

3.2.2.3.3.1 Do phytoestrogens make men impotent?

If sexual activity and sexual satisfaction as the primary meaning-providing aspects in human life, as advocated by Kreutz Ideology, then sexual enhancement has a philosophical dimension. More sexual activity and more sexual satisfaction can just be equaled with more meaning (more sense from more sensation). This ultimately answers the question “Why are we living for” with the answer “To pursue sexual excitement!” This the only ideology that doesn’t have to draw the purpose of an individual life from outside the individual’s life, and at the same time defines “the pursue of happiness” in clear biological and scientific terms.

Sexual enhancement, therefore, is the most clearly defined practical agenda we can establish for our daily lives. We may pursue professional work, have a job to earn money, prepare our daily meals, and learn a foreign language. The ultimate purpose of all these activities, and the motivation that keeps us going for everyday tasks, is, however, that they will, sooner or later, improve our chances to climax in sexual excitement. And if our capabilities to experience sexual excitement and satisfaction decline (as an effect of age, or of sudden physical degeneration through an accident or through disease), the meaning of all other aspects of life diminishes.

A person in his youth, and at a high level of physio-psychological homeostasis may get along just fine without sexual enhancement. His problems are more related to look for sexual outlets (other than masturbation). But for an older person who may have succeeded to organize access to sexual partners that match his preferences but has a decreased capability for making use of the opportunities thus generated, the problem shifts from one of external factors to one of internal ones: how to modify your body chemistry so that your levels of sexual function and sexual satisfaction will be optimal, or optimal again.

Phytoestrogens, together with synthetic substances released into the environment, are grouped together as environmental estrogens. While phytoestrogens have been around longer than mankind, the awareness for environmental estrogens, including phytoestrogens, is

a rather new phenomenon. Attention was brought to environmental estrogens by biologists who noticed that the males of a number of species living in a highly polluted environment experienced a marked decline in fertility as well as a lack of development of the primary sex organs.

Please note that “estrogens” is a term that groups together a range of natural and artificial hormones that have a feminizing effect. The human primary estrogen is estradiol. Estrogens in placental mammals cause “estrus”, which is the scientific term for “heat”.

Androgens are so called male sex hormones. The primary androgen is testosterone, but some of its derivatives, such as dihydrotestosterone, also are grouped under the androgen umbrella (please note that estradiol is also a testosterone derivative, though certainly not an androgen; by means of the enzyme aromatase, the body also converts testosterone into estradiol).

There is plenty of evidence that environmental estrogens are harming the males of some species, and some scientists suspect that they are also responsible for the declined sperm counts of human males in the Western world.

While synthetic environmental estrogens have had a massive degenerative effect on the males of species living in a highly polluted environment, the effect of phytoestrogens has been rather subtle. However, the negative impact on male sexual function is nevertheless measurable.

Red clover, for example, contains comparatively strong phytoestrogens. As cattle farmers have learned from experience, and as has been proven by science, herds that are fed on red clover fields will experience a significant decline in fertility because the phytoestrogens of the red clover interfere with the hormonal balance of the bulls.

Plant oestrogens; the cause of decreased fertility in cows

Authors: Kallela K, Heinonen K, Saloniemi H

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During the stall feeding period 1982-1983, it was established that serious fertility disturbances, indicating oestrogenic stimulation, had occurred in a herd of cattle in an area supported by the College of Veterinary Medicines ambulatory clinic. Whilst investigating the cause of these disturbances it was proven that the silage administered during this period was prepared almost entirely from pure red clover aftergrowth. The oestrogenic isoflavone content of the silage (liquid chromatography examination) and the oestrogenic strength (bioassay) were considerably great. When feeding with the fodder was subsequently discontinued the disturbances ceased to occur and the cows became pregnant more easily. On the basis of the aforementioned incidences it was ascertained that plant oestrogens were almost certainly the cause of the fertility disturbances.

In nature such things don't happen accidentally but are a result of evolution and natural selection. Obviously, containing phytoestrogens is a, however slight, advantageous mutation over the absence of phytoestrogens, as phytoestrogens somehow keep the population of predators, in this case mammalian herbivores, at bay. In principle, it is the same mechanism that has made many plants outright poisonous, and the majority of the rest unfit for human consumption. Therefore, phytoestrogens are an intended (by nature) interruption to the hormonal balance of the males of herbivorous species.

Of course, the attempt of phytoestrogenous plants to disrupt the procreation of mankind has, by and large, been a failure. Male mammals, including humans, have long adapted to the fact that a large number of foods contain phytoestrogens. Evolution, after all, is a game not just of mutation, but one of mutation and adaptation.

Nevertheless, we (the human males) haven't adapted completely to the presence of phytoestrogens in plants, and they still exert some negative influence on male sexual function and male genital size.

Take, for example, a diet in which meat is replaced by ground and baked soybeans, a phytoestrogenic agricultural plant widely consumed in Asia.

Effects of replacing meat with soyabean in the diet on sex hormone concentrations in healthy adult males

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A randomised crossover dietary intervention study was performed to evaluate the effects of replacing meat protein in the diet with a soyabean product, tofu, on blood concentrations of testosterone, dihydrotestosterone, androstenediol glucuronide, oestradiol, sex hormone-binding globulin (SHBG), and the free androgen index (total testosterone concentration / SHBG concentration x 100; FAI). Forty two healthy adult males aged 35-62 years were studied. Diets were isoenergetic, with either 150 g lean meat or 290 g tofu daily providing an equivalent amount of macronutrients, with only the source of protein differing between the two diets. Each diet lasted for 4 weeks, with a 2 week interval between interventions. Fasting blood samples were taken between 07.00 and 09.30 hours. Urinary excretion of genistein and daidzein was significantly higher after the tofu diet ($P < 0.001$). Blood concentrations of sex hormones did not differ after the two diets, but the mean testosterone:oestradiol value was 10 higher ($P = 0.06$) after the meat diet. SHBG was 3 higher ($P = 0.07$), whereas the FAI was 7 lower ($P = 0.06$), after the tofu diet compared with the meat diet. There was a significant correlation between the difference in SHBG and testosterone:oestradiol and weight change. Adjusting for weight change revealed SHBG to be 8.8 higher on the tofu diet (mean difference 3 (95 CI 0.7, 5.2) nmol/l; $P = 0.01$) and testosterone:oestradiol to be significantly lower, $P = 0.049$). Thus, replacement of meat protein with soyabean protein, as tofu, may have a minor effect on biologically active sex hormones, which could influence prostate cancer risk. However, other factors or mechanisms may also be responsible for the different incidence rates in men on different diets.

While environmental estrogens are considered negative in almost any context, phytoestrogens have been credited with helping women when they enter menopause, and are said to have a protective effect on the heart and guard against some cancers, such as prostate cancer. They do so by lowering testosterone levels.

Estrogens and androgens compete in the male, and female, body for the same receptors. One cannot play with estrogens without messing with androgens, primarily testosterone. So, when estrogens are enhanced (in men and women), for example by the consumption of dietary supplements or a diet that includes tofu instead of meat, then automatically, androgens (testosterone) are suppressed.

Do I want to protect my heart Certainly. Do I want to guard against cancers Sure. But do I want to suppress androgen tone Clearly not.

Phytoestrogens aren't the only answer if one intends to do something to protect one's heart. Avoiding tobacco and pursuing some physical exercise every day goes a long way in the same direction, without messing with a man's sexual function.

And there are non estrogenic micronutrients that reduce the overall incidence of cancers, such as the mineral selenium (found, for example, in nuts, most of all in Brazil nuts).

For a man who suffers from early prostate cancer, or a woman with breast cancer, it makes sense to switch to a phytoestrogenic diet. But to recommend a phytoestrogenic diet for all men because it statistically lowers the occurrence of prostate cancer is going one step to far.

Testosterone is not bad per se. Willfully lowering testosterone tone brings with it a plethora of negative side effects, such as loss of sex drive, worse erectile function, feeling less energetic overall, a loss of lean body mass, and more.

For me, the negative impact phytoestrogens have on libido is the most disturbing factor.

Sometimes, scientific, or rather: commercial, medicine doesn't make sense. On the one side, you have docs and public health officials promoting soy protein or other phytoestrogens because they are heart protective and guard against some cancers (by lowering testosterone), and on the other side (or is it the same side), you have physicians promoting testosterone replacement therapy for men who enter andropause (a phase in a man's life when testosterone levels naturally decline).

Well, I've made my choice, and it's pro testosterone.

At that point, there are two options, supplying exogenous testosterone, or increasing the body's own synthesis of testosterone.

Exogenous testosterone can be supplied through testosterone patches or testosterone cream, or through special oral testosterone preparations such as Andriol capsules. But supplying therapeutic amounts of exogenous testosterone invariably will result in a shutdown, or near shutdown of the body's own testosterone production, and this will lead to testicular and penile atrophy (a wasting away of testicular and penile tissue).

Bodybuilders who use synthetic anabolic steroids may present with an enlarged biceps or pectoralis, but they almost always pay for it with a shrinking of their penises and testicles (and that doesn't look attractive when they take off their clothes, in spite of looking attractive when exposing other parts of their bodies).

The better option is to stimulate a man's own testosterone production. There are a number of advantages to this approach. One is that it will keep a man's primary testosterone production site, the Leydig cells of the testes, busy. This can be achieved, for example, with the Southeast Asian herbal tongkat ali, though one should be careful to obtain it from an Indonesian, not a Malaysian source. Malaysian tongkat ali often is heavily diluted (in spite of claims of being highly concentrated), simply because tongkat ali is a protected plant in Malaysia and no longer can be obtained from forests in that country.

Tongkat ali is supposed to work on the whole hypothalamic pituitary testicular endocrine axis. This is effective because a person's testosterone levels are determined by a rather complicated negative feedback mechanism, designed by evolution to keep testosterone levels at genetically determined levels.

When the hypothalamus is signaled that testosterone levels are above the genetically determined levels, it will reduce the release of gonadotropin releasing hormone into the pituitary; the pituitary will respond by releasing less gonadotropins (luteinizing hormone and

follicle stimulating hormone) and thereby put a break on Leydig cell production of testosterone.

If men with healthy testosterone levels use pharmaceutical testosterone dosages designed for men with a clinically low testosterone level, they will achieve nothing. Their overall testosterone levels will not rise, because the hypothalamus and pituitary gland, which become aware of the fact that normal testosterone levels have been achieved through exogenous testosterone, will just signal the testes to stop synthesizing testosterone. Then, testosterone levels remain normal, but the testes and penile tissue waste (atrophy) due to inactivity.

There are only two ways to raise testosterone levels beyond genetically set levels.

One is to hugely overdose exogenous testosterone. Then, plasma levels are supranormal even when the body's own testosterone production is completely shut down over a lengthy period of time. This is the standard approach of bodybuilders who are after testosterone's anabolic effect. As mentioned, they pay for their overall muscular appearance with ridiculously small testes and a penis that has shrunk to boyhood size.

The other option is to switch one's testes into increased production, for example through tongkat ali extract (a single effective dose of tongkat ali active ingredients would be the equivalent of about 100 gram tongkat ali root; such amounts of active ingredient can realistically only be obtained through the use of an extract). This approach will not only generate testosterone levels that are above genetically set levels but also contribute to an increased size of the testes and the penis.

If the aim is to raise testosterone levels for the purpose of better sexual function, then the second option is superior. This is the case because the effect of oral tongkat ali extract supplementation is not just to raise levels of testosterone, but those of related hormones as well. This is not achieved through exogenous testosterone, which is why bodybuilders who use testosterone or synthetic anabolic steroids often not only suffer from an atrophy of the testes and penile tissue, but a loss of libido and sexual functionality as well.

While all phytoestrogens are considered disruptive for male sexual function, some phytoestrogenic herbal extracts, such as damiana, are considered aphrodisiacs for women.

The following chain of thought has been offered to explain this phenomenon: the phytoestrogens of such herbal extracts occupy estrogen receptor sites of the female body. These receptor sites are thereby closed to the woman's own estrogens. The woman's own estrogens are considered stronger than phytoestrogens. That estrogen receptor sites are occupied by weak phytoestrogens instead of the woman's own stronger estrogens tilts the balance between androgens and estrogens in favor of androgens. As the theory goes, the women will therefore feel more sexual appetite.

In men, damiana will likely have the opposite effect. Weak phytoestrogens such as damiana do not only bind to estrogen receptor sites but also to testosterone receptor sites, so that in men, they cause overall testosterone levels to decline.