

Austin Quan Yin Newsletter

The Better Health News

Special Interest Articles:

- Pain medication and kidney disease
- Antioxidants and surgery
- Testosterone and the heart
- Vitamin D and sunlight
- Lignans and breast cancer
- Diet and asthma
- Testosterone and diabetes

Magnesium Levels and Heart Surgery

Research appearing in the *American Heart Journal* (June 2003;145(6):1108-1113) found a connection between low serum magnesium and adverse events following cardiac surgery. Low serum magnesium was defined as being less than 1.8 mmol/l in any of the eight days prior to the surgery. Of 957 patients, 12.3% of the patients with low

magnesium had an adverse event following surgery compared to only 9.2% of patients with normal magnesium levels. There was also double the incidence of Q-wave myocardial infarction and all-cause mortality rate as long as one year after surgery.

Swine Flu? No Vaccine? What to do.

You can't turn on the television and not hear about the swine flu. A vaccine may be months away; besides, there are still some who prefer not to be vaccinated.

The idea behind vaccines is to confer immunity to a specific virus. Since this is not an option, why not take steps to improve general immunity. We hear that half of Europe died during the Bubonic Plague in the 14th century. That means that the other half didn't die—better immunity.

So you want to enhance your immune system as much as possible. First do all the things your mother told you: wash your hands before eating, eat a good diet, and get plenty of rest (stress really puts a strain on the immune system and can increase your chances of getting sick). Also, supplementation often helps with immunity: Vitamin C, is

antiviral and antioxidant. It protects your cells from chemical stress and from viruses. Vitamin A is a much neglected immune support nutrient. Research shows that chemical exposure, and bacterial and viral exposure reduces vitamin A levels (get professional help before taking vitamin A, because too much of it can be toxic). Arabinogalactan can be purchased as a powder. They exist in high amounts in herbs that boost the immune system like: Echinacea purpurea, Baptisia tinctoria, Thuja occidentalis, Angelica acutiloba and Curcuma longa. In short, it is found in herbs that boost the immune system.

The idea is to improve your body's infrastructure. Fortify your immune system and the chances of getting sick decrease.

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Pain Medication and Kidney Disease

People with kidney disease who regularly take aspirin or acetaminophen may increase their risk of developing kidney failure, According to research published in the *New England Journal of Medicine* (December 20, 2001;345:1801-1808) the use of aspirin or acetaminophen may increase the risk of kidney failure in those with existing kidney disease. Kidney patients who took these drugs frequently (at least twice a week for 2 months) were two to three times more likely to have the beginning stages of chronic kidney

failure than those who do not regularly use pain medication, according to researchers. Individuals who took either aspirin or acetaminophen regularly were 250% more likely to be diagnosed with chronic renal failure, compared with individuals who did not use these painkillers. The researchers found that the risk rose in with the amount of either drug taken over a lifetime. This study and others have found that the risk of kidney failure linked to pain medication is minimal in those without pre-existing kidney disease.

Antioxidants and Surgery

Supplementation with antioxidants and other nutrients may be beneficial to patients undergoing surgery. A randomized, double-blind, placebo-controlled study, appearing in the journal *Free Radical Biology and Medicine* (2009; 49(5): 599-606) involved men having surgery to repair the anterior cruciate ligament (ACL), in the knee. For the two weeks prior to the surgery the control group received a placebo and the test group took 500 mg of vitamin C and 200 IU of vitamin E twice each

day. They continued to take the supplements for 12 weeks after the surgery. The group receiving the supplement had lower levels of a chemical marker indicating inflammation (IL-10, a proinflammatory cytokine). This may possibly mean that supplementation may lead to less inflammation and less muscle atrophy post-surgery.

Testosterone 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 given to men with low testosterone in a study published in *Atherosclerosis* (1996;121:35-43), and they were found to help lower total cholesterol and LDL cholesterol. Interestingly, the injections did not affect HDL levels. HDL levels were lowered with testosterone injections, according to research appearing in the *International Journal of Andrology* (1995;18:237-242), but 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, double-blind, placebo controlled 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.

In men, testosterone levels decline around the age of 30 and by age 80 may be down to 20% of someone in their 20s. Men with low testosterone tend to have less stamina, reduced muscle mass and reduced libido. They can also have cognitive problems as well as depression and anxiety. The thing you really notice in men with low testosterone levels is a lack of initiative—they fit the stay-at-home, couch potato stereotype. They may say things like, “I used to like to work on the car (go on a hike, go dancing, work around the yard, etc.), but I really don’t feel like doing that anymore.”

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Vitamin D and Sunlight

It is dangerous to get a sun burn or have “excessive” exposure to the sun. But the sun is necessary for vitamin D metabolism. The band of radiation between 290 and 315 nm is necessary for the conversion of provitamin D₃ to previtamin D₃. Eventually the previtamin D₃ is thermally converted in the skin. A sun block rated as low as SPF 8 can stop this process.

Vitamin D deficiency is associated with a risk for osteoporosis, diabetes, high blood pressure, cancer, and auto-immune diseases such as multiple sclerosis. Inadequate vitamin D is also harmful for developing fetuses and is the cause rickets of in children.

One study, in the July-August, 2006 issue of *Anticancer Research*, suggests that sunlight and the production vitamin D may reduce the risk of several cancers. There are many other studies that indicate that vitamin D may protect us from cancer.

Activated vitamin D is a steroid hormone that has an effect on immunity. It reduces inflammatory chemicals (cytokines) and increases the effectiveness of certain white blood cells. It stimulates potent antimicrobial peptides found in white blood cells and in the cells lining the respiratory tract. In researchers the British journal, *Epidemiology and Infection* (2006 Dec; 134(6):1129-40) propose that the reason flu season is in the winter may be because low sunlight and low vitamin D levels. Cod liver oil, a source of vitamin D, reduces the incidence of viral infections. Treating children with vitamin D reduced the incidence of respiratory infections.

According to the *Mayo Clinic Proceedings* (December 9, 2003), vitamin D deficiency is one possible cause of persistent and vague musculoskeletal pain. A study of 150 children and adults suffering from vague musculoskeletal pain performed at the University of Minnesota found that 93% of the subjects were vitamin D deficient. In a separate study, conducted in Saudi Arabia, a vitamin D deficiency was found in a group of chronic back patients. All the patients were given cholecalciferol for three months, which

improved the chronic pain. The subjects were given doses that are considered toxic (5,000 to 10,000 IU, which is between two and three times the toxic dose).

Research appearing in the *Archives of Internal Medicine* (2005;165:1246-1252), suggests that there may be a connection between low levels of vitamin D and calcium, and PMS. Earlier studies have shown that the blood levels of vitamin D and calcium were lower in women with PMS than in women without PMS.

According to research printed in the *Journal of Clinical Nutrition*, (2000;130:2648-2652) vitamin D deficiency may be a factor in inflammatory bowel disease (IBD). Researchers tested this idea in mice bred to have a tendency for IBD. Vitamin D deficient mice rapidly developed diarrhea and a wasting disease, and died. The mice with adequate vitamin D did not suffer from diarrhea and wasting. Supplementation with vitamin D (1,25-dihydroxycholecalciferol) for as little as two weeks actually blocked the symptoms and gave relief to mice that already had IBD.

Researchers at Penn State and Helen Hayes Hospital in New York conducted a small study that has shown that a daily dose of 1000 IU of vitamin causes changes in blood chemistry that indicate positive effects for multiple sclerosis patients. Also, in the Jan. 13, 2004 issue of *Neurology* an analysis of data from the Nurse's Health Study indicates that vitamin D may have a protective A dose of 400 IU or more of vitamin D per day reduced the likelihood of developing MS by 40% when compared to subjects who used no supplements. The study involved 187,563 women, 173 women developed MS during the study. Earlier studies on mice have supported this idea that vitamin D may be a deterrent to MS. Some researchers have linked low vitamin D levels to MS. MS exists mostly in Northern latitudes where there is less sunlight (hence less vitamin D).

Lignans Lower Breast Cancer Risk

Lignans are phytoestrogens with antioxidant activity. Lignans are from the cell walls of plants and are found in a variety of foods, including flax seeds, soybeans, whole grain cereals, rye, broccoli, pumpkin seed and some berries. A recent prospective study, appearing in the *Journal of the National Cancer Institute* (2007; 99(6): 475-86), analyzed the lignan intake of 58,049 postmenopausal French women. There was a link

between lignan intake and lower breast cancer risk. Intake was assessed in the women, who were not taking any sort of soy isoflavone supplement, with a self-administered dietary history questionnaire. The women in the top quartile of lignan intake had a 17% lower risk of developing breast cancer than the women in the quartile with the lowest lignan intake.

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Diet, Asthma and Allergies

Approximately 20 million Americans have asthma; nine million of them are under the age of 18. More than 70% of the people with asthma also suffer from allergies, with 10 million of the patients have asthma specifically because of their allergies. The number of asthma patients has been growing. The prevalence of asthma increased by 75% between 1980 and 1994; there was an increase of 160% in children under the age of five.

Research appearing in the journal *Thorax* (2007;62:677-683) studied children in rural Crete and the relationship between asthma and allergy with diet. It was a cross-sectional survey involving 690 children between the ages of 7 and 18. Allergic and respiratory symptoms were determined by a questionnaire filled out by the parents.

They were also given skin tests for 10 common airborne allergens. A food frequency questionnaire was given to determine adherence to a Mediterranean diet, using a scale with 12 dietary items.

It was found that 80% of the children ate fresh fruit and 68% ate fresh vegetables at least twice each day. A high grapes, oranges, apples and fresh tomatoes did not seem to lower the incidence of allergy, but did lower the incidence of wheezing and rhinitis. Similarly, consumption of nuts seemed to be associated with less wheezing. Margarine consumption was associated with increased wheezing and allergic rhinitis.

[The key to longevity:] Keep breathing—
Sophie Tucker,
newspaper
reports, Jan 13,
1964

Low Testosterone in Male Diabetics

Symptoms of low testosterone include reduced libido, erectile dysfunction, lack of initiative, increased abdominal fat, reduced muscle tone and loss of bone density. Low testosterone can also adversely affect mood and cognition. Research appearing in the *Journal of Clinical Endocrinology Metabolism* (November 2004;89(11):5462-8) has shown a link between type 2 diabetes and hypogonadism (low testosterone) in men. The study looked at over 100 men with type 2 diabetes and found that 33% were hypogonadal. The low testosterone levels were not necessarily linked to obesity, as about 30% of the lean patients had low testosterone.

There seems to be a link to insulin resistance and low testosterone. Another

cross-sectional survey of 580 type 2 diabetic men and 69 men with type 1 diabetes that appeared in the *Journal of Clinical Endocrinology Metabolism* (May, 2008; Vol. 93, No. 5 1834-1840), looked at insulin resistance and low testosterone levels. Type 2 diabetes is the result of insulin resistance. Type 1 diabetics are incapable of producing insulin. The study found that 43% of the type 2 diabetics had reduced total testosterone and 57% had a reduced calculated free testosterone. Only 7% of the subjects with type 1 diabetes had low total testosterone. The calculated free testosterone levels were low in 20.3% of the subjects with type 1 diabetes.

