July, 2015
Volume 6, Issue 7

Austin Quan Yin Newsletter

Special Interest Articles:

Probiotics and Low Birth-Weight Infants

Research appearing in the *Journal of Perinatology* (epublished ahead of print March 22, 2012) looked at probiotic supplementation in infants with low birth weight. The subjects of the double-blind, placebo-controlled study were 31 low-weight infants. Postprandial (after meal) increase in time-averaged mean velocity (a measurement of intestinal blood flow) increased in the group given the probiotic supplements.

Eat Your Way to a Healthy Heart

Often we are told what not to eat in order to protect us from cardiovascular disease. It is nice when a study tells us how to protect the heart, and enjoy the process by eating a treat.

A recent study published in the *American Journal of Clinical Nutrition* (February 2008, Volume 87, Number 2, Pages 323-331) looked at the health benefits of berries; 72 middle aged subjects were divided into two groups. One group was used as a control, and was given sugar water, sweet rice porridge, marmalade sweets or sweet semolina porridge. The test group was given 100 grams of whole bilberries and 50 grams of nectar from lingonberries every other day. On the days they did not consume the nectar and the bilberries, they received 100 grams of a puree made from black currants or strawberries.

The study lasted for eight weeks. The group receiving the berries enjoyed a 5.2% increase in HDL (the “good” cholesterol), improvements in blood pressure and improvements in platelet function (ie, less likely to form clots).

Learn more about nutrition, natural health care and how to improve the length and quality of your life. Contact our office for more information.

Chemotherapy and Nutritional Support

The supplement also seemed to reduce the incidence of severe acute mucositis (painful inflammation and ulceration of the mucous membranes lining the digestive tract).

Research appearing in *Supportive Care in Cancer* (Epublished ahead of print March 28, 2012) looked at supplementation and its effect on inflammation in patients receiving chemotherapy. The subjects of the study were 31 patients with stage III or IV squalors cell carcinoma in the head or neck. Supplementation (containing amino acids, omega-3 fatty acids, RNA, vitamins and antioxidants, called Oral Impact®) was given during five days before each cycle of chemotherapy. Biological samples were collected at baseline, after five days of oral supplementation and before the last cycle of chemotherapy. Acute phase proteins levels, proteomic cytokines determination and urinary isoprostanes levels were used as inflammatory and oxidative stress biomarkers. Toxicities were followed up during radiochemotherapy. After five days of supplementation, there was a decrease in inflammation. The supplement also seemed to reduce the incidence of severe acute mucositis (painful inflammation and ulceration of the mucous membranes lining the digestive tract).

Nutrition, Stroke Risk and Recovery

Research appearing in *Nutrition*, *Metabolism, and Cardiovascular Diseases* (2005; 15(3):188-97) surveyed 755 subjects aged 65-99 years (361 men and 394 women). Emphasis was placed on diet. Information was obtained through dietary history interviews with the subjects, who were followed for up to 10 years. Serum vitamins and mineral elements were analyzed for the duration of the study.

The researchers found that a low intake of vitamin D and low serum vitamin D were associated with stroke when adjusted for other risk factors.

On the other hand, high dietary intakes of certain bioflavonoids (plant pigments that act as antioxidants) decreased the risk for acute myocardial infaction. Low levels of iron in the serum seem to increase the risk of both stroke and acute myocardial infarction. The results remained essentially unchanged when adjusted for additional major risk factors of atherosclerosis.

Research appearing in the *Archives of Internal Medicine* (2008 March 10:168(5):469-65) looked at magnesium levels in 26,000 Finnish men between the ages of 50 and 69 years. Researchers kept track of the magnesium intake of the group for 14 years. The men with the highest magnesium intake had a 15% lower risk of stroke (infarction) than those with the lowest magnesium intake.

A study appearing in the *European Journal of* Nutrition (2005; 59(12): 1367-1373) looked at 48 patients after an acute ischemic stroke. Within 12 hours of the event, patients were given either a combination of vitamins E (800 IU) and C (500 mg) or a placebo. They continued to take the supplement for 14 days. At the end of the two weeks the treatment group had higher levels of alpha tocopherol and ascorbic acid than the placebo group. They also had better total antioxidant capacity and lower C-reactive protein (CRP) levels than the control group. The supplementation may have an anti-inflammatory and protective effect.

Nutrition and the Nervous System

Alzheimer's disease, MS, ALS and other serious neurological diseases, may be considered to be incurable, but patients with these conditions may progress by taking steps to improve general health. Each patient and each disease state is different, but anyone suffering from any disease, no matter how serious, can benefit from taking steps to improve his or her general health.

Mark Goodman Ph.D. has some interesting observations of patients diagnosed with Alzheimer's disease. He believes that many patients diagnosed with Alzheimer's disease actually have dementia caused by a lack of vitamin B_{12} ("Are U.S. Lower Normal B12 Limits Too Low?" *Journal of The American Geriatric Society,* October, 1996;44(10):1274-1275).

A team of researchers at UCLA studied mice that were genetically predisposed to an Alzheimer-like disease. Researchers fed one group of mice a diet deficient in DHA (a fatty acid found in fish oil). Another group was fed a diet that was very high in DHA. After five months the mice were given a memory test. They were trained to find a platform in water. The platform was then submerged. The mice had to remember where the platform was in order to find it again. The mice fed the DHA did much better in finding the platform than those fed the DHA deficient diet. In many cases the DHA deficient mice swam in a circle on the edge of the tank and could not find the platform at all.

In a study, published in the journal, *Neurology* (March 2000;54:1265-1272) 3,385 Japanese American men ages 71-93 were surveyed and tested for dementia over a nine year period. Participants taking both vitamin E and C supplements regularly (at least once a week) in 1988, nine years into the study, were 88% less likely to have vascular dementia four years later. The group taking the supplements was also 69% less likely to have forms of dementia other than vascular, Alzheimer's related dementia or mixed forms of dementia.

A study performed on mice and published in the January 2002 issue of the *Journal of Neurochemistry* indicates that mice fed folic acid were more resistant to Parkinson's disease than mice fed a diet deficient in the vitamin. According to research published in the February 14, 2002 *New England Journal of Medicine,* high homocysteine levels can double the risk of dementia and Alzheimer's disease. The conversion reactions that change homocysteine to the more benign amino acids are dependent on vitamins B_6, B_{12} and folic acid.

A six-month double-blind, placebo-controlled study of 23 individuals with mild multiple sclerosis (MS) was performed at the University of California, San Diego (UCSD) School of Medicine. Physicians noted better performance on neuropsychological tests by patients who took Ginkgo biloba compared to those who took an inactive placebo. Past studies have shown that Ginkgo slows mental decline in Alzheimer's patients, but no previous studies have been done on MS patients.

The nervous system needs nutrients to ensure proper function. The function of enzymes and neurotransmitters, as well as the integrity of the nerve tissue are all affected by nutrition.

... many patients diagnosed with Alzheimer's disease actually have dementia caused by a lack of vitamin B_{12}

Nutrition and MS

Chronic diseases that do not enjoy good results from traditional medicine usually respond very well to natural therapies. This is not about "curing" the disease, but improving the quality of life. In natural health care you treat the patient, not the disease. With that in mind, there are some reasonable nutritional approaches to MS.

There are approximately 350,000 people in the United States with MS. A number of studies have shown that certain nutrients, while not offering a cure, may help improve function and quality of life in MS patients. There are a number of studies that look at vitamin D levels and their relationship to the disease. A review of studies published in the *Annals of Pharmacotherapy* (Jun 2006; 40: 1158 - 1161) concluded that vitamin D supplementation may reduce the chances for developing MS and may also reduce the incidence of exacerbations in patients who already have MS.

One study published in the journal *Multiple Sclerosis* (2009; 15(1): 9-15) found that vitamin D had a protective effect in women and that higher serum vitamin D levels were associated with a reduced chance of developing the disease, as well as reduced disability in those who already had the disease. A population-based study published in the *Journal of Neurology* (Volume 254, Number 5 / May, 2007) found an association between low serum vitamin D and the level of disability in MS patients. The authors recommend testing for vitamin D insufficiency, and supplementing where needed as part of the clinical management of MS patients. Another cross-sectional study that was published in the journal, Multiple Sclerosis (2008 Jul 24; [Epub ahead of print]), found that serum vitamin D levels may be inversely associated with relapse rates in patients with relapsing remitting multiple sclerosis.

Antioxidants have also been studied. In the journal *Biological Trace Element Research* (1990;24:109-117) a study was published that looked at the antioxidant status of MS patients. The authors of the research state that studies have shown MS to be associated with low levels of selenim and antioxidants like glutathione peroxidase (a selenium dependent enzyme) as well as antioxidants like vitamin C and vitamin E. Indeed, MS patients had higher levels of peroxidation metabolites (ethane and pentane) than healthy controls, according to research appearing in *The Nutrition Report* (September 1992;10(9):70). Also, during times of exacerbation, the ethane and pentane levels are higher. In another study that appeared in *Biological Trace Element Research*, 18 MS patients and 13 healthy patients (used as a control) were given 666 mg of vitamin C, 80 mg of vitamin E and 2 mg of sodium selenate, three times each day. The study found that MS patients had much lower glutathione peroxidase levels than the normal controls and that the supplementation drastically increased levels of the enzyme with no side-effects.

Carotenoids and Eye Health

Carotenoids are plant pigments that have antioxidant activity. The dominant carotenoids in the whole retina are lutein and zeaxanthin.

Carotenoids are plant pigments that have antioxidant activity. The dominant carotenoids in the whole retina are lutein and zeaxanthin. Zeaxanthin is concentrated in the macular region, whereas lutein is dispersed throughout the entire retina, according to Investigative Ophthalmology & Visual Science (1988 Jun;29(6):850-5). A recent article appearing in Nutrition Journal (2003, Dec. 11, 2:20) speculates that the intake of these carotenoids may help prevent macular degeneration. Low levels of these carotenoids seem to be related to a higher risk of macular degeneration. Studies are inconclusive. The Medical Journal of Australia (2006; 184 (9): 455-458) cites a large study that investigated the use of antioxidants (high doses of vitamin C, 500 mg; vitamin E, 400 IU; β-carotene, 15 mg) and zinc, 80 mg, with progression of AMD.33 They followed up 3640 participants for an average of 6.3 years. They showed that the use of antioxidants and/or zinc in the 2577 participants with a high-risk of age related macular degeneration (AMD) resulted in a reduced risk of disease progression. The results were not as conclusive in the lower-risk

CoQ10 and Heart Surgery

Bypass surgery produces oxidative stress, so it stands to reason that supplementing with antioxidants may improve surgical outcomes. Taking CoQ10 may be beneficial to coronary bypass patients, according to research appearing in the *Journal of Cardiothoracic and Vascular Anesthesia* (2008 Dec;22(6):832-9). The subjects of the study were scheduled for CABG surgery. The 30 patients were randomly assigned to receive either a placebo or between 150 -180 mg of CoQ10 per day for seven to ten days prior to the surgery. The group receiving the supplement has shorter hospital stays, fewer reperfusion arrhythmias, less need for blood product (and less mediastinal drainage) and less myocardial dysfunction than the control group.

Other research appearing in the *Journal of Thoracic and Cardiovascular Surgery* (January 2005;129(1):25-32) 62 coronary bypass surgery patients received 300 mg/day of CoQ10 for two weeks before surgery. Another group of 59 subjects received a placebo. In the group receiving the supplement, mitochondrial respiration was more efficient and mitochondrial tissue from the supplement group recovered from hypoxia more quickly than it did for the control group. In short, CoQ10 protected from oxidative stress.

"Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius -- and a lot of courage -- to move in the opposite direction." —

Einstein

Protect From Alzheimer's Disease

Eat your vegetables and protect yourself from dementia. Vegetables are high in folic acid; the word “folic’ comes from the word “foliage”. Adequate folic acid levels may protect you from dementia. The most common form of dementia is Alzheimer’s disease, affecting about 13 million people worldwide. By mid century the prevalence of Alzheimer’s disease is expected to quadruple.

A study appearing in the *Journal of Neurology, Neurosurgery and Psychiatry (*Published online ahead of print, doi 10.1136/jnnp.2007) found a connection between folic acid levels and the tendency for dementia. Researchers followed 518 elderly individuals (average age 73) for a 2.4 year period. At the beginning of the study, none of the subjects had dementia.

Homocysteine is an amino acid that is associated with various health problems, including osteoporosis and heart disease. The body needs folic acid and vitamin B_{12} to convert it to more useful products. In this study, some of the subjects had high levels of homocysteine, 17% had low vitamin B_{12} levels and 3.5% were deficient in folic acid. At the end of a 2.4 year period, 45 of the subject developed dementia; 34 of those were diagnosed with Alzheimer’s disease. The researchers noted that the development of dementia was much more likely in those subject with low folate levels and high homocysteine levels. So eat your vegetables, get plenty of folic acid and protect your brain.