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Austin Quan Yin Newsletter

Special Interest Articles:

Magnesium and 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.

Patients with congestive heart failure seem to benefit from magnesium supplementation. A double-blind, placebo-controlled study appeared in the *International Journal of Cardiology* (2009; 134(1): 145-7) that involved 79 patients with severe congestive heart failure. The subjects were randomly selected to receive either magnesium orotate or a placebo for one year. The survival rate was higher in the magnesium group (75.7% compared to 51.6% in the placebo group). Also, symptoms improved in 38.5% of the patients receiving magnesium. In 56.3% of the placebo group symptoms became more severe.

Drugs that are used by heart patients may deplete magnesium. Research in *Magnesium Bulletin* (1994;16(3):98-100) demonstrated that treatment with ACE inhibitors deplete magnesium.

Fish Oil and Heart Failure

Research appearing in *The Lancet* (DOI:10.1016/S0140-6736(08)61239-8, published online Aug 31, 2008 ahead of print) shows that fish oil is beneficial to patients with congestive heart failure. The double-blind, placebo-controlled study took place in over 300 cardiology centers in Italy, and involved over 7,000 patients diagnosed with heart failure. Half of the subjects took a daily fish oil capsule and half took a placebo.

Pain Medication and Heart Failure

Researchers found that patients who had filled at least one NSAID prescription were nearly 10 times more likely than those who didn't use the drugs to have a relapse of CHF.

Popular anti-inflammatory, pain-killing drugs (called NSAIDs—or non-steroidal anti-inflammatory drugs) may increase the risk of relapse in patients with heart failure according to a study published in the *Archives of Internal Medicine* (February 11, 2002;162:265-270). NSAIDs, a group of drugs that includes aspirin and ibuprofen, are often used to treat pain and inflammation.

The drugs will not create congestive heart failure (also called CHF), but there may be an association between the use of the drugs and relapse in patients already diagnosed with CHF. CHF occurs when the heart loses the ability to pump efficiently, creating fluid build-up in the body, including the lungs.

Aspirin is often taken to reduce the risk of heart attack, but some research has suggested that those who take other pain medications may increase their risk of heart failure. Researchers found that patients who had filled at least one NSAID prescription were nearly 10 times more likely than those who didn't use the drugs to have a relapse of CHF.

For certain patients, NSAIDs may indeed cause fluid retention and high blood pressure. Patients who have had angina, congestive heart failure, bypass surgery, heart attack, or angioplasty with stent placement should seriously consider safer alternatives.

Is Onion Soup Good for Your Heart?

Platelets in the blood are responsible for clotting. When we speak of platelet aggregation we mean the tendency of the platelets to clump together. Increased platelet aggregation can be a problem because clotting occurs too easily and it can create a tendency to develop atherosclerosis. A study that was published in the *British Journal of Clinical Nutrition* (2006; 96(3): 482-8) that looked at the effect consuming onion soup that was high in quercetin had on platelet aggregation. In the study, subjects consumed onion soup that was either high in quercetin (69 mg.) or low in quercetin (5 mg.). In the subjects consuming the high quercetin soup, platelet aggregation was inhibited.

Quercetin is a bioflavonoid. Bioflavonoids are a class of water-soluble plant pigments found in fruits, vegetables, and certain beverages that have antioxidant effects. Antioxidants are compounds that protect cells against the damaging effects of reactive chemicals known as free radicals. Free radicals can cause oxidative stress, leading to cellular damage.

Statins

Recently, it was found that one cholesterol lowering drug may actually contribute to plaque formation. Merck and Schering said that not only did Zetia fail to slow the accumulation of fatty plaque in the arteries, it actually seemed to contribute to plaque formation. Research on pravastatin appearing in the *Journal of the American Medical Association* (December 18, 2002;288:1998-3007,3042-3044) shows that the drug does indeed lower cholesterol, but does not reduce the risk of death or heart disease in those with moderately high cholesterol and high blood pressure.

While that is bad enough, especially considering the fact that the manufacturers delayed releasing this information, there may be worse news when it comes to cholesterol lowering drugs. Statin drugs not only block the formation of cholesterol, they block the formation of other substances as well, including the formation of CoQ_{10}. CoQ_{10} is an extremely important substance to the body. A study published in the journal *Diabetes Wellness* (May 2005;11(5):4) showed that giving CoQ_{10} to patients who take statins reduces muscle pain. Subjects in this study received either 400 IU of vitamin E or 100 mg. of CoQ_{10}. Eighteen of the 21 subjects receiving the CoQ_{10} (90%) experienced pain relief; this compared to three patients out of 20 in the vitamin E group. Co Q 10 levels decrease after taking a statin drug. In the June, 2000 issue of *Archives of Neurology* a study was published that showed a reduction in CoQ_{10} levels after the subjects took 80 mg. of a statin drug. The mean blood level of CoQ_{10} in the 34 participating subjects went from 1.2 mcg/ml to 0.62 mcg/ml.

Patients who experience muscle soreness on these drugs are advised to discontinue—they may be experiencing rhabdomyolysis, which is a breakdown of the muscles. The heart is mostly muscle and has high contents of CoQ_{10}. One five-year study, involving 126 patients showed improvement in congestive heart failure patients, with CoQ_{10} supplementation—without any adverse effects. Another study showed that coenzyme Q_{10} supplementation improved blood pressure, reduced left ventricular hypertrophy and improved exercise capacity in heart patients.

An article appearing in *The Lancet* (1998;352(Suppl. 1):39-41) notes that the incidence of heart failure has dramatically increased in the last three or four decades. The prevalence of heart failure increased by 70% between 1990 and 2000. Since statins adversely affect muscle and deplete CoQ10, it makes you wonder if there is a connection between statin use and heart failure.

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Congestive Heart Failure

About one in 56 Americans will experience heart failure, a life-threatening condition, according to the statistics on heart failure. Nearly five million Americans are currently living with congestive heart failure (CHF), with 550,000 new cases being diagnosed each year. Most CHF patients are over the age of 60, but 1.4 million are under the age of 60, with approximately one million patients between the ages of 40 and 59. More than 5% of adults between the ages of 60 and 69 have CHF.

Heart failure is responsible for 11 million physician visits each year and more hospitalizations than all forms of cancer combined. According to the statistics of heart failure, hospitalization for the condition has risen threefold in the past 30 years. The most common diagnosis in patients over the age of 65, over 875,000 hospitalizations occur a year. Overall, the statistics of heart failure indicate that over $23 billion is spent a year dealing with it. More than half of all CHF patients die within five years of diagnosis, and it contributes to approximately 275,000 deaths each year.

Current treatments are largely ineffective
Treatment for congestive heart failure largely depends upon the causes and symptoms. The main objective of the treatment for congestive heart failure is to diagnose the reasons, analyze the signs and nip the disease from flourishing. Removing excessive liquid from the lungs, systemizing the flow of blood and providing more oxygen to our body are the preeminent steps for the treatment for congestive heart failure. Furosemides (Lasix) or spironolactones are immensely helpful in controlling the extra fluid of body. In order to release the stress from heart or cure injured heart muscle beta blockers and ACE inhibitors are considered to be the best possible treatment for congestive heart failure. Self treatment for congestive heart failure entails adopting a healthy life style by improving the living conditions and environment.

Recommendations to CHF patients include the following:

- Various body organs, especially the legs are generally get swollen, so elevations of the legs are recommended.
- Don't consume a lofty quantity of salt in diet.
- Check your weight and blood pressure daily, and consider it as a prominent part of the treatment for congestive heart failure.
- Diabetes patients should check the level of their blood sugar regularly.

Let's face it, you can mitigate the problem, but if you are honest, there are no solutions here.

There are some natural health care treatments that are well-researched and offer benefits to patients with congestive heart failure. One of the best-researched supplements is CoQ_{10}. Some of the research is posted in the article on the back page.

Other supplements that are useful include carnitine, magnesium and thiamin (vitamin B_1). Natural health care carries with it very little (if any) risk, and often provides gratifying benefits.

Thiamin and Heart Failure

Patients on the diuretic furosemide (sold under the brand name Lasix) tend to be deficient in thiamin. A study appearing in *The American Journal of Medicine* (1991;151-155) measured thiamin status in 23 patients with congestive heart failure, and who were taking furosemide. A high thiamin pyrophosphate effect, which indicates thiamin deficiency, was found in 21 of the 23 subjects. Thiamin deficiency was only found in two out of 16 controls. This result was confirmed by other research appearing in the *Journal of the American College of Cardiology* (2006; 47: 354-61), which found that 33% of 100 hospitalized patients with congestive heart failure were thiamin deficient. Only 12% of healthy controls were found to be thiamin deficient.

Beriberi is the disease of thiamin deficiency. Wet beriberi affects the cardiovascular system and is characterized by an enlarged heart, and congestive heart failure. There is some research that indicates supplementation with thiamin may be of benefit to patients with congestive heart failure. A study appearing in *The American Journal of Medicine* (May 1995;98:485-490)looked at 30 patients with severe congestive heart failure who were also taking furosemide. In the double-blind study, the patients were given either IV thiamin (200 milligrams per day) or a placebo. The thiamin group experienced improvement in left ventricular ejection fraction--increasing by 22% in 27 patients who completed the full seven-week therapy. The authors of the study concluded that thiamin supplementation would be a beneficial addition to conventional therapy for congestive heart failure.

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Is Green Tea Good for the Heart?

A study that appeared in *Clinical Research in Cardiology* (March 10, 2010, epublished), looked at the effect epigallocatechin-3-gallate (also called EGCG, which is an antioxidant extract [polyphenol] from green tea) had on patients with amyloidosis involving the heart. Amyloidosis is a disease that occurs when proteins accumulate abnormally in the organs. Amyloid protein is an abnormal protein that is produced by cells in the bone marrow. Amyloidosis affects different organs in different people and can affect the heart, liver, spleen, kidneys or nervous system. The disease begins in the bone marrow. One of the roles of bone marrow is to make antibodies, which are proteins that help protect against infection. In amyloidosis, the body has trouble breaking down those proteins. The proteins accumulate and are deposited in various organs.

The subjects of the study were 59 patients who had amyloidosis, with cardiac involvement. The subjects were placed in one of two groups. One group consumed green tea, the other, acting as a control, did not. The group that consumed the green tea had a decrease in the thickening of the heart wall and a decrease in the size of the left ventrical. They also had improvement in cardiac efficiency (increase in the left ventricular ejection fraction). The control group enjoyed none of these improvements.

"Walking is man's best medicine".—Hippocrates

CoQ_{10} and Heart Failure

Recent research looked at the effect that coenzyme Q10 supplementation had on patients with heart failure. The heart contains high levels of coenzyme Q 10 and these levels are found to be lower in people suffering from congestive heart failure. According to an article appearing in *The Lancet* (1998;352(Suppl. 1):39-41) notes that the incidence of heart failure has dramatically increased in the last three or four decades. The prevalence of heart failure has increased by 70% between 1990 and 2000.

A double-blind, placebo-controlled study appearing in the *European Heart Journal* (2006 November;27(22):2675-81) had 23 subjects with stable, chronic heart failure. The study had four phases. In the first phase the subjects were given 300 mg of CoQ10 per day. In phase two, they received the supplement and supervised exercise training. In the third phase they received a placebo and in the final phase they received exercise training along with the placebo.

The researchers found that the CoQ10 supplementation improved the ability of cardiac arteries to dilate. It also improved the contractility of the left ventricle and generally improved the heart's functional capacity. The benefits of the supplementation were enhanced by exercise. This supports earlier studies. Coenzyme Q10 has been shown to be of value in patients with heart failure according to earlier research appearing in the journal *Biofactors* (2006; 25(1-4): 137-45) and the *European Heart Journal* (August 1, 2000).