

EndoAxis

Formula 15

SHBG SUPPORT

Nutrients to help maintain healthy sex hormone binding globulin already within normal range.

AT A GLANCE

Sex Hormone Binding Globulin, or SHBG, is a glycoprotein produced by the liver that plays a crucial role in the regulation of sex hormones, particularly testosterone and estrogen. Only a small portion of our sex hormones are free and available to exert a biological effect on the target tissues. The remainder are bound to carrier proteins like SHBG, reducing their bioavailability until needed. Higher levels of SHBG can signify less unbound hormone, particularly testosterone and estrogen, is available and can lead to symptoms of hormone deficiency. Symptoms of high SHBG could include irregular menstrual cycles, low libido, mood changes, reduced muscle mass, excessive hair growth, and challenges with fertility.

Multiple factors can cause elevations in SHBG. SHBG is physiologically elevated in circumstances with elevated levels of free hormone to balance homeostasis or naturally as we age. However, SHBG can also elevate in the presence of excess inflammation, hypothyroidism, insulin resistance, and certain medications[1]. This formula was designed with these factors in mind: choosing herbs and nutrients that either have direct effects on SHBG levels, the hormones affected by increases in SHBG, or that promote a healthier balance by targeting inflammation and blood sugar balance.

Meet Restore

Designed to move, alter and transform our detox intermediates into less reactive and more easily eliminated by-products. Supporting our hormone balance.



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KEY BENEFITS



Promotes regular hormonal patterns and cycles



Supports healthy levels of testosterone and estrogen



May reduce markers of inflammation



May reduce SHBG levels allowing for more free and active hormone circulation

FORMULA ANALYSIS

Boron

Boron may play multiple roles in hormonal regulation, several of which can affect levels of free hormone and SHBG[2]. Boron has demonstrated the ability to significantly decrease SHBG levels while increasing free testosterone and free estradiol levels [3]. This may be due to a proposed mechanism of boron displacing sex steroids from their carriers, including SHBG, by disrupting the interactions that bind them. Boron has also demonstrated the ability to significantly reduce hsCRP levels associated with inflammation, a known cause of increased SHBG[4].

Zinc

Zinc is an essential mineral involved in most metabolic processes in the body, including hormone regulation. SHBG has binding sites for cations such as zinc. As zinc binds to SHBG, SHBG has a lowered affinity for estrogen binding, leaving more estrogen free and in circulation. Research also suggests that zinc may inhibit the production of SHBG in the liver. Zinc also aids in maintaining the sensitivity of androgen receptors in the tissues, leading to enhanced efficacy of presently circulating testosterone [5].

Calcium-D-Glucarate

Calcium D-glucarate aids in promoting the detoxification of hormones by inhibiting the activity of beta-glucuronidase. Typically, hormones are prepared for excretion through glucuronidation, making them water soluble and ready to exit the body through the urine or stool. Beta-glucuronidase cleaves the bonds made between these conjugates, making them less water soluble and able to be reabsorbed into the body. By inhibiting beta-glucuronidase, calcium D-Glucurate promotes efficient detoxification and hormone metabolite balance, which can have direct effects on the feedback loop that elevates SHBG[6].

Tongkat ali

Eurycoma longifolia, commonly referred to as Tongkat Ali, has been traditionally used as an aphrodisiac, adaptogen, and as a testosterone booster. It improves testosterone concentration through multiple mechanisms, including inhibition of aromatase, which transforms testosterone into estrogen. Tongkat ali has also been shown to release bound testosterone from SHBG and reduce SHBG levels[7].

SUPPLEMENT FACTS

Serving Size 1 Capsule
Servings Per Container 60

Amount Per Serving		% Daily Value
Calcium (as calcium d-glucarate)	32.5 mg	3%
Zinc (as zinc picolinate)	3.5 mg	32%
Calcium D-Glucarate (Tetrahydrate Form)	250 mg	†
Oat Straw (<i>Avena sativa</i>) (aerial parts) extract	250 mg	†
Tongkat ali (<i>Eurycoma longifolia</i>) (root) (22% bioactive eurypeptides and 40% glycol saponins) extract	50 mg	†
Boron (as boron citrate)	5 mg	†

† Daily Value not established

Other ingredients: Vegetable capsule (hypromellose), microcrystalline cellulose, magnesium stearate and silicon dioxide.

SUGGESTED USE

Take 1 capsule 2 times per day with a meal or as directed by your healthcare practitioner.

CAUTION: Do not use if pregnant or nursing. Consult your physician before use if you have a medical condition, or taking any medication. Do not use product if the safety seal is broken or damaged. Keep out of reach of children.

MADE WITHOUT

Corn, soy, or wheat.

*These statements have not been evaluated by the Food & Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

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