, honey and propolis (the resinous “glue” bees use for hive construction). Numerous studies show that chrysin prevents the conversion of testosterone to estrogen. As a result of this blocking action, testosterone levels are raised. It is reported that the absorption of chrysin is enhanced when it is taken with bioperine (black pepper). As an added bonus, Chrysin quells inflammation and inhibits COX-2, the enzyme that triggers pain and swelling. But this is definitely a “man’s nutrient.” Because of chrysin’s ability to boost testosterone levels, it should not be taken by women.

Forskolin. This is the active component of the Coleus forskohlii plant. Known for its fat-fighting potential, forskolin also dilates blood vessels and even enhances testosterone. All of these benefits are due to the herb’s ability to activate adenylate cyclase, an enzyme that increases intracellular levels of an important molecule known as cAMP. The cAMP molecule can directly help keep testicles pumping out testosterone. Try 20 to 50 mg., taken two or three times daily.

Zinc: Zinc plays a critical role in balancing your hormones. It is a necessary nutrient to maintain normal serum testosterone. Inadequate levels of zinc prevent the pituitary gland from releasing lutenizing and follicle stimulating hormones, which stimulate testosterone production. Most importantly, zinc inhibits the aromatase enzyme that converts testosterone into excess estrogen.

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