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Life Extension Update Exclusive

Better than testosterone?

The April 2004 issue of the journal *Urology* published the findings of Italian researchers that the amino acid carnitine was more active than testosterone in improving symptoms of aging in men, such as sexual dysfunction and depression, associated with the decline of androgenic hormones.

One hundred twenty men between the ages of 60 and 74 with symptoms of low testosterone were randomized to receive 160 milligrams orally administered testosterone undecanoate, 2 grams propionyl-L-carnitine plus 2 grams acetyl-L-carnitine per day, or a placebo for a six month period. Prostate-specific antigen, prostate volume, nocturnal penile tumescence, total and free testosterone, prolactin, luteinizing hormone, erectile function scores, depression, fatigue and other parameters were assessed before treatment, at three months, and after the treatment period.

Erectile function, sexual desire, sexual satisfaction and nocturnal penile tumescence increased over the course of the study in the group receiving testosterone as well as the group receiving carnitine. In addition, the group receiving carnitine experienced an increase in orgasm and general sexual well-being. Erectile function and nocturnal penile tumescence were significantly more improved in this group than in those receiving testosterone. While both treatments lowered depression scores, carnitine's effect was greater.

Predictably, treatment with testosterone increased serum total and free testosterone and decreased luteinizing hormone levels, but carnitine's effect on these hormones was not significant. Treatment with carnitine was not associated with an increase in prostate volume as was testosterone treatment after six months. PSA levels did not increase in any of the groups.

Although tissue carnitine levels have been found to be positively associated with sex hormone levels, the findings of this study show that the compound's action is not strictly linked to sex hormone blood levels. Carnitine's mechanism of action against reactive oxygen species (ROS) is different than conventional anti-ROS compounds tried for conditions associated with male aging, which may help explain its effectiveness.

Protocol

Male Hormone Modulation

A remarkable amount of data has been compiled indicating that many of the diseases that middle-aged men begin experiencing, including depression, fatigue, abdominal weight gain, alterations in mood and cognition, decreased libido, erectile dysfunction, prostate disease, and heart disease are directly related to hormone imbalances that are correctable with currently available drug and nutrient therapies. The onset of these symptoms usually appears in the early 50s, although with smokers the onset is significantly earlier

Before beginning testosterone replacement, comprehensive blood testing is necessary to determine liver-kidney function, and levels of glucose, minerals, lipids, thyroid, free and total testosterone, estradiol, DHT, DHEA, PSA, homocysteine, LH (optional), and SHBG (optional). These tests may be done at your doctor's office or they can be performed directly at a laboratory in your area. Call 1-800-208-3444 for information about ordering these tests on your own. A digital rectal exam is also recommended to eliminate the possibility of prostate cancer. Natural testosterone is highly recommended over synthetic types. Nutritional supplements may be added to the diet depending upon test results that can prevent testosterone from cascading into estrogen and DHT.

The following supplements are recommended:

1. Super MiraForte containing chrysin, piperine, nettle, and muira pauma boosts free testosterone and suppresses estrogen by acting as a mild aromatase inhibitor, 4 capsules daily.
2. Saw Palmetto/Nettle Formula helps to inhibit SHBG and reduce the effects of excess estrogen, 2 capsules daily.
3. Indole-3-carbinol (IC3) helps neutralize dangerous estrogen metabolites (16-hydroxyestrone), 200-400 mg daily.
4. Zinc functions as an aromatase inhibitor in some men, 80-90 mg daily.

<http://www.lef.org/protocols/prtcl-130.shtml>

Featured Products of the Week

Acetyl-L-carnitine capsules

A major cause of aging is the deterioration of the energy-producing components of the cell which results in reduced cellular metabolic activity, the accumulation of cellular debris, and eventual death of the cell.

The amino acid L-carnitine helps to maintain cellular energy metabolism by assisting in the transport of fat through the cell membrane and into the mitochondria within the cell, where these fats are oxidized to produce the cellular energy ATP.



<http://www.lef.org/newshop/items/item00449.html>

Super Miraforte with Maximum Strength Chrysin

As you grow older, the testosterone responsible for libido tends to bind to globulins in the blood instead of stimulating cell receptor sites throughout the body. Natural plant extracts have been shown to enhance sexual desire, performance, and gratification. These extracts also have been shown to be free of side effects. Life Extension offers a standardized muira puama extract combined with a potent nettle root extract, zinc, Peruvian ginseng (maca), and chrysin in a preparation called Super MiraForte. This product is for use by men only.



<http://www.lef.org/newshop/items/item00615.html>

Blood Test Sale through June 14 2004

The Most Comprehensive Tests for Women and Men

These are the most popular tests members order. For those who want to better evaluate their health status, Life Extension has put together a panel of the most important tests for men and women as follows:

Male Life Extension Panel

- CBC/Chemistry Profile
- DHEA
- PSA (prostate specific antigen)
- Homocysteine
- C-reactive protein (High-sensitivity)
- Free Testosterone
- Estradiol
- Total Testosterone

Nonmember price: \$400.00, member sale price: **\$224.00**

Female Life Extension Panel

- CBC/Chemistry Profile
- DHEA
- Estradiol (an estrogen)
- Homocysteine
- C-reactive protein (High-sensitivity)
- Progesterone
- Free Testosterone
- Total Testosterone

Nonmember price: \$400.00, member sale price: **\$224.00**

<http://www.lef.org/bloodtest/>

If you have questions or comments concerning this issue or past issues of Life Extension Update, send them to ddye@lifeextension.com or call 954 766 8433 extension 7716.

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