

Botanical and Hormonal Support for Increased Satisfaction

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*[Editor's Note: Dr. Meletis is author of the book *Better Sex Naturally*, published by HarperCollins.]*

Low libido is a health concern most people are reluctant to discuss. Yet, it can take a huge toll on emotional health. For both women and men, not being able to perform at an optimal level can interfere with self esteem, the quality of relationships and outlook on life in general.

More than 10–20 million American men suffer from erectile dysfunction. This equates to approximately 1 man in 10, with that number becoming even larger by age 50, at which time, 1 man in 4 is believed to be affected.¹⁻² Such statistics are not as readily available for women, probably because of the previous lack of research into the field of female sexual response and the fact that it's harder to measure sexual parameters in females due to a less obvious external response. Yet, because the same mechanisms drive sexual response in both genders, logic and clinical practice suggests that, in females, the same principals of support prove to be as helpful as they are in men.

Despite the fact that erectile dysfunction and female libido issues increase with age, it is not a foregone conclusion that men and women must become less sexually active as they age. In fact, traditional healers and physicians around the world have long known there are many natural substances that can enhance sexual desire and function in both men and women of all ages.

This article will address libido in both men and women and offer botanical and hormonal support to help encourage a satisfying sex life.

The Male Libido

Leonardo Da Vinci was the first scientist to realize that during an erection the penis swells with blood. Da Vinci wrote, "The penis does not obey the order of its master, who tries to erect or shrink it at will, whereas instead the penis erects freely while its master is asleep. The penis must be said to have its own mind, by any stretch of the imagination."³ Since then, researchers have determined the penis isn't quite as independently minded as Da Vinci observed 500 years ago, but is largely under the control of the central nervous system and both conscious and subconscious cues.

Nitric oxide plays a starring role in an erection. Sexual stimulation triggers excitatory signals in the brain, which causes the parasympathetic nerves to release nitric oxide (NO) gas directly and indirectly via endothelial cells in the penis. Nitric oxide acts as a chemical messenger by entering into smooth muscle cells lining the arteries of the spongy erectile tissue called the corpus cavernosum. This in turn triggers the activation of substances that cause smooth muscles of the penile arteries to relax, infusing more blood into the organ. When the corpus cavernosum of the penis fills with blood, the veins that normally drain blood from the penis compress. The additional blood creates added pressure, which squeezes the veins nearly closed, trapping blood within the corpus cavernosum and resulting in an erection.⁴

Because nitric oxide is the instigator of the male sexual response, finding natural substances that boost nitric oxide levels are often the focus of steps to enhance sexual satisfaction. In addition, preserving the health of the nervous system is important to generating sexual satisfaction. Before we

take a look at natural substances that perform these roles, however, I would like to address the other side of the spectrum, the female libido.

The Female Libido

Although male sexual health is more widely studied due to the easily measurable external rate of response, sexual dysfunction in women is just as damaging to quality of life as it is in men. The female sexual response is driven by many of the same factors that govern male libido such as nitric oxide synthesis, proper blood flow and hormonal factors.

As the female body ages, both estrogen levels and testosterone levels decline. This affects the central nervous system as well as the sensory organs that are key players in environmental sexual stimuli. Prolactin increase may further inhibit libido.⁵ Therefore, enhancing both blood flow and hormonal health is integrally important to sexual satisfaction.

Possible Causes of Dysfunction

Before I discuss the ways that both men and women can improve their libido, it's important to address the causes behind sexual dysfunction. Indeed sexual dysfunction can serve as the barometer of one's overall health status since a healthy cardiovascular, neurological and mental wellness must all be present for peak performance.

First, a well-functioning sex drive depends upon neuromuscular health. Without optimal nervous-system health, nerve impulses are less than efficient in impulse transmission. Nerve impulses are important in the release of nitric oxide and proper functioning of the central nervous system is essential to sexual health in both genders.

Mental health also is extremely important to proper sexual function. In addition, prostate problems, chronic stress and the use of certain medications such as antipsychotics, antidepressants, anticholinergics, antihypertensives, and antihistamines can decrease libido.

Furthermore, there is a huge link between cardiovascular health and the libido in both genders. Scientists have hypothesized that unsatisfactory erectile function is a manifestation of atherosclerosis and that the common denominator between the two conditions is the endothelial L-arginine-Nitric oxide pathway.⁶ The fact that a reduction in nitric oxide bioavailability contributes to vascular changes in both conditions further cements the link between libido and cardiovascular health.⁶ This link makes sense because sufficient blood flow is required for optimal male and female sexual performance just as it is for heart health.

A number of studies have demonstrated an increased erectile dysfunction incidence in heart patients. Among men with ischemic heart disease, the prevalence of ED was approximately 75 percent.⁷ Researchers also established a connection between ED and the number of coronary vessels occluded on angiography.⁸ A study in females with coronary artery disease reached similar conclusions. Female sexual dysfunction was diagnosed in 12 of 20 (60 percent) CAD patients participating in the study, compared to only five of 15 (33.3 percent) of healthy female controls.⁹

Due to the diverse causes behind sexual dysfunction, anyone interested in enhancing their sexual well-being should consider participating in a four-pronged approach: 1) using the botanicals

mentioned below to increase blood flow and improve nitric oxide synthesis; 2) improving central nervous system health; 3) balancing hormonal health with DHEA and testosterone-boosting supplements and 4) enhancing cardiovascular health. For more information on cardiovascular health, please see my article [Cardiovascular Health: The First Component of Healthy Aging] located in this newsletter. In this article, I will now address natural strategies to improve blood flow, nitric oxide synthesis and hormonal and central nervous system health.

Natural Libido Enhancers

One of the most effective natural libido enhancers is arginine. This amino acid is the precursor to nitric oxide, and consequently is vitally important to sustaining blood flow to the genitals. In both animal and human studies, arginine has improved erectile response, indicating that both penile erectile function and clitoral engorgement may be improved. It is also likely that arginine-enhanced pelvic circulation improves vaginal lubrication. Clinically, arginine has been effective in approximately 80 percent of cases in which increased circulation was needed to optimize sexual function.

Nutritional Support To Enhance Libido	
Arginine	Human studies indicate improvements in erectile dysfunction and an increase in nitric oxide levels.
Ginkgo Biloba	Improved sexual satisfaction in both males and females with antidepressant-induced sexual dysfunction in several studies. Increases nitric oxide availability.
Tribulus Terrestris	Increased testosterone levels in rodents and primates. In women, decreased levels of the libido-destroying hormone prolactin.
Muira Puama	Improved erections and libido in male subjects.
Mucana Pruriens	Rich source of L-dopa, which is known to stimulate sex drive.
Panax Ginseng	Increases nitric oxide production. Produced a significant improvement in erectile parameters such as penile rigidity, girth, duration of erection, improved libido, and patient satisfaction.
Vitamin B12	Supports nervous system health.
DHEA	Low levels found in women with diminished libido and sexual dysfunction. Particularly effective in women with adrenal insufficiency. In men with erectile dysfunction, 50 mg of DHEA per day improved sexual performance.

In one uncontrolled trial, men with ED were given 2.8 grams of arginine per day for two weeks. In the arginine group, 40 percent of the men reported improvement, compared to none in the placebo group.¹⁰ A larger, double-blind trial studied 50 men with ED for six weeks. The subjects were administered 5 grams L-arginine per day or a matching placebo. There was a significant subjective improvement in sexual function in 31 percent of the patients taking L-arginine. Researchers had noted low urinary nitric oxide excretion at baseline in all patients who reported subjective improvements at the end of the study. Nitric oxide concentrations had doubled by the end of the study.¹¹ Consequently, scientists have speculated that L-arginine may be the most effective in ED patients who have dysfunctional alterations in nitric oxide activity and reduced NO availability.

Ginkgo biloba is another circulation enhancer that has demonstrated some impressive results in patients with antidepressant-induced sexual dysfunction. Like arginine, ginkgo enhances blood flow by facilitating microvascular circulation, vasodilation, and smooth-muscle relaxation.¹² However, ginkgo's abilities go one step farther as it has potent antioxidant and vascular stabilizing effects as well. Its ability to enhance sexual satisfaction was discovered accidentally when male geriatric patients taking ginkgo for memory enhancement also reported improved erections. In these patients, researchers noted that impaired sexual function was a side effect of antidepressant medications.

Selective serotonin reuptake inhibitors, which millions of people use for depression, cause an elevation in serotonin, which causes a decline in nitric oxide synthase activity and starves the penile smooth muscle cells of the nitric oxide required to cause an erection. Ginkgo may mitigate the effects of SSRIs on sexual function by increasing NO availability as researchers have shown that ginkgo can increase NO synthase activity.¹³ In one four-week trial of ginkgo in 30 men taking antidepressants, the subjects were given 40 or 60 mg capsules of ginkgo twice per day, titrated up to 120 mg twice per day with an average dose of 207 mg per day. Ginkgo was 76-percent effective in alleviating symptoms related to all phases of the sexual response cycle in men, including erectile function.¹⁴ In another study

investigating ginkgo's effects on antidepressant-related sexual dysfunction in both genders, 12 men and 12 women experienced significant improvement in sexual response after both three and six weeks of ginkgo use.¹⁵

Tribulus terrestris is another botanical commonly used to enhance libido. It has long been used in traditional Chinese and Indian medicine for various ailments and has been studied in animals with encouraging results. After conducting a study of tribulus terrestris in rodents, researchers concluded that "tribulus terrestris extract appears to possess aphrodisiac activity probably due to androgen increasing property of tribulus terrestris."¹⁶ They reached the same conclusion in both an earlier study on primates, where they found that tribulus increased testosterone in the animals, and another later study on rodents, leading them to conclude "The increase in intracavernous pressure which confirms the proerectile aphrodisiac property of tribulus terrestris could possibly be the result of an increase in androgen and subsequent release of nitric oxide from the nerve endings innervating the corpus cavernosum."¹⁷

Tribulus also is known to decrease levels of prolactin in women.¹⁸ An increase in prolactin is associated with reduced libido.

Another libido-enhancing botanical is muira puama. At The Institute for Sexology in Paris, France, a study of 262 men who were experiencing a lack of sexual desire and inability to attain or maintain an erection found that muira puama (*Ptychopetalum guyanna*) enhanced both erectile-tissue response and libido. After 2 weeks of taking muira puama, 51 percent of patients with erectile dysfunction improved and 62 percent reported increased libido.¹⁹ This effect also occurs consistently in clinical practice. In women, it would be reasonable to expect that the benefits would be comparable to those found in men.

Mucuna Pruriens, also a natural libido enhancer, is a rich source of L-dopa and, as such, has been studied as a possible substance that can improve the health of Parkinson's patients.²⁰ L-dopa is a treatment of choice for Parkinson's patients and the pharmaceutical drug source of L-dopa (levodopa) has been known to cause an increased sex drive. Therefore, although mucuna pruriens has not been studied specifically for any potential libido-enhancing effects, the fact it is a source of L-dopa indicates it may have the ability to support a healthy sex life.

Panax ginseng relaxes smooth muscle and thereby increases circulation as well as nitric oxide production.²¹ The ginsenosides contained in ginseng have been shown to cause a dose-dependent relaxation of the corpus cavernosal smooth muscle in rabbits by increasing nitric oxide release.²²⁻²³ In one human study, 90 patients were divided into three groups and given Panax ginseng, a placebo, or trazodone orally. Frequency of intercourse, premature ejaculation, and morning erections after treatment were unchanged in all three groups. However, in the Panax ginseng group a significant improvement in erectile parameters such as penile rigidity, girth, duration of erection, improved libido, and patient satisfaction were reported. The overall therapeutic efficacy for erectile dysfunction was 60 percent for the Panax ginseng group but only 30 percent for the trazodone and placebo groups.²⁴

A more recent, double-blind, placebo-controlled, crossover study confirmed these results. Forty-five men diagnosed with ED received either 900 mg Panax ginseng or placebo three times per day for eight weeks. The first eight weeks of treatment were followed by a two-week washout period, after which the patients switched groups—those who had initially received the placebo received ginseng and those who initially received ginseng received the placebo for an additional eight weeks. Researchers

measured the efficacy of treatment through changes observed in indexes of erectile function, including the International Index of Erectile Function (IIEF). Mean scores on the IIEF for Panax ginseng were significantly higher than for placebo after eight weeks of each treatment. In addition, penile tip rigidity was significantly better after eight weeks of Panax ginseng compared to placebo.²⁵

The above natural agents can be combined with supplements to support nervous system health such as vitamin B12.

Hormonal Help

Another important factor to explore, when dealing with low libido, is hormonal health. Taking a salivary hormone test to determine whether low testosterone levels are a cause sexual dissatisfaction can determine whether natural hormone replacement is warranted. If so, DHEA can be used to help increase testosterone levels and improve libido. Researchers have found low levels of circulating DHEA in women with diminished libido and other symptoms of sexual dysfunction. DHEA appears to be especially effective in elevating sex drive in women with adrenal insufficiency.²⁶

In 40 men with ED and low DHEA levels, a double-blind, placebo-controlled study found that DHEA at a dose of 50 mg per day for six months improved sexual performance. Efficacy of DHEA was defined as the ability to achieve or maintain an erection sufficient for satisfactory sexual performance.²⁷

Conclusion

It is clear that ultimate sexual functioning depends on a strong and well-nourished body that provides the ability to attain or maintain an erection. Using the appropriate botanicals and natural hormones as well as addressing lifestyle factors that inhibit libido can help ensure that nearly everyone experiences the level of satisfaction they were meant to enjoy.

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