



## References

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## The Science Behind our Products

### Indian ginseng (Ashwagandha)

Indian ginseng is an ancient Ayurvedic herbal medicine prized for its tonic, aphrodisiac, and stress-reducing properties. It is considered to have rejuvenating effects on the body and promotes physical and mental well-being. As a potent antioxidant,<sup>1-3</sup> Indian ginseng has been shown in studies to normalize stress brought on as a result of sexual dysfunction. It possesses significant anti-stress and adaptogenic activities.<sup>4,5</sup> Animal research hints that it may be helpful in the treatment of chronic fatigue syndrome (CFS) by reducing oxidative stress, which research suggests plays a significant role in CFS pathophysiology.<sup>6,7</sup>

### Ginkgo biloba (Ginkgo)

An ancient Chinese medicine used for thousands of years, Ginkgo biloba is well known for its cerebral-enhancing effects. However, it has also been proven to be effective in treating antidepressant-induced sexual dysfunction.<sup>8</sup> A triple-blind, placebo-controlled study found that 240 mg of Ginkgo biloba for 12 weeks may alleviate symptoms of depression and anxiety.<sup>9</sup> Another randomized, double-blind study showed that oral treatment with Ginkgo biloba dilated blood vessels and increased blood flow.<sup>10</sup>

### Tribulus (Tribulus terrestris)

Tribulus is an herbal plant known for its controversial claim to increase testosterone and DHEA levels and improve sexual desire.<sup>11,12</sup> While several studies on humans and animals do not show a direct or indirect influence on androgen production, oral administration of tribulus extract did show an increase in serum levels of androstenedione and free testosterone.<sup>13,14</sup> In addition, further studies found the herb had a significant improvement on sexual behavior, serving as a potent aphrodisiac and a moderate treatment for erectile dysfunction.<sup>15-17</sup> While not sure of the exact mechanisms of action, researchers suspect it's due to a release of nitric oxide rather than androgen production.<sup>18-20</sup>

### Gentiana (Gentiana lutea)

This yellow plant found in the mountainous regions of central and southern Europe is mostly known for its gastric-stimulating properties. Research shows that gentiana roots and its leaves exhibit significant antioxidant properties. Pharmacological studies indicate that the bioactive compounds in the roots possess cholagogue, hepatoprotective, wound-healing, and anti-inflammatory effects.<sup>21,22</sup> Gentiana extracts also contain antimicrobial properties, suggesting a possible use in topical treatment for skin disorders like acne or eczema.<sup>23</sup>



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### **Sarsaparilla (*Smilax aristolochiifolia*)**

Sarsaparilla is tropical, woody vine known for its immunomodulatory, antibacterial, antifungal, hepatoprotective, and antioxidant properties. Studies show that the water extract of the sarsaparilla leaves contain powerful antioxidant activity, quenching free radicals and inhibiting lipid peroxidation. In addition, several steroidal saponins derived from sarsaparilla have shown antifungal activity against three human pathogenic yeasts: *Candida albicans*, *C. glabrata* and *C. tropicalis*.<sup>24-28</sup>

### **DMG (Dimethylglycine)**

DMG is derived from the amino acid glycine and is known mostly for its ability to enhance athletic performance and acts as an immune system stimulant.<sup>29</sup> A double blind study showed that oral ingestion of DMG significantly increased humoral and cell-mediated immune response. Scientific evidence also suggests that DMG serves as an antioxidant and enhancer of oxygenation.<sup>30</sup>