

Can Fenugreek Boost Testosterone?

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✓ Fact Checked

September 04, 2023

STORY AT-A-GLANCE

- › Several studies support the theory that fenugreek promotes an increase in testosterone levels, which supports a reduction in body fat, improvement in upper and lower extremity strength and an improvement in men's sexual function
- › Testosterone is a sex hormone important to hormonal balance in men and women. Small amounts of circulating testosterone are converted to estradiol and, in turn, improve women's sexual function and desire
- › Testosterone is converted to dihydrotestosterone (DHT), another sex hormone. High levels of DHT contribute to prostate cancer, polycystic ovarian syndrome and male pattern hair loss
- › Fenugreek increases testosterone levels but lowers DHT levels, which helps reduce hair loss. Fenugreek also helps modulate blood glucose levels and improves glucose tolerance in those with Type 2 diabetes

In this eight-minute video, Dorian Wilson reviews some of the effects fenugreek can have on hormonal balance. Fenugreek has a long history in traditional medicine and is a common ingredient in foods found in the Mediterranean region, Western Asia and Southern Europe, which is its native habitat.

Fenugreek seeds smell and taste like maple syrup and the extract is used in many soaps and cosmetics. According to the National Center for Complementary and Integrative Health,¹ it's believed to be safe in amounts commonly found in food but should not be used during pregnancy in larger amounts as it's been linked to birth defects.

In areas where the herb grows natively, it was traditionally used to increase milk supply in breastfeeding women and to treat diabetes. Another benefit of fenugreek supplements is a boost in testosterone. Testosterone is a sex hormone that's known to regulate fat distribution, muscle mass and strength, cognitive health, sex drive and bone mass in men.

As men age, they can produce less testosterone, which contributes to testosterone deficiency and an accompanying decline in estradiol. Small amounts of circulating testosterone are converted into estradiol,² which is a form of estrogen important to men's and women's health.

While testosterone is the most significant sex hormone for men and estrogen the most significant sex hormone for women, men and women require a balance of estrogen and testosterone, just in different ratios.

Fenugreek Boosts Testosterone Levels and More

In this short four-minute video, Dr. Michael Greger reviews research evidence demonstrating the effect fenugreek has on testosterone levels and subsequent health benefits. In the first study titled, "The Effects of a Commercially Available Botanical Supplement on Strength, Body Composition, Power Output, and Hormonal Profiles in Resistance-Trained Males," Greger notes several benefits.³

The researchers engaged 49 participants in an eight-week intervention in which they participated in resistance training and took either 500 mg of a placebo or fenugreek. The results demonstrated a reduction in body fat and an improvement in lower and upper extremity strength. Greger noted that the only side effect the men appeared to have was that the fenugreek made their sweat and urine smell like maple syrup.

Past research studies on castrated rats have demonstrated that fenugreek could raise testosterone levels enough to improve muscle bulking in the animal study. But it wasn't until recently that a review of four trials demonstrated that fenugreek could significantly increase total serum testosterone,⁴ with subsequent health benefits.

A study⁵ published in *The Aging Male* showed fenugreek improved men's sexual function and another study demonstrated it facilitated an increase in testosterone and estradiol in women, which in turn improved sexual desire and function.

The results were so significant that researchers measured double the sexual activity as compared to the women taking a placebo. The next logical question was that if fenugreek could improve estrogen levels in women could it influence menopausal symptoms?

Greger discusses a 2017 study⁶ published in *Phytotherapy Research*, in which the researchers found a significant reduction across every domain measured, including in weekly hot flashes and night sweats, cutting those nearly in half over three months.

Since fenugreek appeared to improve symptoms of hormonal imbalance, another study measured whether it could improve painful periods, also called dysmenorrhea. They found that taking just a third of a teaspoon of fenugreek in the first three days of the woman's menstrual period reduced pain and improved other menstrual symptoms as well.

Finally, Greger reviewed research from a randomized double-blind placebo-controlled trial that demonstrated that fenugreek is a galactagogue which increases breast milk production by 50% within two weeks and 100% within four weeks.

Relationship Between Testosterone and DHT

As the video from Wilson describes,⁷ an enzyme in the body converts circulating testosterone to dihydrotestosterone, also known as DHT. This is the hormone responsible for the expression of male features. When DHT rises too high or too low, it can create health issues, depending on your age and stage of sexual development.

While DHT helps the expression of male physiology during puberty, it is testosterone that maintains that expression throughout adulthood.⁸ In an adult, high levels of DHT are associated with prostate cancer, polycystic ovarian syndrome, benign prostatic hyperplasia and androgenic alopecia or male pattern hair loss.

Wilson describes two studies⁹ in which fenugreek demonstrated a small increase in circulating testosterone with a subsequent decrease in circulating DHT. The theory is that a compound in fenugreek inhibits the 5 alpha-reductase enzymes that are responsible for converting testosterone to DHT. This decrease in DHT may offer some benefit to men and women suffering from male pattern hair loss, as demonstrated by several studies.^{10,11}

As Wilson points out, the increase in testosterone and subsequent reduction in DHT is not enough to explain the increase in men's libido while taking fenugreek. Additionally, the androgen receptors in the brain respond to DHT and not testosterone, which means that as DHT levels drop taking fenugreek, you might expect libido to also drop.

However, as it turns out with many other mechanisms within the body, it's much more complex than the effect of one hormone on one receptor.¹² Wilson consulted with Beth Steels, Ph.D., from the University of Sydney, who explained that libido is a complex relationship between hormones, in which testosterone plays just one part.

She explained that fenugreek also interacts with gut bacteria, which may help balance other hormones within the body. Wilson proposes that fenugreek affects anabolic signaling pathways in the brain and doesn't just simply raise hormone levels, which may be one explanation for how fenugreek affects libido without significantly raising testosterone levels.

Fenugreek and Blood Sugar Benefits

Wilson goes on to describe the benefits in one study¹³ that participants experienced when consuming between 2 and 5 grams of fenugreek seeds. On average, the participants experienced a 13.4% decrease in blood glucose and an improved glucose tolerance. Reduction in blood sugar and improvement in glucose tolerance may help those with Type 2 diabetes.

The number of people with diabetes continues to rise each year, which has a significant financial impact on health care and affects life expectancy as it's a modifiable leading or

contributing factor to at least five of the 10 leading causes of death in the U.S.¹⁴

Researchers in one study¹⁵ evaluated the addition of soaked fenugreek seeds to the diet and found it had a synergistic effect with diet and exercise on fasting blood glucose and hemoglobin A1c. The study enrolled 60 patients with Type 2 diabetes who had been diagnosed for at least six months and were on blood glucose-lowering medication.

The group was randomized to receive 10 grams of soaked fenugreek seeds and the control group that did not. Additionally, both groups adhered to strict diet and exercise guidelines from the American Diabetic Association. Each month both groups were tested for fasting blood sugar levels and hemoglobin A1c. Statistical analysis of the data showed a significant reduction in fasting blood glucose in the intervention group that occurred in the fifth month of the study.

A second study published in Food and Nutrition Research,¹⁶ enrolled 154 people with Type 2 diabetes. The participants took a daily dosage of 500 mg twice a day of Fenfuro, an enriched fenugreek seed extract. There were 108 men and 46 women between the ages of 25 and 60 years.

The researchers measured body weight, pulse rate, blood pressure, fasting and postprandial plasma blood sugar, hemoglobin A1c and C peptide levels. The data revealed a significant reduction in fasting plasma and postprandial blood sugar levels with roughly 83% of the participants exhibiting a decrease in fasting plasma sugar levels and 89% experiencing a reduction in post parental plasma sugar levels.

The researchers did not record any significant adverse effects from blood chemistry analysis and 48.8% of those taking Fenfuro reported reducing their anti-diabetic therapy.¹⁷

The mechanism by which fenugreek helps lower blood glucose levels is not well understood. It could be that the hormonal balancing effect has a positive effect on several bodily systems. However, while fenugreek has demonstrated the potential to raise testosterone levels and lower blood sugar, it is important to use this as an adjunct to other lifestyle changes.

As I have written before, **intermittent fasting** helps balance testosterone in men and women and you can naturally raise testosterone levels by maintaining a normal weight, getting exercise and seven to eight hours of quality sleep.¹⁸ Additionally, you should avoid tobacco, stress and excessive alcohol.

Sources and References

- ¹ National Center for Complementary and Integrative Medicine, Fenugreek
- ² Reviews in Urology, 2017;19(1)
- ³ Nutrition Facts, August 1, 2022, Click "View Transcript" in gray bar below the video - may have to scroll to see the bar, para 1
- ⁴ Nutrition Facts, August 1, 2022
- ⁵ Nutrition Facts, August 1, 2022, Video min 1:02 & 1:07
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- ⁷ YouTube, April 17, 2018; min 3:28
- ⁸ Cleveland Clinic, DHT (dihydrotestosterone), section 2
- ⁹ YouTube, April 17, 2018; min 4:20
- ¹⁰ International Journal of Current Research, 2013;5(11)
- ¹¹ Kosmetische Medizin, 2006;27(4)
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- ¹³ YouTube, April 17, 2018; min 6:40
- ¹⁴ Centers for Disease Control and Prevention, Leading Causes of Death
- ¹⁵ AYU, 2017; 38(1-2) Abstract/Materials/Results
- ^{16, 17} Food and Nutrition Research, 2016;60
- ¹⁸ VA Office of Patient Centered Care and Cultural Transformation, Improving Low Testosterone Naturally