

IN THE NEWS

Testosterone therapy reverses prostate growth, lowers PSA



There has been controversy as to whether testosterone replacement therapy in aging men might cause prostate disease. Critics point to the fact that high levels of a testosterone metabolite (DHT) causes increased prostate gland growth and might increase prostate cancer risk. On the other side of the argument is the fact that aging men have very low levels of testosterone, but epidemic rates of benign prostate enlargement and prostate cancer.

The Life Extension Foundation has pointed out that it is possible that a testosterone deficiency might actually contribute to benign prostate hypertrophy (BPH) and prostate cancer. One reason for this is that when there is a shortage of testosterone, prostate cells can overexpress receptor sites that bind estrogen and DHT, thus causing prostate cells to grow in response to the higher levels of these hormones seen in aging men. Life Extension has highlighted numerous studies showing that higher testosterone levels do not predict a man's future risk of developing prostate cancer.

A study published earlier this year [Int J Androl 2002 Apr;25(2):119-25] helps validate Life Extension's position. The study was based on observations that the gradual decrease in testosterone levels in middle-aged and older men coincides with increases in the abnormal growth of the prostate gland.

Scientists conducting this research set out to determine how testosterone replacement therapy affects prostate health. They examined 207 middle-aged and older men who had clinical symptoms of age-related testosterone deficiency. The patients were divided into two groups, one treated with daily doses of 80 milligrams of oral testosterone therapy, while the other received 120 milligrams each day.

The patients then were examined for prostate enlargement, as well as various hormone levels. In response to testosterone therapy, levels of luteinizing hormone (LH) were noticeably lower in all patients in the first group, and most in the second group. The explanation for this is that the pituitary gland releases LH to prompt the testes to produce testosterone. When there is a deficiency of testosterone in the blood, the pituitary pumps out large amounts of LH in a futile attempt to stimulate testosterone production. Some people believe that excess levels of LH prematurely age the body. One of the many benefits of testosterone therapy is to reduce excess secretion of LH.

In this latest study, scientists found that prostate gland growth was reduced or reversed and that PSA levels declined in testosterone-supplemented men whose LH levels were also lowered. The PSA (prostate specific antigen) is a marker of an enlarged prostate gland or prostate cancer. Any therapy that lowers PSA levels is of keen interest to aging men.

The authors wrote: "These findings suggest that testosterone [therapy] in middle-aged and older men with some clinical features of age-related androgen deficiency can retard or reverse prostate growth..."

This study helps substantiate the importance of men maintaining their blood testosterone, luteinizing hormone and estrogen levels in youthful ranges. The implication from these findings is that high levels of luteinizing hormone (LH) may contribute to prostate disease, and that reducing LH levels with testosterone may prevent prostate disease.

The Life Extension Foundation has long advocated testosterone patches, gels, creams and aromatase-inhibiting supplements that naturally increase free testosterone levels. The reason for avoiding testosterone pills is that an enormous burden is placed on the liver to detoxify this acute dose of orally ingested testosterone.

For complete information about how to safely increase free testosterone, decrease excess estrogen and luteinizing hormone, refer to the Male Hormone Modulation protocol located at www.lef.org.

Vitamin E may augment radiation efficacy

Scientists have discovered that vitamin E may help ease the side effects of radiation therapy for cancer patients, while bolstering the sensitivity of cancer cells undergoing this type of treatment. In a recent study [J Am Coll Nutr 2002 Aug;21(4):339-43], researchers compared the effect of d-alpha-tocopheryl succinate (vitamin E) in easing the cellular damage induced by radiation in both normal and cancer cells. The scientists treated three normal human fibroblast cell lines in vitro, as well as three human cancer cell lines for several hours before radiation exposure.

They determined that similar levels of vitamin E enhanced chromosomal damage caused by the radiation in both the cervical cancer and ovarian cancer cells, but not in the normal cells. The findings suggest that the vitamin may enhance the effectiveness of radiation therapy for cancer patients, while protecting normal cells from the toxicity that also results.

In a German study [Br J Cancer 2001 Jan 5;84(1):87-9], scientists describe these characteristics of vitamin E as apoptotic. The researchers even suggested that this vitamin may be a powerful cancer preventive because it helps inhibit the explosive cellular growth that accompanies this disease. Other experts [Free Radic Biol Med 1997;22(7):1145-51] suspect that the efficacy of vitamin E in stalling cancer cell growth does not lay in its antioxidant properties, but instead may be related to one of its roles within these cancer cells, such as the regulation of enzymes involved in cellular growth.

The use of antioxidants during cancer radiation therapy remains controversial, but Life Extension will be publishing an in-depth report on the subject very soon.



-John Martin

EPA-Rich fish oil improves symptoms in depressed patients



The omega-3 fats have garnered an enormous amount of attention lately in the area of chronic disease research. These fats, found most abundantly in fish that live in cold, deep waters, have been found to positively affect resistance against heart disease, some cancers, allergies and psychological problems, including depression, bipolar disorder (manic depression) and schizophrenia. Low blood concentration of omega-3 fats have been found in people with the latter two conditions. The typical American processed-food diet is very low in these fats.

Researchers at the Swallownest Court Hospital in Sheffield, England have published a study on the effectiveness of fish oil as an adjunctive therapy for depression. Seventy patients with depressive symptoms including sadness, anxiety and sleep problems were randomly assigned to take daily supplements of ethyl eicosapentaenoate, a form of the omega-3 fat EPA (eicosapentaenoic acid), or a placebo. Dosages of EPA were either one gram, two grams or four grams daily. All of the patients had been using either selective serotonin reuptake inhibitors (SSRIs) such as Prozac or one of the older tricyclic antidepressants, with poor results. They continued to take the drugs throughout the 12-week duration of the study. By the study's end, 69% of the patients taking one gram a day of EPA in addition to their medications had exhibited a 50% improvement in symptoms, while only 25% of those in the placebo group showed comparable improvement. Higher doses did not lead to greater improvements. Clinical measures of depression, anxiety, sleep quality, lassitude, suicidality and libido all improved.

-Melissa Block

Aged garlic extract protects the liver from painkiller's toxicity

Acetaminophen kills pain but overdoses destroy the liver. Recent reports show that thousands of Americans unwittingly take potentially fatal doses of acetaminophen, also known as Tylenol.

Acetaminophen's toxicity is due to its conversion to a free radical producing compound, which is normally detoxified by binding to liver glutathione, a cellular antioxidant. Overdoses of acetaminophen deplete glutathione supplies and the liver goes into failure.

Studies show that aged garlic extract protects the liver and may act as an antidote to acetaminophen poisoning. Aged garlic extract (Kyolic), made from garlic by slow extraction and aging, induces production of glutathione in cells and scavenges free radicals. Its water-soluble sulfur compounds, S-allyl cysteine and S-allyl mercaptocysteine, are potent antioxidants.

In mice, S-allyl mercaptocysteine given before or after injecting toxic amounts of acetaminophen, prevented liver damage, showing that the aged garlic component can both prevent toxicity and act as an antidote. S-allyl cysteine also showed protection.

In a human study, volunteers ingested 10 ml/day (that is, 3000 mg/day) aged garlic extract for three months. These people were given one gram of acetaminophen before the garlic course, at each month's end and a month after the study. Aged garlic extract enhanced acetaminophen detoxification, indicating its potential benefits in humans, against the painkiller's toxicity.

While it is best to avoid overdoses of acetaminophen, it is wise to consider preventive measures. Aged garlic extract, an odorless dietary supplement, expedites acetaminophen detoxification. Its dual action as protector and antidote can help save the liver from damage.

-Carmia Borek, Ph.D.

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