PART 1

Natural Support for Sexual Performance and Libido For Men and Women

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In the normal aging process the decline in sex hormone levels and the declining number of functioning nerve endings in the genitalia region often contribute to a reduction in sex drive, arousal capabilities, climax and intensity of pleasure-full sensations. This can become a source of frustration and disappointment that is a common problem, which affects the quality of life for many men and women over the age of 50. As a result many people turn to hormone replacement therapy and erectile dysfunction medications to help overcome these problems. Unfortunately, hormone replacement therapy can increase risk of breast cancer, endometrial cancer, prostate cancer as well as heart attack and stroke. In addition, erectile dysfunction medication is not suitable for all men, carries risk for sudden death and does not affect libido, only performance. In my view, before resorting to pharmaceutical drugs, individuals should first turn to natural libido and sexual performance-enhancing herbs, which have been shown to be safe and effective in human clinical trials. The following herbal compounds have been used individually for many years by health practitioners in various countries as therapies for low libido and sexual dysfunction. When combined into a single formulation, the synergistic effects of these herbs can exert a potent influence, helping to maximize, restore and prolong sexual desire, arousal and performance in both men and women.

Tribulus Terrestris (Puncture Vine)

Tribulus Terrestris is an herb that has been used for centuries to enhance sexual performance in men and stimulate libido in both men and women. Recent investigations have shown that Tribulus Terrestris increases the release of nitric oxide from the lining of blood vessels and nerves that supply blood flow to the penis and clitoris. In turn, nitric oxide relaxes blood vessels allowing greater engorgement of blood within the erectile tissues of the genitalia. This resulst in a firmer, longer-lasting erection in men and increased genital sensitivity in women. An important study showed that Tribulus Terrestris supplementation in women improved libido and sexual function in 66% of those who originally reported low sex drive and sexual dysfunction problems.

Muira Puama (Potency Wood)

Muira Puama extract is derived from the root of tropical Brazilian plants. Studies indicate that it can increase sexual performance (potency) and libido in men and in women. It has long been used as a powerful aphrodisiac and nerve-stimulant in South America folk medicine, where it has appeared in the Brazilian Pharmacopoeia since the 1950's. French studies demonstrated that it reversed low libido and/or erectile dysfunction problems in men within a two week period. In a landmark study involving 202 women with low sex drive 65% of women who took a supplement containing Muira Puama, for one month, reported improvement in their sex drive and other aspects of sexual function and behavior. The researchers reported statistically significant improvements in frequency of sexual desire, sexual intercourse, and sexual fantasies, as well as in satisfaction with sex life, intensity of sexual desires, excitement of fantasies, ability to reach orgasm, and intensity of orgasm.

Damiana (Tunera aphrodisiaca)

Damiana is found throughout Mexico, Central America and the Caribbean. Its Latin name (Tunera aphrodisiaca) suggests its use as an aphrodisiac.

In the years following the European conquest of Central and South American Damiana has been associated with improvement of sexual function in both males and females.

In Holland it is renowned for its sexual enhancing qualities and positive effects on reproductive organs. In particular, Damiana has been shown to increase the sensitivity of genital tissues. With aging, sensitivity of these tissues is often reduced due to fewer functioning nerve endings. Damiana helps to compensate for this effect, re-establishing heightened sensitivity and arousal capabilities.

Epimedium (Horny Goat Weed)

Epimedium commonly known as horny goat weed, has been used by Chinese doctors for generations as a male and female aphrodisiac or libido enhancer. Many years ago, Chinese farmers noticed their goats became much friskier, demonstrating a dramatic increase in copulating behavior, after grazing on this plant. Thus, its common name, *"Horny Goat Weed"*. These observations prompted investigation into its potential to enhance human sexual desire and performance capabilities. Its exact mechanism of action is still somewhat a mystery, but it has shown success for many years in boosting sexual desire, aiding erectile function, and fighting fatigue in humans. Clinicians have long used epimedium to treat erectile dysfunction problems, to improve libido, and to restore sexual vitality.

Avena Sativa (Wild Oat)

Avena Sativa, or wild oat, has been shown to nourish nerves, increasing tactile sensation of the genital area, and increasing pleasure. In a study conducted at the Institute For Advanced Study of Human Sexuality men experienced a 22% increase in genital sensation and a 36% increase in frequency of orgasms, and women experienced a 15% increase in genital sensation and a 29% increase in the frequency of orgasms following regular supplementation with Avena Sativa. The phrase "sowing ones wild oats" is derived from the sexual enhancement effects derived from Avena Sativa.

Maca *(*Lepidium Meyennii Walp)

Maca is a native Peruvian plant that has been used traditionally to enhance sexual performance in both men and women. Its libido stimulating and sexual enhancement properties are attributed to its sterolic compounds, polyunsaturated fatty acids and alkaloids. Placebo-controlled studies in humans and animals have demonstrated a positive effect on sexual performance and increased libido following supplementation with maca. In human studies libido and sexual performance were followed during 12 continuous weeks of maca supplementation compared to placebo, which confirmed its libido-enhancing qualities. Anecdotal comments from doctors who recommend Maca suggest that Maca is highly effective at improving male sexual performance and is touted to be the Female Viagra – due to its libido enhancement effects on women.

Summary

The combination of Tribulus Terrestris, Muira Puama, Damiana, Epimedium, Avena Sativa and Maca represent a safe and natural approach to enhancing sexual desire, performance and satisfaction. Each of these herbs has enjoyed a long-history of use for these purposes and recent clinical trials have supported

their safety and efficacy. As hormone replacement therapy and erectile dysfunction drugs are associated with significant health concerns, individuals wishing to combat age-related decline in libido and performance and those wishing to enhance their overall level of sexual satisfaction and performance should, in my view, first consider use of these natural agents.

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Part 2

Preserving Libido and Sexual Function After Fifty: An in-depth look at medical and natural treatments

James Meschino DC, MS, ND

The Prevalence of Age-Related Sexual Dysfunction And Reduced Libido, In Men And Women

An aspect of the aging process, that deserves consideration from a quality of life standpoint, pertains to the ability to combat the age-related changes within our body that results in reduced libido and compromised sexual function and performance in men and women, which is a common finding in individuals 50 and older. Statistics show that as the population ages, the prevalence of sexual dysfunction has steadily increased in both men and women.

In men, sexual dysfunction is expressed as erectile dysfunction, which is defined as the consistent inability to obtain and/or maintain an erection sufficient for satisfactory sexual relations. Complete erectile dysfunction is defined as the absolute inability to participate in penetrative relations at any stage. Approximately 30 million men in the U.S. experience some degree of diminished sexual function (erectile dysfunction). The majority of these men are over 65, but 5% of men in their 40% report complete erectile dysfunction problems (severe impotence).

Results from the Massachusetts Male Aging Study of 1300 men between the ages of 40 and 70 years show that 52% of men have some degree of erectile dysfunction; 5% of 40-year olds and 25% of 75-year olds have complete erectile dysfunction. Other studies suggest that overall, 50% of all males experience varying degrees of impotence by the age of 50, and by age 60, 75% of men will experience erectile dysfunction to some degree. In a study of 216 men, aged 40-79, presenting with varying degrees of erectile dysfunction (Kaiser FE, et al. 1988), no patient over the age of 70 reported any full erections, even of short duration. This study also showed that the most significant alterations in testosterone secretion related to erectile dysfunction and the most significant decline in blood flow to the penis resulting from narrowed arteries (atherosclerosis from cholesterol build up) occur after the age of 50.

For many women, menopause can trigger a loss of interest in sex (decreased libido) and bodily changes such as vaginal dryness caused by a decline in estrogen that can make intercourse painful, and therefore, less desirable. It has been estimated (Blumel JE et al, 2004) that approximately 40% of women between 40 and 64 years of age cease their sexual activity, and that sexual dysfunction is the primary cause in 49.2% of cases (unpleasant personal relationship with a partner accounted for 17.9% and lack of a partner accounted for 17.7%).

Of interest is the fact that low sexual desire is the main reason for ceasing sexual activity and some studies indicate it accounts for approximately 50% of the cause of sexual inactivity among women 40-64 years of age. In a study of middle-aged women (Castelo-Branco C., et al. 2003), 51.3% of those who were sexually active reported a significant degree of sexual dysfunction. The prevalence of sexual dysfunction increased with age (from 22.2% in the 40-44-year age group to 66% in the 60-64-year age group). The risk increased after menopause showing more than a 3-times greater incidence in menopausal women than women who had no yet experienced menopause.

Causes Of Sexual Dysfunction In Men

Although a decline in testosterone secretion is associated with reduced libido and erectile dysfunction problems in men as they age, some experts suggest that the age-related decline in testosterone secretion is not sole responsible for the increased prevalence of erectile dysfunction in middle-aged and older men. However, the decline in testosterone synthesis and secretion is associated with erectile dysfunction in many studies and testosterone replacement therapy has been shown to reverse many cases of erectile dysfunction.

In regards to testosterone and the aging process, studies show that between 40 to 70 years, the average testosterone level decreases annually by about 1%. This translates into a 30% drop off in testosterone levels between age 40 and 70, which is quite significant, and is strongly linked to erectile dysfunction. Nevertheless, some men demonstrate sexual functionality into their 80's and 90's. In support of the argument that declining testosterone levels play a key role in erectile dysfunction, it has been shown that testosterone replacement therapy in middle-aged and older men can boost sex drive and improve sexual performance in men who report reduced libido and varying degrees of erectile dysfunction. However, the risk is that testosterone replacement therapy may promote the growth of undetected prostate cancer (latent cancer), as testosterone is known to foster the growth and spread of detected prostate cancers. As prostate cancer is the leading incidence cancer among North American men, many experts feel that it is too risky to give men testosterone replacement therapy to maintain sexual virility, as it may trigger the growth and spread of prostate cancer cells that otherwise may not have represented a life threatening disease or been of clinical significance.

Until conclusive evidence indicates that testosterone replacement therapy does not increase risk of prostate cancer development I am of the view that it should not be routinely used to boost sexual function in men as they age. This is especially true in regards to the fact that many natural supplements can significantly improve sexual performance in men with varying degrees of erectile dysfunction and loss of libido, without increasing prostate cancer risk.

Other reasons for male sexual dysfunction include diabetes (due to narrowed arteries, a frequent complication of this disease), atherosclerosis (a build up of cholesterol plaque on the walls of the arteries causing reduced blood flow to the erectile tissues of the penis), the use of certain drugs, especially drugs used in the treatment of depression and other psychological disorders as well as drugs that lower blood pressure (anti-hypertensive drugs), alcohol, social-psychological factors (lack of attraction, unpleasant relationship with partner, anxiety, depression etc.), and prostate enlargement (lower urinary tract symptoms-LUTS). Men with LUTS, due to prostate enlargement, have been shown to have a higher risk of erectile dysfunction than men with no clinically significant prostate enlargement (no symptoms of enlargement), and also report a higher incidence of ejaculatory loss (no ejaculation) and painful ejaculation.

Another important reason for erectile dysfunction in men is attributed to an age-related decrease in vibrotactile sensitivity of the penis. Most mammals demonstrate gradual decline in sexual activity among males, which has been shown to be, in part, due to a reduction in the nerve receptors within the skin of the penis, called mechanoreceptors. These receptors register tactile sensation when the penis is touched or used in a sexual manner, and transmit pleasurable sexual sensations through the nerve pathways that lead to the spinal cord and up to the brain. The age-related decline in these specific vibrotactile (mechanoreceptors) receptors results in decreased penis sensation, which may provide to too little sensory input to produce a reflex response within the nervous system that would normally result in a full and sustainable erection. In short, the penis becomes less sensitive to touch as men age, and the result is too little sensory stimulation to produce an erection, or a sustainable erection, through the normal automatic reflex nerve channels. Fortunately some natural supplements like damiana, avena sativa, melatonin and choline (CDP-choline, alpha-glycerylphosphorylcholine, choline bitartrate) can increase the sensitivity of the penis, either by increasing the nerve chemicals (acetylcholine) that trigger sensation within these nerves or via other mechanisms, and help compensate for reduced sensation ability stemming from the age-related decline in the number of functional mechanoreceptors (nerve receptors) within the skin of the penis. We will discuss the use of these supplements shortly.

Causes Of Sexual Dysfunction In Women

In women, the age-related increase in sexual dysfunction and loss of libido is most strongly linked to the significant drop off in estrogen, progesterone and testosterone that accompanies menopause. Fortunately, the use of a woman's hormonal support formula derived from natural herbs, as outlined previously, in conjunction with a supplement containing libido and sex-enhancing herbal agents for women, can reverse many cases of female sexual dysfunction and lack of libido, and enhance overall sexual function and sexual enjoyment and fulfillment to a significant degree. Estrogen has been linked to increased sex drive in women, and it is of interest to note that alcohol consumption causes a rise in estrogen secretion and blood levels in women. This finding may explain, to some degree why, many women report that alcohol consumption increases their libido. Over and above the loss of psychological inhibition associated with the use of alcohol, the rise in blood levels of estrogen may also be a factor that heightens the sexual responsiveness of women upon consumption of alcohol. Some studies indicate that testosterone replacement in women can also increase their sex drive after menopause. Menopause is

associated with a 50% decrease in testosterone blood levels, an often over looked finding, in relation to the attention usually given to estrogen and progesterone.

The Risks Of Treating Age-Related Sexual Dysfunction With Hormone Therapy and Viagra

There is little doubt that the decline in estrogen, progesterone and testosterone that occurs in women during menopause, and the decline in testosterone production in men after the age of 40 (the beginning of male andropause) are significant factors, which contribute to the high incidence (approximately 40% of women) of reduced libido and sexual dysfunction problems that accompany the aging process. The decline in growth hormone and Insulin-like Growth Factor-1 (IGF-1) that accompanies aging, have also been shown to contribute to reduced libido and sexual dysfunction problems after age 40, in both men and women. As such, the medical profession has approached the treatment of sexual dysfunction and loss of libido, to a large degree, through the replacement of estrogen, progesterone, testosterone, DHEA (dehydroepiendrosterone - a steroid hormone that the body can convert into testosterone and estrogen), and growth hormone injections. The truth is that hormone replacement of this nature has been shown to be effective in improving libido and sexual function in both men and women, however, the side effects of using these drugs also increases risk of breast cancer, heart disease, stroke, and may increase risk of colon cancer and prostate cancer.

Hormone Therapy For Women

As discussed previously, the use of hormone replacement therapy (estrogen and progesterone, and sometimes testosterone) for the management of menopause and to reduce risk of osteoporosis, has fallen out of favor due to the confirmed findings from the Women's Health Initiative Study showing that this form of treatment significantly increases risk of breast cancer, heart attack and stroke. This is why the use of black cohosh, soy isoflavones and gamma-oryzanol, from a woman's hormonal support supplement, should be used in place of traditional hormone replacement therapy to help manage the menopausal and post-menopausal years. However, to correct sexual dysfunction problems and loss of libido in both young and older women alike, the use of certain aphrodisiac herbs have been shown to enhance sexual function, desire and sexual satisfaction in women, and in these cases, should also be incorporated into a woman's anti-aging supplementation program. We will discuss these aphrodisiac and sexual enhancement herbs shortly.

DHEA (dehydroepiandrosterone)

DHEA is a steroid hormone from which the body makes testosterone and estrogen. DHEA has been used as an agent to help manage menopause in women and andropause in men. Some

studies have shown that it can improve sexual dysfunction and loss of libido problems in men and women as they age.

What is DHEA and where does it come from? In the body, cholesterol is the basic building block that gives rise to all steroid hormones, including estrogen, progesterone, testosterone and dihydrotestosterone (DHT). The testes and the ovaries can extract cholesterol from the blood stream and manufacture these hormones. The adrenal glands also extract cholesterol from the blood stream from which it synthesizes a number of steroid hormones, one of which is DHEA. In the synthesis of testosterone and estrogen cholesterol is first converted into pregnenolone. Pregnenolone can then be converted into progesterone or DHEA. DHEA is then converted into androstenedione, which is further converted into testosterone. Using an aromatase enzyme, which is more active in women, the body can convert testosterone into estrogen. As it turns out the adrenal glands, throughout our lifetime, release DHEA into the blood stream, allowing the testes and ovaries to extract it and convert it into testosterone and estrogen. Studies show that as we age, blood levels of DHEA decline, providing less of the raw material for testosterone and estrogen synthesis to our reproductive tissues. It appears that the enzyme that converts pregnenolone into DHEA drops off, and thus there is less DHEA synthesis in the adrenal glands, testes and ovaries as we age. As such, our DHEA blood levels have been shown to peak in our 20's. From our thirties on, there is a progressive decline in DHEA blood levels, such that by age 70, our blood levels are 75% lower than that of a 20-year old, and by age 90, are 90% lower in many cases.

Some anti-aging experts have recommended DHEA supplementation beginning between age 40 and 50, as means to provide the body with the missing raw material from which it can make its own testosterone and estrogen. Thus far, the reports regarding it effectiveness as an anti-aging supplement have been mixed and inconclusive. Although some patients have realized improvement in various aspects of aging and well being, including enhanced sexual performance and libido, experimental evidence suggests that DHEA supplementation may encourage the growth of undetected (latent) breast cancer and prostate cancer, both of which are known to occur at a higher level of incidence in individuals over 50.

A closer look at DHEA research indicates that supplementation with DHEA in middle-aged and older woman has been reported to improve mood, sense of well being and sexual desire, when taken at a daily dose of 30 to 50 mg per day. In one study a dose of 200 mg was shown to improve cases of systemic lupus erythematosus (Lupus). However, experimental research raises concerns about DHEA supplementation and breast cancer risk. Studies show that DHEA increases the replication rate of human breast cancer cells (estrogen receptor-positive breast cells), even in the presence of the breast cancer drug tamoxifen, which is known to slow down the replication rate of breast cancer cells that are estrogen receptor-positive (meaning that they possess estrogen receptors on their cell surface). A study in women with stage IV hormone-sensitive breast cancer indicated (Morris KT et al. 2991) that higher blood levels of DHEA were strongly associated with progression of the disease. Other studies show that breast cancer cells can convert DHEA into estrogen, which in turn is likely to encourage the growth and spread of cancer (Le Bail JC et al. 2002). Some animal studies and other experimental studies have shown that DHEA may decrease the risk of colon cancer and suppress the growth of other human cancer cells under experimental condition. However, the evidence showing that DHEA can contribute to the development of breast and endometrial cancer calls into question the wisdom of using DHEA

as a treatment for sexual dysfunction and loss of libido in women. Many experts feel that, as is the case for hormone replacement therapy, the risk of using DHEA out weighs the benefits in regards to its effects on breast cancer, endometrial cancer, and possibly liver cancer.

The same is also true for men. Although no well -designed studies have shown improved sexual function in men taking DHEA, some males have reported improved sex drive and enhanced sexual function with DHEA supplementation. However, studies show that the male prostate gland converts DHEA into testosterone and then into dihydrotestosterone, which is known to increase risk of prostate enlargement and encourages the growth of prostate cancer. Studies using human prostate cancer cells (LNCaP cell lines) have shown that these prostate cancer cells convert DHEA into androstenedione, testosterone and dihydrotestosterone, all of which promote the growth and spread of prostate cancer.

Confusing matters is a single study that reported that DHEA could inhibit the growth of human prostate cancer cells and rat prostate cancer cells (Townsend Letter for Doctors & Patients. July,1998). Overall, however, the body of evidence suggests that DHEA is likely to promote the growth of undetected prostate cancer as well as prostate cancer that has already been diagnosed. In fact, in a single case study (Jones JA et al. 1997) a patient with advanced prostate cancer was shown to have significant flaring (faster spreading) of their cancer upon supplementation with DHEA. Until DHEA can be shown to be a safe intervention in regards to prostate cancer risk it may not be wise to recommend it as a treatment option for men with erectile dysfunction problems and loss on libido. Quite clearly there are some natural herbal agents that can improve sexual function in men without increasing risk of prostate disease, as will be discussed.

Testosterone Replacement Therapy For Men

As mentioned previously, erectile dysfunction and libido problems in middle-aged and older in men are, in part, attributable to the age-related decline in testosterone production (a result of declining DHEA synthesis), and although testosterone replacement therapy can successfully treat these problems it comes with the risk of potentially increasing prostate cancer development and/or its metastasis.

However, there is another side to this argument that was presented at the American College For The Advancement Of Medicine Conference in October of 2000, by Dr. Neal Rouzier, which deserves consideration. Reports from the study of his patients indicate that testosterone replacement therapy lowers LDL-cholesterol and triglycerides, increases insulin sensitivity, strengthens the heart muscle, dilates (opens up) coronary blood arteries to allow more blood flow to the heart muscle, and alleviates angina. He contends that males should consider testosterone replacement for the prevention of heart disease as they age. Rouzier goes on to state that testosterone builds muscles and bones, decreases exercise-induced stress, reduces abdominal fat,

protects joints, helps prevent cognitive decline and Alzheimer's disease, and is a wonderful anti-depressant.

As for the risk of prostate cancer, Rouzier contends that the decline in testosterone allows the effects of estrogen to be exerted to a greater degree on the prostate gland (in men, estrogen is mostly made in fat tissue from the conversion of androstenedione to estrone, a powerful estrogen hormone). Estrone hormone is known to decrease the breakdown of DHT in the prostate gland, which in turn, encourages higher DHT levels in prostate cells. The higher levels of DHT cause rapid cell division leading to prostate enlargement and increasing risk of prostate cancer development and spread of existing prostate cancer cells. Rouzier suggests that estrogen is the real culprit in prostate cancer, and that it is the conversion of testosterone to estrogen that is the underlying problem in prostate disease, as estrogen allows DHT to build up in prostate cells. He indicates that taking testosterone along with substances that prevent the conversion of testosterone to estrogen (aromatase inhibitors) makes testosterone replacement a safe and desirable option for men as they age, as it prevents estrone hormone, made in fat tissue, from exerting its undesirable effects upon the prostate.

Aromatase inhibitors include substances such as flaxseed powder, soy isoflavones, indole-3-carbinol from cruciferous vegetables and a flavonoid known as chrysin. He actually recommends the use of a testosterone patch containing DHT, noting that DHT cannot be converted into estrogen by the aromatase enzyme (only testosterone and androstenedione are converted into estrogen by aromatase enzymes).

This is very revolutionary thinking. However, in the many cases where early stage, undetected prostate cancer already exists, there is little doubt that the addition of testosterone replacement therapy or DHT replacement therapy will promote the growth and metastasis of these cancers. Therefore, many experts feel that more research is required to show the safety of testosterone replacement in regards to prostate cancer risk before it should be used as an anti-aging treatment to reverse erectile dysfunction problems and loss of libido in aging men. Furthermore, it is well established that men who can not synthesize DHT from testosterone, due to a lack of the 5 alpha-reductase enzyme , which is responsible for this conversion, do not develop prostate cancer and prostate enlargement. Thus, any therapy that encourages higher levels of DHT in the body, as would be the case with testosterone or DHT replacement therapy, is likely to promote the development of latent prostate cancer in the view of many authorities. It is well known that prostate cancer cells divide and spread more aggressively in the presence of testosterone and/or DHT.

Research studies show that a number of natural herbal products can boost male libido and sexual performance without increasing risk of prostate cancer, and should be considered as the first line of therapy in age-related sexual dysfunction problems.

Growth Hormone Injections

In addition to an age-related decline in testosterone, estrogen and progesterone, the decline in growth hormone secretion and Insulin-like Growth Factor-1 (IGF-1) levels as we age, also contribute to many aspects of the aging process. Studies have shown that growth hormone injections in older subjects can reverse many of these age-related changes, and boost libido and sexual function in both men and women. However, growth hormone injections may increase IGF-1 levels into range that promotes the growth of undetected cancers, including breast, colon and prostate cancer. At this point in time no one knows what is the optimal level of IGF-1, which can reverse aging and enhance sexual performance without at the same time increasing our risk of cancer. The medical evidence has consistently shown that excess growth hormone, either from injections or from natural causes (e.g. the condition acromegaly in which the pituitary gland secretes excess growth hormone) is associated with an increase risk of colon cancer. More recently it has been shown that various cancer cells increase their own synthesis of IGF-1, fostering their own growth and replication, upon stimulation from growth hormone (Cohen P et al. 2000). Thus, growth hormone injections as a treatment for sexual dysfunction and reduced libido, is not without risk and safety concerns. It appears that the use of growth hormone secretagogues are a safer choice, in that they do not elevate IGF-1 levels above 250 ng/ml; a level that has not been associated with increased cancer risk. Preliminary reports suggest that growth hormone secretagogue supplements can improve sexual function and libido in both men and women, and therefore, can be considered for this purpose by individuals who have no history of cancer within their own body.

Viagra

The drug known as Viagra has gained tremendous popularity and has demonstrated a proven ability to reverse erectile dysfunction and improve sexual performance in men who have taken this prescription medication for this purpose. To illustrate the magnitude of sexual dysfunction problems in aging men and their desire to re-establish a more youthful ability to engage in sexual activity, more than one million prescriptions, per year, were written for Viagra in the first years of its introduction to the marketplace.

However, even the miracle drug Viagra is not without risk. It is well established that Viagra should not be taken by men who have heart disease (angina, congestive heart failure, patients taking multi-drug anti-hypertensive agents, etc.), kidney or liver disease, and men taking the drugs erythromycin or cimetidine. These precautions are in place because Viagra can cause a precipitous decline in blood pressure during the 24 hours after ingestion, at which time nitroglycerine drugs must also be avoided. From late March through to July of 1998, the FDA's Medwatch program received reports of 123 deaths in patients prescribed Viagra, including 69 reports involving American patients who had taken Viagra and for whom clinical information was adequate. Of those 69 cases, 51 had one or more risk factors for cardiovascular disease or cerebrovascular disease, and three others had severe coronary artery disease detected at autopsy. Two died of stroke and 46 of cardiovascular events; the cause of death was not reported for 21 patients.

In 2001 a research team from Cedars-Sinai Medical Center examined reports of bad side effects from Viagra collected by the Food and Drug Administration in its "adverse event reporting system." In an analysis of 1,473 reported major adverse events, 522 people died -- the majority of cardiovascular causes, according to the researchers.

- The majority of deaths (70 %) were associated with the standard Viagra dosage, 50 milligrams, and were attributed to cardiovascular causes.
- In two-thirds of the deaths, the victim had taken Viagra within four to five hours before the death was reported.
- The majority of deaths occurred in men who were younger than 65 and who had no reported heart disease risk factors.

The Cedars-Sinai study confirmed the well-documented increase in heart risks when nitrate use is combined with Viagra. Of the 90 patients who were on nitrates and taking Viagra, 68 percent died, and another 20 percent suffered non-fatal heart attacks. Viagra's manufacturer, Pfizer, officially discourages mixing Viagra and organic nitrates, such as nitroglycerin.

Using nitrates with Viagra is not the only problem, however. The Cedars-Sinai study showed that of the deaths recorded by the FDA, a whopping 88 percent occurred in patients who were not taking nitrates.

That led investigators to speculate that there are some individuals who are susceptible to harmful effects of Viagra without nitrates.

More recently, some of the effects of Viagra have also been linked to increased risk of stroke, as well, due to its indirect action on increasing blood clotting (Lehmann J, 2001, DrugIntel, 2003). This report also explains other actions through which Viagra can invoke other adverse cardiovascular reactions and events, which can lead to ruptured atherosclerotic plaques within blood vessels, thrombus formation, and headaches (12% occurrence rate of headaches in Viagra users). More than half the deaths, or first symptoms leading to death, occur within 4 hours on using Viagra. Eighty-nine percent of deaths in Viagra users occur in individuals using the drug for the first time, suggesting that some individuals are highly susceptible.

Viagra works by increasing the amount of nitric oxide (by indirectly inhibiting the breakdown of nitric oxide) in blood vessels that feed the erectile tissues of the penis. This opens up blood flow to the erectile tissues, supporting erection ability and erection endurance. There is no question that Viagra works in cases of erectile dysfunction, however, there are natural herbal agents that have been proven to provide a gentler, but similar benefit, without increasing risk of cardiovascular complications. They represent a safer and more prudent first choice to reverse age-related changes related to reduced libido and erectile dysfunction problems in middle-aged and older men.

For many centuries various cultures around the world have used natural herbal agents for the purpose of enhancing libido and sexual function. In recent years a number of these herbal products have shown impressive results in clinical trials involving human subjects with known libido and sexual dysfunction problems. For many of these herbs researchers have identified their active constituents and/or the mechanism of action through which they exert their libido-stimulating and sexual performance-enhancing effects. Tests for toxicity, side effects and potential drug-nutrient interactions have also been established for most of these agents to ensure that these products can be used in a safe, effective and responsible manner. Moreover, a number of studies have shown that by combining some of these herbal agents into a single supplement product, even greater positive effects on sexual function can be realized than may be attained from the intake of a single sexual-enhancement herb alone.

Muira Puama (Potency Wood)

Muira Puama extract is made from the root of tropical Brazilian plants. Studies indicate that it can increase sexual performance (potency) and libido in men and in women. The usual dosage is 1,000-1,500 mg per day. This shrub, which is native to Brazil, has long been used as a powerful aphrodisiac and nerve-stimulant in South America folk medicine, where it has appeared in the Brazilian Pharmacopoeia since the 1950's. Early European explorers noted its aphrodisiac qualities and brought the muira puama shrub back to Europe, where it has been used in European herbal medicine for a number of centuries. In England, muira puama is listed in the British Herbal Pharmacopoeia, as a treatment for impotence and dysentery. Two clinical studies conducted at the Institute of Sexology in France, involving men with low libido and/or erectile dysfunction problems, have shown that muira puama extract can reverse problems related to a lack of sexual desire (low libido) and reverse erectile dysfunction in a high percentage of men within a two week period. Researchers indicated that muira puama extract in these studies was able to enhance libido in 85% of subjects, increase frequency of intercourse in 100% of subjects, and improve the ability to maintain an erection in 90% of subjects. Its mechanism of action remains unknown, however, it appears to work by enhancing both psychological and physical aspects of sexual function.

A landmark study involving 202 women with low sex drive, demonstrated that a combination supplement product containing muira puama and ginkgo biloba (Herbal vX) showed that 65% of women who took this supplement for one month reported improvement in their sex drive and other aspects of sexual function and behavior. The researchers (Wayneberg F; Brewer S. 2000) at the Institute of Sexology in France stated that statistically significant improvements occurred in frequency of sexual desires, sexual intercourse, and sexual fantasies, as well as in satisfaction with sex life, intensity of sexual desires, excitement of fantasies, ability to reach orgasm, and intensity of orgasm.

The active ingredients in muira puama are thought to include its unique profile of fatty acids and fatty acid esters (especially behenic acid) as well as essential oils, plant sterols, triterpenes, and

various alkaloids. Muira Puama has not been associated with any significant side effects or toxicity.

Tribulus Terrestris (Puncture Vine)

Tribulus terrestris is a natural herb, commonly known as puncture vine that has been used for centuries in Europe. It grows in many tropical and moderate climates throughout the world, and has been used to treat a variety of conditions by different cultures. The ancient Greeks used tribulus as a diuretic and a mood-enhancer. In Ayurvedic Medicine (the Indian Medical System), tribulus is known as a tonic for treating genito-urinary troubles, and is used a treatment for impotence. In China, tribulus has been used successfully as a treatment for high blood pressure and angina, and for a variety of liver and kidney conditions. In Bulgaria, tribulus is used as sex enhancer and to treat infertility. Olympic athletes in this country claim to have used high doses of tribulus to increase muscle growth and development, although the research on this has never been revealed to exercise physiologists in the Western world.

One of the most consistent findings related to the use of tribulus is its ability to enhance sexual performance in men and stimulate libido in both men and women. Studies indicate that it acts through two mechanisms to enhance sexual virility, which include hormonal effects and by increasing blood flow to the erectile tissues of the penis and the clitoris. Studies performed on animals and male subjects have shown that tribulus supplementation can increase testosterone levels by 30-40%. This seems to occur as a result of an increase in the release of luteinizing hormone (LH) from the pituitary gland, which in turn, increases testosterone production from the testes. This effect may also account for its traditional use in the treatment of infertility, as these hormonal alterations can also increase sperm production and motility (sperm movement).

One human study showed that LH blood levels rose from 14.38 ml/U/ml to 24.75 ml/U/ml (72% increase) after supplementation with 750 mg per day of tribulus terrestris (standardized to 45% saponin content) and that free testosterone rose by 41% in these male subjects (from 60 ng/dl-84.5 ng/dl).

The second mechanism through which tribulus terrestris has been shown to improve male sexual performance is via its ability to increase the release of nitric oxide from the lining of blood vessels and nerves that supply blood flow to the penis. The increased release of nitric oxide triggered by tribulus results in an opening and relaxing of these blood vessels, which in turn, allows greater engorgement of blood within the erectile tissues of the penis. The result is a firmer and longer lasting erection. Many experts believe that the effect of tribulus on increasing blood flow to the erectile tissues of the penis is the primary way in which tribulus improves erectile dysfunction problems, as improvement in this condition often occurs on the first day of use (or within the first few days), which is too soon to see a rise in testosterone levels. Studies on animals suggest very strongly that tribulus terrestris increases blood flow to the penile erectile tissues by increasing the release of nitric oxide. Studies on mature male rats have shown that tribulus terrestris administration increases body weight (possibly through the anabolic effects of testosterone secretion), and significantly increased firmness of erection (objectively measured intracaverous pressure), and sexual frequency (mount and intercourse frequency) compared to rats not given tribulus (control group).

In general, human studies involving male subjects, as well as anecdotal evidence, indicates that tribulus terrestris supplementation can increase libido, frequency and strength of erections,

increases sperm count and motility, and shortens the time period between achievement of the next erection (shorter refractory period).

The active ingredients in tribulus have not been completely identified, however, much research indicates that its furostanol saponins are likely a principle ingredient. These include the saponins dioscin, protodioscin and diosgenin, all of which have a similar structure to the body's reproductive hormones. Studies yielding the best results have used tribulus terrestris supplements that are standardized to contain 40-45% steroidal saponins (furostanol saponins).

The proven ability of tribulus terrestris to improve blood flow has also shown it to be an effective agent in the treatment of angina. In China, large clinical trials (Wang B et al. 1990) with angina patients have proven that the saponins from tribulus terrestris improve angina by dilating coronary arteries and improving blood flow to the heart muscle (myocardium), with resulting improvements on ECG findings (electro-cardiagram). These studies have also shown that if taken for a long period of time tribulus terrestris produces no adverse side effects and has no damaging effects on the circulatory system, the liver or the kidneys. Tribulus terrestris has also been shown to reduce high blood pressure (Sharifi AM et al. 2003) by acting as an ACE inhibitor (angiotensin-convering enzyme inhibitor), in a similar fashion as synthetic ACE inhibitor drugs prescribed by medical doctors in this country to lower blood pressure. Remarkably, the saponin content of tribulus terrestris also lowers blood cholesterol levels by inhibiting cholesterol absorption from the intestinal tract, and by increasing the excretion of cholesterol through the bile-fecal route.

Tribulus terrestris has also been shown to act as a natural anti-inflammatory in a similar fashion to drugs like Celebrix and Vioxx. Like these drugs, tribulus inhibits the enzyme in our joints (the COX-2 enzyme) that produce the prostaglandin hormones that encourage inflammation and pain. However, it does not damage the intestinal tract like aspirin and ibuprofen because it does not inhibit the COX-1 enzymes that are required to produce the protective secretions of the intestinal tract.

As well, tribulus terrestris contains beta-sitosterol, which supports male prostate health by reducing the production of inflammatory prostaglandin hormones and by inhibiting the enzyme that converts testosterone into dihydrotestosterone (DHT). DHT is known to contribute to the development of prostate enlargement and prostate cancer. Beta-sitosterol has also been shown in experimental studies to decrease the proliferation rate (replication rate) of prostate cancer cells and breast cancer cells, and encourages them to self-destruct (apoptosis-programmed cell death).

The steroidal compounds in tribulus terrestris have also been shown to improve immune - function and to possess anti-bacterial and anti-viral properties, which have led to reports of its use to treat herpes, and other viral infections such as flus and the common cold.

Thus, tribulus terrestris is not only a safe, natural agent to improve and restore male and female sexual virility, but its daily use is associated with a number of other significant anti-aging/disease prevention effects, which make it an attractive supplement for men and women over the age of 45-50. No adverse effects to the central nervous or cardiovascular systems were noted in any of

the clinical studies using tribulus terrestris and no toxicity or deviations in blood count have occurred. No known negative effects presently exist when tribulus is used as a dietary supplement.

Among women, Tribulus increased the concentration of hormones including estradiol, with testosterone being very slightly influenced, which is associated with improved sexual function and libido. It is also thought to increase clitorial blood flow, adding to sensitivity and sexual responsiveness. The study by Tabakova et al, showed that tribulus terrestris supplementation in women improved libido and sexual function in 66% of subjects with reported low sex drive and sexual dysfunction problems.

The usual dosage to preserve or restore sexual virility is 750-1500 mg per day. Generally speaking, a sex-enhancement supplement containing 250-500 mg tribulus terrestis (standardized to contain 40-45% saponin content) per capsule, along with other virility herbs, is taken 3 times per day (or alternatively three capsules at once).

Damiana (Tunera aphrodisiaca)

Damiana is found throughout Mexico, Central America and the Caribbean. Its Latin name (Tunera aphrodisiaca) suggests its use as an aphrodisiac.

In the years following the European conquest of Central and South American Damiana has been associated with improvement of sexual function in both males and females.

In Holland it is reknowned for its sexual enhancing qualities and positive effect on the reproductive organs. The pharmacology of the plant suggests that its alkaloids may have hormone-like effects. Damiana has also been shown to increase the sensitivity of genital organs by providing a slight irritant property to the urethra and possibly other tissues that line the reproductive tract, which most likely accounts for its fast-acting properties. Damiana has been used in North America as an aphrodisiac since 1874, and to improve the sexual ability of the enfeebled and aged. It is usually included in sex-enhancement supplements along with other virility herbs. Damiana appears to be safe at the recommended dosages. It appears on the FDA's GRAS (generally recognized as safe) list and is widely used as a food flavoring. The only common side effect of damiana is occasional mild gastrointestinal distress.

Many sex-enhancement supplements contain 200-300 mg of damiana, per capsule, in formulations that are usually taken three times per day (or three capsules at once).

Epimedium (Horny Goat Weed)

Epimedium commonly known as horny goat weed, has been used by chinese doctors for generations as a male and female aphrodisiac or libido enhancer. Epimedium is considered to be a powerful sex stimulant herb. Epimedium is a plant common to the grazing and farming regions in China. Many years ago, Chinese farmers noticed their goats became much *friskier, demonstrating a dramatic increase in copulating behavior,* after grazing on this plant. Thus, its common name of *"Horny Goat Weed* Epimedium is an important supplement in Traditional Chinese Medicine, and is gaining popularity in the Western world as well. Epimedium is a leafy plant that grows best at higher altitudes. Its leaves contain a variety of healthful flavonoids,

polysaccharides, and sterols, as well as an alkaloid called magnaflorine. Its exact mechanism of action is still somewhat a mystery, but it has shown success for many years in boosting sexual desire, aiding erectile function, and fighting fatigue. Studies demonstrate that epimedium helps to lower cortisol levels when we are under stress. Higher cortisol levels suppress libido and sexual performance, which partially explains reports of lower sex drive and impaired performance abilities that often occur under stressful conditions. Epimedium has also been shown in animal studies to increase dopamine and serotonin levels, which are nerve chemicals involved in many functions within the body. Clinical practitioners have long used epimedium to treat erectile dysfunction problems, to improve libido, and to restore sexual vitality.

As a sexual-enhancement herb, the standardized grade of epimedium should contain 10% icariin flavonoids, usually providing 100 mg of epimedium per capsule. Epimedium is often included as one ingredient within a multi-herbal sexual enhancement formulation.

There have been no reports of adverse side effects associated with the use of epimedium at recommended dosages.

Avena Sativa (Wild Oat)

Avena Sativa, or wild oat, is an annual grass, which is cultivated for its edible grain. The parts of the herb typically used for supplementation purposes include the seeds and the stem, in which are found many active constituents including saponins (steroid-like substances), flavonoids, alkaloids, as well vitamins, minerals and other nutrients. Avena sativa supplementation has been shown to nourish nerves, increasing tactile sensation of the genital area, increasing pleasure. In a study conducted at the Institute For Advanced Study of Human Sexuality, subjects interested in improving their sexual responsiveness took 300 mg of avena sativa as a supplement, three days per week for 6 weeks. The 20 men and 20 women in the study ranged from 22 to 64 years of age. Men experienced a 22% increase in genital sensation and a 36% increase in frequency of orgasms, and women experienced a 15% increase in genital sensation and a 29% increase in the frequency of orgasms.

Reference to the sex-enhancing effects of avena sativa have been found dating back 200 years ago in the German Pharmacopoeia. Avena sativa has been shown to be non-toxic and is not associated with any adverse side effects or drug-nutrient interactions. Avena sativa is often included in herbal sexual-enhancement products as an agent to help increase pleasurable genital sensation.

Other Virility Herbs With Questionable Safety Profiles

Yohimbe

Yohimbine, an alkaloid compound derived from the yohimbe plant, is an FDA-approved treatment for impotence. Yohimbine increases blood flow to erectile tissue via its direct effects on the nervous system. However, yohimbine produces many undesirable and dagnerous side effects including: anxiety, panic attacks, hallucionations, high blood pressure, rapid heart rate, dizziness, headaches, skin flushing and can aggravate kidney problems and existing psychological disturbances. The FDA classifies yohimbe as an unsafe herb, which should be taken under medical supervision. In the treatment of impotence yohimbine hydorchloride has shown a 34-43% rate in these cases. Many yohimbe products that are sold over-the-counter do not contain sufficient yohimbine content to be effective. Authentic yohimbe bark contains 6%

yohimbine content and this is the effective standardized grade. Yohimbe supplementation should not be used unless prescribed by a physician.

Ginkgo Biloba Extract

Ginkgo Biloba Extract (GBE) has shown a very high success rate in the treatment of erectile dysfunction problems in cases that are due to poor blood flow secondary to atherosclerosis (narrowed arteries) and/or diabetes. In two major studies, men with erectile dysfunction, who failed to respond initially to papavernine injections (a drug injected to produce an erection) and other drugs that improve blood flow, demonstrated a significant response to the oral ingestion of GBE at 60 or 80 mg, three times per day, in trials lasting 6 to 18 months. GBE is known to dilate (open up) blood vessels and inhibits the coagulation of the blood (inhibits platelet clotting-anti-coagulant effects), which account for its ability to improve blood flow to the erectile tissues of the penis.

An herbal sexual-enhancement product for women called Herbal vX, which has been shown to markedly improve libido in women reporting a low sex drive, in an open trial, contains muira puama and ginkgo biloba. Women using this combination formula reported significant increase in sexual desire, sexual intercourse, sexual fantasies, as well improved satisfaction with sex life, ability to reach orgasm and intensity of orgasm, as well as other positive effects on sexual function.

However, a daily dosage of 180-240 mg of GBE, which were the dosages used in the studies on male subjects with erectile dysfunction problems , acts as a powerful anti-coagulant and there have been several cases of bleeding into the brain reported in patients who have used GBE either alone or in combination with other anti-coagulant agents (aspirin, non-steroidal anti-inflammatory drugs, coumadin, warfarin, Plavix etc), at doses as low as 40 mg, once to three times per day. Thus, some authorities caution against the inclusion of GBE as a standard ingredient in an anti-aging sexual virility supplement for men or women. However, in more extreme cases of sexual impotence or low sex drive, GBE can be used as an additional supplement. In such cases a physician should be consulted to monitor bleeding time (prothrombin time or the INR) in order to guard against a potential bleeding disorder. To be effective GBE extracts must be standardized to contain 24% flavone glycosides and 6% terpenes.

Ginseng

Panax Ginseng has been shown to increase sperm count and motility in men, as well as increasing plasma total and free testosterone, dihydrotestosterone, follicle stimulating hormone and leutinizing hormone. An in vitro study suggests that ginseng may relax the corpus cavernosum by releasing nitric oxide, which improves blood flow and facilitates an erection. A double-blind clinical study showed that ginseng extract supplementation (Panax Ginseng) at a daily dosage of 1,800 mg per day for three months helped improve libido and the ability to maintain and erection in men with erectile dysfunction. It is an ingredient in a sex-enhancing product known as Argimax for Women (which also contains ginkgo biloba extract, damiana, L-arginine and multivitamins and minerals). In a four-week clinical trial of 77 females over age 21, subjects reported improved overall satisfaction with sex life in 73.5% of users, compared to 37.2% in the placebo group. Notable improvement was identified in sexual desire, reduction of vaginal dryness, frequency of sexual intercourse and orgasm, and clitorial sensatation. No significant side effects were noted. To what degree ginseng contributed to these results in unknown. The potential risks of using ginseng for this purpose is that has been reported to interfere with medications that affect mood disorders (e.g. antidepressant dugs), causing

symptoms of mania. It may also interfere with anticoagulant dugs, and digoxin (digitalis). On its own ginseng has been shown to cause breast tenderness, postmenopausal vaginal bleeding, and menstrual disorders, which are attributed to its hormone-like effects. In the view of some experts ginseng should not be a standard ingredient in libido and sexual-enhancement supplement products, but as is the case with ginkgo biloba and some other supplement mentioned in this section, it may be added as an individual supplement in individual circumstances where there are no drug-nutrient interactions of concern and proper monitoring of potential side effects are put into place.

Cordyceps

Cordyceps is a rare mushroom that grows on a caterpillar found in high altitudes of Tibet and China. The cordyceps mushroom is one of the most valued medicinal agents in Traditional Chinese Medicine, and is used as a general longevity tonic, to enhance vitality and endurance, as a treatment for asthma and bronchitis, as well as kidney disease. Some sex-enhancement supplements contain cordyceps, as it also enhances blood flow to the body's extremities, including the sex organs, due to its anti-coagulant properties. Studies on animals suggest that active ingredients in cordyceps act like sex steroid hormones in that animals administered cordyceps show an increase weight of male testes (rabbits) and increased sperm count. Cordyceps is one of three ingredients in a product called Venix. In a randomized, placebo-controlled clinical trial Venix (a combination of ginkgo biloba extract, cordyceps, and L-arginine) was taken by 46 male and female participants for 12 weeks. Overall, male subjects reported a 34% improvement in sexual function and libido enhancement. There was no notable change in women.

According to some experts Cordyceps should not be included in a standard anti-aging sexual-enhancement supplement due to its anti-coagulant properties, which may increase risk of a bleeding disorder. It may also interfere with the function of certain anti-depressant medications. Therefore, the use of cordyceps requires proper monitoring of bleeding time (prothrombin time or the INR), and should not be taken by individuals using anti-depressant or mood altering medications. Like ginkgo biloba, ginseng and L-arginine, cordyceps can be an additional supplement used by certain individuals, provided proper monitoring is in place, to help further enhance sexual performance and libido, in cases that may require nutrient support beyond which a standard sexual-enhancement supplement can achieve.

L-Arginine

L-arginine is an amino acid that is used for many purposes in the body. At high dosages it can be converted into nitric oxide within the body. The release of nitric oxide opens up (dilates) certain blood vessels, which improves blood flow to those areas of the body. Studies suggest that L-arginine supplementation can improve blood flow to the genital area, helping to improve erection quality and sexual performance. In a preliminary-trial, men with erectile dysfunction were given 2,800 mg per day of arginine for two weeks. Six of the 15 men noted improvement in erection and sexual performance ability. In a larger, double-blind clinical trial, men with erectile dysfunction were given 1,670 mg of arginine per day, and results showed that men given the arginine supplementation demonstrated a significant success rate compared to the placebo group. Arginine is an ingredient in the sexual-enhancement supplements, Argimax For Women and Venix, which have shown impressive results in the improvement of female and male sexual performance and libido, respectively, as noted previously.

The precautionary note is that arginine, taken in high doses, appears to also act as a blood thinner, which may increase risk of a bleeding disorder. Therefore, it is not recommended unless proper monitoring of bleeding time (prothrombin time or INR) is put in place, and it should not be taken in conjunction with other anti-coagulant drugs. Arginine supplementation has also been reported to promote outbreaks of herpes lesions, such as cold sores and genital herpes, in afflicted individuals.

Standard Anti-Aging Libido and Sex-Enhancement Supplement For Men And Women

As an example, a typical herbal combination libido and sexual-enhancement/performance supplement for men and women, who report reduced sex drive or compromised sexual function as they age (usually beginning between age 40 and 50), usually contains the following ingredients on a per capsule basis:

1. Tribulus Terrestris – 250 mg (standardized to 40-45% saponin content)
2. Muira Puama – 280 mg
3. Epimedium (Horny Goat Weed) – 100 mg
4. Damiana – 50 mg
5. Avena Sativa (Wild Oat) – 50 mg

   Other common libido and sexual enhancement herbs of significance include Maca and Mucuna Pruriens (velvet bean extract), which may also be present in certain combination products

Individuals are instructed to take one capsule, three times per day with meals, or three capsules at once, at one meal. In some cases individuals may need to double this dosage in the beginning, and can cut back to the standard daily dosage once the product begins to work for them.

In addition, the use of melatonin, 5-hydroxytryptophan (5-HTP) and/or a growth hormone secretagogue (e.g. Meditropin), one hour before bedtime may also improve aspects of sexual function and libido, as well as providing the other anti-aging effects.

In certain cases of erectile dysfunction and sexual dysfunction, the use of other natural agents, such as ginkgo biloba, L-arginine, ginseng, and/or cordyceps may be warranted. However, due to their effects on blood clotting mechanisms and other functions, the use of these agents requires proper monitoring by a physician.

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Avena Sativa, aka, Wild Green Oats, is a herb that results in increased libido; not breast enlargement.Herbal Extract. Company of North America 2000 www.megabust.com Avena_Sativa.html

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