THE BETTER HEALTH NEWS

ITESTOSTERONE AND THE HEART

An animal study, appearing in the journal Circulation, (2007; 116(21): 2427-34) indicates that physiologic testosterone injections may decrease arterial plaquing. The study involved 33 feminized mice (mice with a nonfunctional androgen receptor and low circulating levels of testosterone). It was found that physiologic doses of testosterone increased HDL production and reduced fatty streak formation on arterial walls. Testosterone injections were given to men with low testosterone in a study published in Atherosclerosis (1996;121:35-43), and it was found to help lower total cholesterol and LDL cholesterol. Interestingly, the injections did not affect HDL levels. In a separate study, HDL levels were lowered with testosterone injections. according to research appearing in the International Journal of Andrology (1995;18:237-242). In this study the volunteers were healthy, and had normal testosterone levels.

Other research appearing in *Hypertension Research* (2007 Nov;30 [11]:1029-34) looked at testosterone levels in 187 men and compared the hormone levels to the health of the vascular endothelium (lining). Elasticity of the blood vessel lining

was evaluated using ultrasound. Low testosterone levels correlated with poor vessel elasticity and the association held true regardless of age, blood pressure, weight, cholesterol levels or other cardiac risk factors.

Testosterone seems to benefit men with heart failure. A double-blind, placebo controlled study appearing in the European Heart Journal (2006; 27(1): 57-64) looked at the relationship between testosterone and heart failure. In the year long, study, 76 men with moderate to severe heart failure were randomized to receive either a testosterone patch or a placebo. At the end of the 12 months, 35% of the subjects receiving the testosterone improved by one NYHA class. Overall, the testosterone improved the ability to exercise and quality of life. Another double-blind, placebo controlled study appearing in Heart (2004;90:446-447), found that testosterone injections improved walking distance in congestive heart failure patients. Peruvian Maca root and Velvet Deer Antler and has increased testosterone levels in clinical studies.

TO YOUR HEALTH

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HOLEH

2

5

6

LOWERING CRP Levels

LUPUS 4

HEALTH Questionnaire

FATTY ACIDS DURING PREGNANCY

LOWERING CRP LEVELS

CRP is C-reactive protein; it is a globular protein that increases when there is tissue damage or inflammation. Research appearing in *Clinical Chemistry* (2008 Feb;54 (2):335-42) verifies this. CRP is also associated with depression, cognitive decline and stroke, according to a meta-analysis of 19 studies appearing in *Lancet Neurology* (2005; 4(6): 371-380).

C-reactive protein (CRP) also turns out to be a good predictor for cardiovascular disease. A study appearing in the *Journal of the American Nutraceutical Association* (2005;8(1):43-44), involving more than 27,000 women, found that CRP was a better predictor of cardiovascular disease than LDL (bad) cholesterol.

High CRP levels are actually associated with increased mortality from all causes. A CRP level greater than 3 mg/L in men was found to increase the likelihood of death by nearly two-fold, according to research appearing in *Clinical Chemistry* (2008 Feb;54(2):335-42). High CRP levels increased the likelihood of heart attack by a factor of 2.15 and increased the likelihood of cancer by a factor of 1.65.

Omega-3 fatty acid consumption may play a role in lowering CRP levels. In the journal, *Nutrition Research* (2008; 28(5):309-14), a cross-sectional study involving over 440 Japanese women found that dietary intake of omega-3 fatty acids was inversely proportional to CRP levels.

Diet may well affect CRP levels. A study appearing in the Annals of Nutrition and Metabolism (2006; 50 (1): 20-4) examined the serum CRP (as well as lipid levels and other markers) after subjects ate a Mediterranean type of meal. Eighty men (with no health problems) consumed a Mediterranean meal (1,000 calories, 61% of the fat was monounsaturated). On another occasion they ate a typical Western diet (1,000 calories with 57% of the fat being saturated fat). The change in blood levels was compared to changes made after eating a more typical Western diet. Increase in blood lipids and blood sugar were similar, but the CRP was lower after the Mediterranean meal. The Mediterranean meal also increased carotenoids (plant antioxidants and vitamin A precursors) and human serum paraoxonase (also called PON1—it can protect low density lipoprotein (LDL) from oxidation).

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Dietary fiber may also help to lower CRP levels, according to research appearing in the *American Journal* of *Clinical Nutrition* (2006; 83(4): 760-6). Supplementation may also help lower CRP levels. Research appearing in the *European Journal of Nutrition* (2007 May 3; Epub ahead of print) found that magnesium supplementation lowered CRP levels in patients with heart failure. Research appearing in *Free Radical Biology and Medicine* (2008 Oct 10; Epub ahead of print) found that vitamin C supplementation reduced CRP levels in 396 healthy subjects. Vitamin E, on the other hand, did not have this effect.

Since CRP is an inflammatory marker, it stands to reason that things that reduce inflammation should have a favorable effect on levels. Dietary changes that favor a reduction in inflammation should be valuable, no matter what therapy is being undertaken.



LUPUS

A randomized, double-blind, placebocontrolled study appearing in Annals of the Rheumatic Diseases (2008;67:841-848) looked at the effect omega-3 fatty acids had on disease activity in systemic lupus erythematosus (SLE). The study lasted 24 weeks and the 60 SLE patients were given either omega-3 fatty acid supplement (3g per day) or a placebo. Disease activity was measured using the revised Systemic Lupus Activity Measure (SLAM-R) and the British Isles Lupus Assessment Group index of disease activity SLE (BILAG). Endothelial function was measured using flow-mediated dilation (FMD) of the brachial artery; in other words, the health and suppleness of the cells lining the artery were measured. The level oxidative stress was also measured. Measurements were taken at baseline, 12 weeks and at 24 weeks.

Supplementation with omega-3 fatty acids improved SLAM-R and BILAG scores, as well as improving oxidative stress measurements. Researchers concluded that low dose supplementation with fish oil has a therapeutic effect on SLE patients.

A study appearing in *Photodermatology, Photoimmunology and Photomedicine* (2008; 24(5): 260-7) found that patients with cutaneous lupus erythematosus (CLE) tended to be deficient in vitamin D, possibly because of restriction to sun exposure. Low vitamin D levels were found in 65% of the 52 patients involved in the

study. Another study appearing in the American Journal of Medical Science (2008; 335(2): 99-104) looked at 37 female patients with systemic lupus erythematosus (SLE). The study found lower vitamin D status was associated with higher disease activity. Research appearing in Osteoporosis International (Epub ahead of print, July 4, 2008), shows a possible link between systemic lupus erythematosus (SLE) and low vitamin D levels. The cross-sectional study compared serum vitamin D levels (25(OH)D) in 26 healthy controls and 36 patients with SLE. Low vitamin D levels were more prevalent in the SLE patients than in the controls. Vitamin D is a synergist to calcium and magnesium. These products can also be used with hypotension, diastolic para-thyroid dysfunction, bone healing, osteoporosis, patients who avoid the sun or are housebound, fibroids and endometriosis.

A small observational study appearing in the *Annals of Rheumatic Disease* (2004;63:1501-1503) looked at three patients diagnosed with lupus. The patients were tested, and found to have gluten sensitivity. The article states that in patients with SLE, the prevalence of antigliadin antibodies has been reported to be 23%. It goes on to state that gluten sensitivity is a possibility in those with autoimmune type disorders and should be considered as a differential diagnosis.

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FATTY ACIDS DURING PREGNANCY

According to research appearing in the *European Journal of Nutrition* (published online, ahead of print Dec. 19, 2007), the amount of docosahexanoic acid (DHA) found in blood in the umbilical cord during pregnancy has a positive association with the child's motor function later in life. DHA levels are also associated with a lowered risk of post partum depression.

The study followed over 300 children for a period of seven years following birth. Children were evaluated using the Maastricht Motor Test. Children with higher levels of DHA in the umbilical blood scored higher on the test.

This supports other research appearing in Archives of Disease in Childhood (Fetal and Neonatal Edition) (published online Dec. 21, 2006), which found that omega-3 fatty acid supplementation in the pregnant mother resulted in increased hand-eye coordination, improved scores for language comprehension, a tendency to use longer sentences and a better vocabulary when the children were tested at 2 ½ years. Seventy-two children were tested; 33 in the group supplemented with fish oil and 39 in the control group. They were evaluated with the Griffiths Mental Development Scales, the Peabody Picture Vocabulary Test and the Child Behaviour Checklist.