

# LibidoStim-M™

Natural support for enhanced male sexual desire and function\*



By David M. Brady, ND, DC, CCN, DACBN, IFMCP, FACN & Amy Berger, MS, CNS

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The combination of ingredients in LibidoStim-M™ provides safe support for natural testosterone production, enhanced erectile function and increase in desire.\*

## Ingredient Highlights

**Tongkat Ali** (*Eurycoma longifolia*) helps maintain normal testosterone levels, which are critical for supporting sexual desire and fertility (sperm concentration/motility), as well as mood, energy, and building muscle mass. Sometimes referred to as Malaysian ginseng, Tongkat ali (TA) "is popularly used as a sexual tonic in traditional medicine for aphrodisiac activity and improvement of fertility and male libido."<sup>1</sup> LibidoStim-M™ features LJ100®, a form of TA patented for addressing male infertility and sexual dysfunction with these effects substantiated by a number of clinical trials. TA works by affecting luteinizing hormone and is specific as to which hormone derivatives it influences. It increases testosterone but not 5 $\alpha$ -dihydrotestosterone, which could promote aromatization (conversion) to estrogen. It also helps to increase free testosterone (FT) over bound testosterone (BT), a notable difference because BT is not bioavailable and in high levels may be associated with prostate cancer.

A strong body of research supports the efficacy of this compound in humans.<sup>2,3</sup> In a small cohort of men experiencing late-onset hypogonadism, one month of supplementation with TA resulted in significant increases in testosterone levels and improvements in scores on the Aging Males' Symptoms scale.<sup>4</sup> Prior to supplementation, only 10.5% of the subjects registered no complaints according to the AMS scale and 35.5% had normal testosterone levels. Post-intervention, nearly 72% registered no complaints and an impressive 90.8% showed normal testosterone levels.

A randomized controlled trial (RCT) investigating TA extract in men ages 30-55 showed supplementation for three months resulted in improvements in libido, erectile function, semen volume and sperm motility.<sup>5</sup> Notably, those with a body mass index (BMI)  $\geq$  25kg/m<sup>2</sup> experienced a small but significant decrease in body fat mass, possibly due to the natural effect of increased testosterone on improving body composition. The efficacy of TA for enhancing male fertility and sexual function was demonstrated in a study in which several months of supplementation led to spontaneous pregnancies among nearly 15% of sub-fertile couples in which the male had experienced idiopathic infertility.<sup>6</sup>

Low testosterone may be associated with low mood and increased vulnerability to stress. An RCT showed that among moderately stressed subjects, compared to placebo, supplementation with TA for four weeks resulted in a significant decrease in salivary cortisol with an increase in salivary testosterone and these were associated with significant decreases in indices of tension and anger.<sup>6</sup> The authors concluded that TA "appears to have significant potential for restoring hormone balance (cortisol/testosterone) and improving psychological mood state in humans exposed to various modern stressors..."<sup>7</sup>

Overall quality of life and mood were improved among physically active senior men (aged 57-72) who supplemented with TA for five weeks. All subjects (n=13) reported that the supplement was helpful to their health, with 61% reporting an increase in their desire to exercise and over 50% reporting improvement in endurance exercise capacity. After supplementation improvements were noted in anxiety, physical exhaustion, depressive mood, lack of vitality, feeling burned out, libido/sexual desire, ability to perform sexually, and number of morning erections.<sup>8</sup>

Rodent research has revealed potential mechanisms of action of tongkat ali. Eurycomanone, one of the compound's most potent bioactive constituents, increases testosterone and spermatogenesis via influencing the hypothalamus-pituitary-gonadal axis. A host of rodent research shows that eurycomanone or tongkat ali supplementation results in increased sperm counts and motility, enhanced testosterone synthesis and inhibition of aromatization to estrogen.<sup>9-11</sup>

**Tribulus** (*Tribulus terrestris*) has long been used in the traditional Chinese and Indian systems of medicine and is popularly claimed to improve sexual functions in men. It has been studied in animals and shown to be useful for erectile dysfunction (ED). Tribulus increases some of the sex hormones, possibly due to the presence of the steroidal saponin protodioscin. After oral ingestion of tribulus, testosterone, dihydrotestosterone (DHT) and DHEA sulfate (DHEA-S) have all been shown to increase significantly.<sup>12,13</sup> The aphrodisiac activity of tribulus was believed to be due to its androgen-increasing effects but more recent research points to a role in increasing nitric oxide release and improvements in endothelial function.<sup>14,15</sup>

## May be beneficial for\*:

- Safely promoting male sexual desire
- Providing a natural and safe enhancement of testosterone
- Favorably influencing aromatase activity for optimal testosterone metabolism
- Supporting healthy erectile function

## Supplement Facts

Serving Size 2 capsules  
Servings Per Container 30

Amount Per Serving	% Daily Value
Tribulus ( <i>Tribulus terrestris</i> )(aerial) [standardized to contain 40% saponins]	300 mg *
Chrysin	200 mg *
Tongkat ali (as LJ100®) ( <i>Eurycoma longifolia</i> )(root) [standardized to contain 22% bioactive eurypeptides and 40% glyco saponins]	100 mg *
DIM (Diindolylmethane)	100 mg *
Horny Goat Weed ( <i>Epimedium sagittatum</i> ) (aerial)[standardized to contain 20% icariins]	100 mg *
Ginkgo Extract ( <i>Ginkgo biloba</i> )(leaf) [standardized to contain 24% ginkgo flavoglycosides and 6% terpene lactones]	100 mg *
Boron (as Bororganic Glycine)	6 mg *

\*Daily Value not established.

**Other Ingredients:** Cellulose (capsule), microcrystalline cellulose, sunflower lecithin, silicon dioxide, vegetable stearate



**Chrysin and DIM** have been included to safely manage increased testosterone levels by favorably influencing aromatase activity and reducing the potential of testosterone being converted to estrogen. A rodent study showed that chrysin may protect against testosterone-induced benign prostatic hyperplasia (BPH) owing to antioxidant, antiproliferative and proapoptotic properties.<sup>16</sup> Separate research in rodents showed that oral administration of chrysin significantly increased serum testosterone levels, sperm concentration and motility, and significantly decreased the abnormal sperm rate.<sup>17</sup>

DIM may be beneficial for men with a family history of prostate cancer or who wish to reduce their risk. According to UC Berkeley researchers, “DIM exhibits potent antiproliferative and antiandrogenic properties in androgen-dependent human prostate cancer cells.” DIM is a strong competitive inhibitor of DHT binding to the androgen receptor. The title of this study states it clearly: *Plant-derived 3,3-Diindolylmethane Is a Strong Androgen Antagonist in Human Prostate Cancer Cells*.<sup>18</sup>

**Ginkgo biloba** has been used in Traditional Chinese Medicine (TCM) to help alleviate depression and sexual dysfunction. It is believed to improve blood flow to peripheral tissues through facilitating vasodilation via increased release of prostacyclin and nitric oxide (NO).<sup>19</sup> *Ginkgo biloba* extract has been shown to increase copulation as well as non-contact erection in male rats, possibly through NO synthase activity as well as increased dopaminergic activity in the mesolimbic system.<sup>20-22</sup>

**Horny goat weed** (*Epimedium sagittatum*) is employed in TCM for addressing ED and fatigue.<sup>19</sup> Its primary bioactive constituent is icariin, which has been shown in *in vitro* and animal studies to increase NO synthesis, have androgen mimicking effects, decrease formation of advanced glycation end products, and inhibit phosphodiesterase-5 (the enzyme target of many popular prescription drugs used for ED).<sup>23</sup> Icariin has also been shown to preserve penile hemodynamics and improve erectile function in diabetic rats.<sup>24</sup>

**Boron** may be helpful for increasing the conversion of total testosterone to free testosterone and decreasing estradiol (E2) levels, thereby raising the ratio of FT to both total testosterone and E2, with one study calling boron an “androgen amplifier.”<sup>25</sup> Elevation of free testosterone may be particularly beneficial for older men, in whom levels of sex hormone binding globulin (SHBG) are increased. Data are mixed, but evidence exists for an association between increased dietary boron and reduced risk for prostate cancer. *In vitro* research suggests that boron may inhibit growth of some types of prostate cancer cells.<sup>26</sup>

## The Role of Metabolic Syndrome

It is well known that chronically elevated insulin is a primary driver of polycystic ovarian syndrome (PCOS) in women. Chronic hyperinsulinemia affects men’s reproductive hormones in similar ways, leading researchers to posit the existence of a male phenotypic equivalent to PCOS—which includes ED, prostate enlargement, and early androgenic alopecia among other features.<sup>27-29</sup> Erectile dysfunction may be a sign of insulin resistance (IR) in men—particularly in younger men with no other obvious signs of IR.<sup>30,31</sup> To the extent that prostate gland enlargement may interfere with sexual performance, chronic hyperinsulinemia may be a factor in BPH as well.<sup>32-34</sup> Men experiencing hormonal abnormalities resulting from metabolic syndrome may benefit from following a reduced carbohydrate diet along with the use of LibidoStim-M™. It is noted that multiple reviews and analyses of products commercially marketed as “testosterone boosters” and male sexual performance enhancers that include some of the ingredients in LibidoStim-M™ have determined that these compounds often show little to no efficacy.<sup>35-37</sup> Providing these ingredients in the absence of dietary and lifestyle changes to address metabolic syndrome may explain these lackluster results, so it is prudent to use LibidoStim-M™ as an adjunct to the appropriate diet and lifestyle strategies, possibly in conjunction with Metabolic Synergy™.

**Suggested Laboratory Tests:** Serum total and free testosterone and DHEA-sulfate can be assessed for close management (optimal ranges: total T: 600-800 ng/dL; free T: 150-180 pg/mL; DHEA-S: 300-450 mcg/dL). Long-term users should have serum PSA and hs-estradiol measured at one-year intervals to assure that levels are within the normal range.

**Recommended Use:** Take two capsules per day, or as directed by your health care practitioner.

**Consider combining LibidoStim-M™ with these other Designs for Health products for optimal results:**

- Arginine capsules
- Grape Seed Supreme™
- Metabolic Synergy™ (for those with metabolic syndrome)

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/techsheet-references/libidostim-m-references.pdf>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Health care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage.

LJ100® is a registered trademark of HP Ingredients Corp. and is patented under U.S. Patent 7,132,117 and Worldwide Patent WO 02/17946 Bioactive Fraction of *Eurycoma longifolia*.

\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

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