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Austin Quan Yin Newsletter

The Better Health News

Special Interest Articles:

- Folic Acid and Cognition
- Diabetes and Chromium
- Aging, Cancer and Vitamins
- Can Diet Soda Make You Fat?
- Stress
- Vitamin K and Bone Health
- Magnesium and Asthma

B₁₂ and Sleep

There are some small studies that show that vitamin B₁₂ supplementation may be beneficial to patients with problems sleeping. One study that appeared in the *Japanese Journal of Psychiatry and Neurobiology* (1991;45(1):165-166) looked at five patients between the ages of 14 and 60 with a variety of sleep problems, including insomnia, delayed sleep-phase syndrome, non-24-hour sleep-wake rhythm disorder and depression. The patients were successfully treated with 4.5 milligrams of vitamin B₁₂ per day, divided into three equal doses. Vitamin B₁₂ levels increased two to four fold during the therapy. Another study, that was presented at the 5th World Congress of Biological Psychiatry in 1991, had eight subjects between the ages of 12 and 63, with a variety of sleep-wake rhythm disorders. Two of the patients had 24-hour sleep-wake

rhythm disorder, four had delayed sleep-phase syndrome and two had insomnia. Patients were given 1.5 milligrams of vitamin B₁₂ three times per day. Symptoms improved in the patients with the sleep-wake rhythm disorder, in the patients with insomnia and in one of the patients with the delayed sleep-phase syndrome. In 1 case phototherapy was utilized at 2500 lux every morning for 2 hours when vitamin B₁₂ therapy was not beneficial during the first month. The light therapy produced a significant improvement in the sleep disorder. The authors of the second study noted that patients with sleep issues who respond to B₁₂ therapy are not necessarily deficient in vitamin B₁₂. It is also noted that the sleep-wake rhythm disorder relapsed several days or a few weeks after discontinuation of the medication.

Asthma and Chinese Herbs

Research appearing in the *Journal of Allergy and Clinical Immunology* (2009;123(2):297-306) reviewed studies that have looked at the effect traditional Chinese medicine (TCM) had on patients suffering from asthma. The herb *Radix glycyrrhizae* in combination with other TCM herbs has produced favorable results. One herbal formula

known as ASHMI (an acronym for antiasthma herbal medicine intervention) improved lung function and performed favorably when compared to prednisone. Another study looked at an extract of *Sophora flavescens* (also a component of ASHMI) also produced positive results, with no side-effects.

Folic Acid and Cognition

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A study published in the *Lancet* (2007 Jan 20:369(9557)208-16) involved 818 subjects who took either 800 mcg of folic acid per day, or a placebo for three years. The subjects had homocysteine levels that were between 13 and 26 micromoles per liter at the start of the study.

The group receiving the folic acid had an average 26% decrease in homocystine, and a five-fold increase in serum folate levels as compared to the control group. The two groups were tested for memory, sensorimotor speed, complex speed, information processing speed, and word fluency, both at the beginning and end of the study. The group that was supplemented with the folic acid outperformed the control group.

Earlier research that appeared in the *Journal of Nutritional Health and Aging*. (2004; 8(4):226-32 (ISSN: 1279-7707) looked at vitamin intake

and its relation to cognitive function and psychological well-being in over 1000 middle-aged Australian men and women. Specifically dietary intake of folic acid, vitamin B₆ and vitamin B₁₂ were beneficial. The subjects filled out questionnaires to determine dietary intake of these nutrients. The researchers concluded: “Vitamin B₁₂ and B₆ intakes may be positively related to the memory performance of middle-aged men and intakes at around the RDI are associated with better memory functioning for women. The investigation of the dose-response effects of B vitamin supplementation on cognition and mood in middle-aged men and women using objective measures of cognition and accounting for the influence of confounding factors such as age and education would be informative.”

Diabetes and Chromium

A placebo-controlled, single-blind study that appeared in the *Journal of Trace Elements in Medicine and Biology* (epublished ahead of print May 11, 2011) looked at chromium supplementation in 40 patients recently diagnosed with type 2 diabetes. Subjects were given either a placebo or nine grams of brewer's yeast (containing 42 mcg of chromium) for a

period of three months. Those in the treatment group experienced improvements in fasting blood sugar levels (197.6 prior to treatment and 103.7 after treatment) and in hemoglobin A1c levels (9.5 prior to treatment, 6.9 after). Triglycerides and cholesterol levels were also lower in the treatment group.

Aging, Cancer and Vitamins

An article appearing in the *Proceedings of the National Academy of Sciences* (2006; 103(47): 17589-94) discusses the importance of taking vitamin supplements to prevent DNA damage, cellular aging, degenerative diseases and even cancer. The need for supplementation is due to the fact that so many people consume nutrient-deficient processed foods. The body survives nutrient deficiency by allocating nutrients to keep vital cellular functions going. Long-term, deficiencies set the stage for degenerative diseases. The article cites evidence of nutrient deficiencies leading to diseases, such as cancer, that appear late in life.

Other research, appearing in the November 2007 issue of the *American Journal of Clinical Nutrition* looked at vitamin D levels and aging. The researchers compared telomere length with vitamin D levels in 2,160 women between the ages of 18 and 79. Telomeres are a part of the chromosome, and they tend to shorten with age. Long telomeres are associated with slower aging. High vitamin D levels were associated with longer telomeres. Low vitamin D is also associated with poor mood and cognition in older individuals. Research appearing in the *American Journal of Geriatric Psychiatry* (2006; 14(12): 1032-1040) looked at 40 subjects with mild Alzheimer's disease and 40 subjects without dementia and compared cognition and mood to serum vitamin D levels. Low vitamin D levels were associated with poor cognitive function

(according to the Short Blessed Test) and poor mood. Low vitamin E levels are associated with physical decline, according to research appearing in the *Journal of the American Medical Association* (January 23, 2008 Volume 299, Issue 3, Pages 308-315), which measured nutrients in older individuals. The researchers looked at 698 individuals living in Tuscany, averaging 73.7 years of age. A baseline examination was given and the individuals were followed for three years. The Short Physical Performance Battery includes three objective tests for physical function and was used to measure physical performance. The researchers found two things related to physical decline: low vitamin E (alpha-tocopherol) levels among people aged between 70 and 80, and being older than 81.

Omega-3 fatty acids, B vitamins, vitamin C and many other nutrients have been researched. They have also been shown to improve mental function, slow aging and decrease the incidence of disease. This makes sense when you realize that just about everything the body does is the result of a chemical reaction. Nutrition is where your body gets the raw materials for those chemical reactions. Improving nutrient status is one good way to slow the aging process and to improve the quality of life as you get older.

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Can Diet Soda Make You Fat?

Dieters, in their quest to consume fewer calories, often opt to drink diet soda instead of sodas with sugar in them. It turns out that drinking diet soda may not be a very good strategy for losing weight. Research was performed at the University of Texas Health Science Center San Antonio (and presented at the June 25, 2011 American Diabetes Association's Scientific Sessions) found a connection between diet soda consumption and girth.

The researchers monitored 474 subjects between the ages of 65 to 74 years for nearly a decade. They measured the weight, height, and waist circumference of the subjects every 3.6 years. They also kept track of diet soft drink intake.

They found that the weight and waist circumference of the subjects increased proportionally to the amount of diet soda consumed. "On average, for each diet soft drink our participants drank per day, they were 65 percent more likely to become overweight during the next seven to eight years, and 41 percent more likely to become obese," said Sharon Fowler, who was a faculty associate in the division of clinical epidemiology in the Health Science Center's department of medicine at the time.

The fact that something that does not have any calories can actually cause weight gain may change how we think about calories and weight loss. Another study, presented at the same meeting by Sharon Parten Fowler, Ganesh V. Halade, and Gabriel Fernandes showed a

connection between aspartame consumption and weight gain in mice. Mice fed food that was high in aspartame (an artificial sweetener sold under the brand name Nutrasweet) actually had higher blood sugar levels than mice not fed aspartame. Fowler, one of the researchers, postulated that aspartame could trigger an increase in appetite, but do nothing to satisfy it. It can interfere with the body's ability to feel full and can cause overeating.

Also, the taste buds may perceive that the drink is sweet, but the brain knows the difference. One study found that women could not tell the difference between sugar and Splenda in taste tests. When the brain was viewed with functional MRI scans, it was determined that the brain's reward center responded more completely to sugar than to artificial sweetener. "Your senses tell you there's something sweet that you're tasting, but your brain tells you, 'actually, it's not as much of a reward as I expected,'" Dr. Martin P. Paulus, a professor of psychiatry at the University of California San Diego and one of the authors of the study.

"Data from this and other prospective studies suggest that the promotion of diet sodas and artificial sweeteners as healthy alternatives may be ill-advised," said Helen P. Hazuda, Ph.D., professor and chief of the Division of Clinical Epidemiology in the School of Medicine. "They may be free of calories but not of consequences."

Stress

Stress can damage every system in the body and can even contribute to heart disease and death. It can also damage the immune system. Research appearing in *Stress Medicine* (1991;7:53-60) found that stress can decrease the activity of natural killer cells. Students who were under stress were more likely to come down with a cold, according to research appearing in the *New England Journal of Medicine* (August 29, 1991;325(9):606-612). Even AIDS patients fare better with less stress; an article that appeared the *Medical Tribune* (February 10, 1994), declared that AIDS patients who were pessimistic about their health became sick more quickly and died earlier than patients with a positive outlook.

Patients with other health issues also fare better when stress is reduced. A study that appeared in the journal *Digestion* (1991;50:36-42) found that patients suffering from irritable bowel syndrome responded to stress management. Stress can also

affect fertility, according to a study published in the *Medical Tribune* (December 1, 1994;16). Even cancer patients do better when stress management is part of the treatment. A study of 68 melanoma patients undergoing surgical treatment found that those receiving psychological counseling had a reduced rate of recurrence of melanoma and a lower death rate than those not receiving psychological intervention.

High cholesterol, high blood pressure, and heart disease are all linked to stress, according to an article published in the *Journal of the American College of Nutrition* (1992;11(5);609/Abstract 40). According to *Postgraduate Medicine* (January 1991;89(1):159-164), stress can be involved in coronary spasm, plaque formation, increased platelet aggregation, and thrombus formation. Stress has even been linked to sudden cardiac death.

The amount of peanut tolerated by the treatment group, 1710 milligrams (compared to 85 milligrams for the control group), may be enough to protect from accidental ingestion of peanut (a single peanut weighs about 100 milligrams).

Vitamin K and Bone Health

Research that appeared in the journal *Bone* (Epublished ahead of print, April 4, 2011) looked at the relationship between vitamin K status and bone density. The cross-sectional study found looked at 365 elderly subjects and found that the amount of vitamin K in the diet was significantly associated with bone mineral density. Subjects who increased their

intake of vitamin K experienced a decrease in the loss of bone density. It is possible that a higher intake of vitamin K by offer protection against bone loss.

Vitamin K status is important on bone health, and recent research has linked it to cardiovascular health as well.

Magnesium and Asthma

"Not everything that counts can be counted, and not everything that can be counted counts."

(Sign hanging in Einstein's office at Princeton)

Research conducted some years ago showed a relationship between low magnesium and the development of asthma. Also, intravenous magnesium has been used in emergency situations to stop an asthma attack. Recent research, appearing in the *Journal of Asthma* (2010;47(1):83–92), looked at the effect magnesium supplementation had on patients with asthma. The subjects of the study were 52 men and women between the ages of 21 and 55, who had been diagnosed with mild to moderate asthma. Subjects were given either a placebo or 340 mg of magnesium citrate each day for 6 1/2 months.

The group taking the magnesium had significant improvement in lung function and the ability to move air into and out of the lungs. Additionally, the group taking magnesium reported improved quality of life compared to the

placebo group. Both the control group and the group receiving the magnesium had similar levels of CRP (a chemical that is measured to indicate the amount of inflammation), and the amount of magnesium found in the blood cells and in the serum was the same for both the treatment group and the placebo group.

Adequate magnesium intake is of utmost importance, as it is critical to most ATP-dependent reactions. Magnesium is important for musculoskeletal health, proper cardiac and immune function, as well as the maintenance of healthy blood sugar levels. Dietary intakes below recommended levels are common.

