

Austin Quan Yin Newsletter

The Better Health News

Special Interest Articles:

- Olive leaf extract
- Prayer
- Resveratrol
- Radiation
- Atherosclerosis
- Magnesium and CHF
- Crohn's Disease

Metformin and B₁₂

Metformin is a drug for people with type 2 diabetes; it was originally sold as Glucophage. Research appearing in *Revista da Associação Médica Brasileira* (2011 Jan-Feb; 57(1): 46-9) looked at 144 diabetic patients who were being treated with Metformin. Serum B₁₂ levels were below 125 pmol/L in nearly 7% of the patients. Levels in nearly 37% of the patients were between 125 and 250 pmol/L. Furthermore, B₁₂ levels were

negatively associated with the age of the patient and the length of time the patient had been taking Metformin. The authors felt that these results suggest that B₁₂ supplementation may be needed by diabetic patients who are taking Metformin. This may be especially true considering that the serum B₁₂ test is inadequate and misses many patients with poor B₁₂ status.

Probiotics and the Common Cold

Research appearing in the *International Journal of Sports Nutrition, Exercise and Metabolism* (2011 Feb; 21(1): 55-64) looked at the use of probiotics and their effect on the immune systems of 58 athletes. The 58 subjects of the study were randomly assigned to receive either a probiotic supplement (*Lactobacillus casei Shirota*) for a period of 16 weeks. The placebo group had 36% higher incidence

of upper respiratory infections (URTI) compared to the group receiving the supplement. According to the authors, "Regular ingestion of LcS appears to be beneficial in reducing the frequency of URTI in an athletic cohort, which may be related to better maintenance of saliva IgA levels during a winter period of training and competition."

Olive Leaf Extract and High Blood Pressure

The group receiving the olive leaf extract enjoyed an additional benefit, a significant reduction in triglyceride levels.

In a randomized, double-blind study published in *Phytomedicine* (2011 Feb 15; 18(4): 251-8) involved patients with stage 1 hypertension and tested the efficacy of treatment with olive leaf extract. Two groups of patients were treated with either Captopril or olive leaf extract. Captopril is in a group of drugs called ACE inhibitors. ACE stands for angiotensin converting enzyme. At the start of the study, the mean systolic (top number) blood pressure was 148.4 in the group receiving the drug and 149.3 in the group receiving the olive leaf extract. After eight weeks of treatment, the olive leaf extract performed comparably to the drug. The olive leaf extract decreased

the systolic blood pressure by 11.5, the Captopril reduced the systolic blood pressure by 13.7. The diastolic (bottom number) blood pressure was reduced 4.8 by the olive leaf extract and 6.4 by the Captopril. The group receiving the olive leaf extract enjoyed an additional benefit, a significant reduction in triglyceride levels. According to the authors of the study, "Olive (*Olea europaea*) leaf extract, at the dosage regimen of 500mg twice daily, was similarly effective in lowering systolic and diastolic blood pressures in subjects with stage-1 hypertension as Captopril, given at its effective dose of 12.5-25mg twice daily."

Can Prayer Heal?

Bush babies are also known as galagos or nagapies (nagapies means "little night monkeys" in Afrikaans). They are small, nocturnal primates native to continental Africa. According to some accounts, the name bush baby comes from either the animal's cries or appearance. The South African name nagapie comes from the fact they are almost exclusively seen at night. A study that appeared in *Alternative Therapy in Health and Medicine* (2006 Nov-Dec;12(6):42-8) that looked at the effect prayer had on healing in 22 bush babies.

The study involved 22 bush babies with chronic self-injurious behavior. They were divided into two groups, with members of the groups being matched by the severity and total area of their wounds. Both groups were given L-tryptophan as treatment. Prayer was directed at one group, daily for a period of four weeks. The second group acted as a control and did not have prayer directed toward it. The animals that were prayed for had a greater increase in red blood cells, hemoglobin and hematocrit. They also had a reduction in wound size when compared to the control group.

Resveratrol

Resveratrol is a phytoalexin that is found in certain plants. A phytoalexin is a compound that is produced by a plant to protect itself from invading microorganisms. Just as bioflavonoids, which are produced by plants as a protection from the oxidative stress of photosynthesis, can protect human cells when ingested, resveratrol may also be beneficial. There are a number of animal and in vitro studies that show resveratrol may have value to those with insulin insensitivity or heart disease, and may actually help to extend life. One study, appearing in *Current Biology* (2006; 16(3): 296-300) showed that resveratrol increased lifespan in fish in a dose dependent manner. Furthermore, resveratrol delayed the age-dependent deterioration of motor ability and cognitive skills.

Another study that appeared in *Nature* (2006; 444(7117): 337-42) found that resveratrol improved the health and survival of mice who were fed a high calorie diet. In that study, one group of mice were fed a normal diet, a second group was fed a high-calorie diet containing 60% fat, and a third group was fed the high calorie diet but was supplemented with resveratrol (22.4 mg/kg/day). The mice who were fed the high-fat, high-calorie diet developed high levels of insulin and

other diabetic markers. The mice who were given resveratrol along with the high-fat diet had better insulin sensitivity--comparable to the mice fed the normal diet.

There have been some human studies. A double-blind, placebo-controlled study was published in *Nutrition, Metabolism and Cardiovascular Diseases* (Epublished ahead of print July 31, 2010) looked at 19 overweight subjects. In this double-blind, placebo-controlled crossover study. The subjects were given either 30 mg, 90 mg or 270 mg of resveratrol daily for a week, or they were given a placebo. One hour after supplementation. Supplementing with resveratrol produced improvement of flow mediated dilation of the brachial artery was experienced in a dose-dependent manner. This may help to explain the cardiovascular benefits of red wine. Resveratrol was found to reduce oxidative stress and improve insulin sensitivity in type 2 diabetic patients. according to research that appeared in the *British Journal of Nutrition* (Epublished ahead of print March 9, 2011).

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Radiation Poisoning

The signs and symptoms of radiation sickness depend on the severity of the exposure. The measurement for radiation exposure is done in a unit called the gray (Gy). Symptoms will appear when the entire body receives a dose of 1 Gy or greater (a typical x-ray focuses 1/10 Gy to a small area of the body). A dose greater than 6 Gy is untreatable and usually fatal.

A dose between 1-2 Gy will produce nausea and vomiting within six hours. Within four weeks these patients will begin to experience weakness and fatigue. If the exposure is more severe (between 2-4 Gy), the patient will also experience hair loss, bloody vomit and stools, poor wound healing, infections and low blood pressure usually within one to four weeks. A more severe dose (between 2-6 Gy) will produce nausea and vomiting within two hours; the patient may also experience diarrhea, fever and headache. Severe exposure (8 Gy or higher) will produce nausea and vomiting within 10 minutes. Severe exposure will also immediately produce dizziness and disorientation, weakness, fatigue, hair loss, and bloody vomit.

Treatment starts with decontamination--removing all exposed clothing and washing the skin to remove any radioactive particles. This prevents further distribution of radioactive particles into the body.

Bone marrow damage is one of the long-term problems in radiation exposure. In moderate to severe exposure the patient has trouble with wound healing and infections. Using a protein based

medication, called granulocyte-colony-stimulating factor, promotes the growth of white blood cells and helps to offset the damage to the bone marrow.

Some substances are used to reduce the organ damage caused by radioactive particles. These treatments are for *specific* types of exposure. Potassium iodide (KI) is taken to prevent damage to the thyroid from radioactive iodine. Some people have been taking KI prior to exposure to prevent damage should they become exposed, some have the mistaken idea that KI is some kind of panacea. KI cannot prevent radioactive iodine from entering the body; it can protect only the thyroid from radioactive iodine, not other parts of the body. KI cannot reverse the health effects caused by radioactive iodine once damage to the thyroid has occurred. It also cannot protect the body from radioactive elements other than radioactive iodine—if radioactive iodine is not present, taking potassium iodide is not protective. Some people are allergic to iodine and may react badly to taking it. People with thyroid disease should not take iodine without first discussing it with a doctor.

Prussian blue is a dye that binds to radioactive cesium and thallium and allows the body to eliminate these specific particles. Diethylenetriamine acid (DTPA) binds to metals. DTPA will bind to plutonium, americium and curium and allows the body to eliminate these radioactive substances through the urine.

Dietary Reduction of Atherosclerosis

Atherosclerosis is produced by a combination of inflammation and pro-atherogenic lipids. It stands to reason that a mixture of anti-inflammatory substances may reduce the risk for cardiovascular disease. That idea was tested by an animal study that was recently published in the *Journal of Nutrition* (Epublished ahead of print March 16, 2011). The researchers produced a mixture containing resveratrol, lycopene, catechin, vitamin E, vitamin C and fish oil (also called anti-inflammatory dietary mixture, or AIDM by researchers).

Male human C-reactive protein (CRP) transgenic mice and female

ApoE* 3 Leiden transgenic mice were used in the experiment. The male and the female mice were each divided into two groups. One group was given a placebo and the other was given AIDM for a period of six weeks. The AIDM reduced the CRP and fibrinogen expression in the human CRP transgenic mice. It also reduced serum cholesterol and serum amyloid. The long-term treatment with the AIDM reduced atherosclerosis by 96% in the female ApoE* 3 Leiden transgenic mice, compared to the placebo group.

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Magnesium and Congestive Heart Failure

Research that appeared in the *American Heart Journal* (June 1993;125:1645-1649) looked at the effect IV magnesium sulfate had on patients with congestive heart failure. Magnesium was given intravenously to patients with congestive heart failure, arrhythmia and with serum magnesium levels lower than 2.0 mg/dl. The patients all had at least 10 premature ventricular depolarizations per hour as determined by a six hour ambulatory electrocardiograph reading. There was a significant decrease in

premature ventricular depolarizations from treatment with magnesium. A study that appeared in the *Journal of the American College of Cardiology* (1990;16(4):827-831) found 19% of a sampling of 199 patients with congestive heart failure had low serum magnesium. Considering that serum magnesium is a poor way to determine deficiency, it would be interesting to see what RBC magnesium levels were in this group of patients.

Crohn's Disease and the Pancreas

"Happiness is nothing more than good health and a bad memory."—
Albert Schweitzer

Patients with Crohn's disease may have decreased pancreatic activity. A study appearing in the journal, *Gut* (1990;31:1076-1079) compared the activity of amylase and lipase (pancreatic enzymes that digest carbohydrate and fat respectively) in patients with Crohn's disease and healthy controls. The 59 men and 84 women with the disease had less pancreatic enzyme activity than the 50 men and 65 women who did not have the disease. The lowest enzyme activity was found in those with the most extensive bowel involvement.

A number of studies have shown that patients with Crohn's disease tend to have consumed a lot of refined sugar prior to developing the disease. Research appearing in the *Scandinavian Journal of Gastroenterology* (1983;18:999-1002), *Epidemiology* (, January, 1992;3(1):47-52) and the *British Medical Journal* (September 29, 1979;2:762-764) support this. A study appearing in *Z*

Gastroenterol (January 1981;19(1):1-12) compared patients on a low carbohydrate, sugar-free diet to those eating a high carbohydrate diet. It was a small study, but 80% of the Crohn's disease patients on the low carbohydrate, sugar-free diet experienced improvement of symptoms. Four of the five patients on the high carbohydrate diet had to be removed from the study because their symptoms flared up.

Elaine Gottschall's model for Crohn's disease is one where the capacity to digest complex carbohydrates is overwhelmed. Carbohydrate is then broken down in the small intestine by bacteria, irritating the lining and further degrading the body's capability to digest carbohydrate. Her book, *Ending the Vicious Cycle*, goes into this mechanism in great detail and proposes a diet that is free of disaccharides and complex carbohydrates.

