

Austin Quan Yin Newsletter

The Better Health News

Special Interest Articles:

- Olive leaf extract
- Can prayer heal?
- Pain costs
- Omega-3 fatty acids vs pain medication
- Enzymes and dentistry
- Vitamin D and chronic pain
- Enzymes and pain

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.

Have You Checked Your Vitamin D Levels?

Testing for vitamin D in the serum is a very inexpensive test. If you have been labeled with fibromyagia, chronic pain, osteoporosis or any of a number of chronic health problems, it may be worth having someone check your vitamin D.

According to the Nov. 12, 2003 edition of the *Pain Management* issue of the *Journal of the American Medical Association*, the cost of treating pain unsuccessfully is \$61.2 billion

per year. This study shows that there may be, at least in some patients, a very simple answer for this common problem.

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.

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.

Pain Costs

For some reason doctors and patients seem to think that pain medications treat pain and inflammation. The fact is that they relieve pain. This seems like a subtle difference, but by a slight shift in attitude we can cut our health care costs.

An advertisement for a popular pain medication touts that taking it before intense physical activity will reduce the amount of pain caused by the activity. There are some problems with this thinking. Pain medications actually increase oxidative stress, so while they offer temporary relief, they actually promote an environment that favors pain and inflammation. NSAIDs can actually cause cartilage to break down, increasing the potential for injury. So many people take medication for arthritis pain, but they are trading short-term relief for long-term degeneration. One of the popular pain medications (classified as a Cox-2 inhibitor) actually doubles the chance of getting a heart attack.

Also, pain medications can lead to a host of other health problems. According to the July 27, 1998 issue of the *American Journal of Medicine*: "Conservative calculations estimate that approximately 107,000 patients are hospitalized annually for nosteroidal anti-inflammatory drug (NSAID)-related gastrointestinal (GI) complications and at least 16,500 NSAID-related deaths occur each year among arthritis patients alone. The figures for all NSAID users would be overwhelming, yet the scope of this problem is generally under appreciated"

The *New England Journal of Medicine* (December 20, 2001;345:1801-1808) published research that linked pain medication to kidney failure (in patients with existing kidney disease). An article published in the *New York Times* (January 29, 2002) covers concern of NBA players over the regular use of these medications. This is in the wake of Alanzo Mourning of the Miami Heat developing a kidney disorder and Sean Elliot needing a kidney transplant. Basketball players commonly take large amounts of NSAIDs before a game.

Taking pain medication can have an adverse effect on the cardiovascular system. According to the *Archives of Internal Medicine* (February 11, 2002;162:265-270), 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 congestive heart failure. According to research published in the *Archives of Internal Medicine* (October 28, 2002;162:2204-2208), frequent use of pain-relief medications may result in an increased-risk of high blood pressure in women.

The cavalier attitude our medical system has in treating one of the most common conditions, pain, can lead to further health complications and cost. How much more are we spending on health care because we don't choose natural methods for pain control first?

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Omega-3 Fatty Acids vs Pain Medication

One way to reduce inflammation is to “change the patient’s oil”. There is a large body of research showing that omega-3 fatty acids are anti-inflammatory. There is a good reason to choose omega-3 fatty acids over pain medication—blood pressure.

According to research published in the *Archives of Internal Medicine* (October 28, 2002;162:2204-2208), frequent use of pain-relief medications may result in an increased-risk of high blood pressure in women. These drugs are known as NSAIDs (non-steroidal anti-inflammatory drugs). Use of acetaminophen (Tylenol) was also monitored in this study. Acetaminophen is not an NSAID, it addresses pain, but not inflammation.

NSAIDs work by blocking hormone-like substances known as prostaglandins, some of which cause inflammation. Prostaglandins also dilate blood vessels. If they are chemically blocked by NSAIDs, blood vessels may narrow. This can lead to hypertension.

The health of 80,000 women, all of whom did not suffer from hypertension was monitored. Frequency of the use of pain medication (including aspirin, NSAIDs and acetaminophen) was noted and compared with the number of diagnosed cases of hypertension after two years. Use of NSAIDs 22 days or more each month increased the risk of high blood pressure by about 86%. Women using acetaminophen 22 days or more each month were almost twice as likely to have high blood pressure than those who did not. Aspirin users did not experience the increased risk of high blood pressure. Researchers concluded that over use of

pain medications could be responsible for a large portion of the hypertension cases in the United States.

According to a double-blind, placebo controlled study appearing in the *Journal of Nutrition* (2007 Apr;137(4):973-8), a small amount of DHA (docosahexaenoic acid) can moderately reduce blood pressure. The 38 male subjects were randomized to receive either 700 mg of DHA or a placebo each day of the three month study. The study paused for four months and the role of the subjects were reversed, with the original placebo group receiving the supplement and the original supplement group receiving the placebo. Overall, subjects taking DHA had a diastolic blood pressure that was lower by 3.3 mm Hg. Heart rate was also lower in the DHA group, by 2.1 beats per minute.

A cross-sectional epidemiological study appearing in the journal, *Hypertension* (2007;50:313-319) looked at blood pressure in 4,680 subjects. Blood pressure was measured eight times over four doctor visits. The researchers found an inverse relationship between omega-3 fatty acid consumption from food and blood pressure, with a decrease in blood pressure with omega-3 consumption.

A meta-analysis of studies relating fish-oil consumption to blood pressure appeared in the *Archives of Internal Medicine* (June 28, 1993;153:1429-1438). In 11 studies, it was found that omega-3 fatty acids reduced blood pressure in people with normal blood pressure. Another six studies found that omega-3 fatty acids reduced blood pressure in hypertensive individuals. The greatest blood pressure reduction was in individuals with the highest blood pressure.

Enzymes and Dentistry

A study appearing in the *Journal of Dental Disease* (1964;19(2):73-77) evaluated the plant enzyme bromelain and its effect on pain and healing after dental surgery. One group of 22 patients took 40 mg of a bromelain concentrate four times each day for 2-3 days prior to surgery and continued for 3 days after surgery. In the second phase 33 subjects took 2 tablets 4 times a day on the day of surgery with the first dose being administered prior to surgery. The use of the enzymes produced a marked reduction in inflammation and the length of time the inflammation persisted

post operatively. There was also a reduction in pain. In another study, appearing in the *Journal of the American Dental Association* (June 1966;72:1420-1425), subjects who underwent dental surgery received a proteolytic enzyme from *Carica papaya* (1 tablet per hour), or a placebo from the time of surgery until the following morning; for the next four days, they were given 1 tablet four times each day. The subjects taking the enzyme experienced less inflammation and pain, and had enhanced wound healing.

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Vitamin D and Chronic Pain

Research appearing in the July 19, 2006 issue of *Clinical Rheumatology*, linked anxiety and depression experienced by fibromyalgia patients to depleted vitamin D levels. The subjects of the study were 75 patients with fibromyalgia who filled out a Fibromyalgia Impact Questionnaire and Hospital Anxiety and Depression Score. Blood samples were taken to measure vitamin D levels. Twenty-three of the patients had normal levels of vitamin D. Ten of the patients were deficient in vitamin D and 42 had insufficient levels. Patients who were deficient in vitamin D placed higher on the Hospital Anxiety and Depression Score than those with normal or insufficient levels of vitamin D. The researchers concluded that low vitamin D levels were associated with fibromyalgia and that the anxiety and depression associated with the disease may be linked to low levels of vitamin D.

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. Of the subjects involved with the study, all of the African, African-American, Hispanic and Native Americans were vitamin D deficient, as well as all of the subjects under the age of 30. The worst vitamin D deficiencies were found in women of child-bearing age.

In 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). After receiving the cholecalciferol, all the patients had normal levels.

Enzymes for Pain

"Always laugh when you can. It is cheap medicine."—Lord Byron

Bromelain, or a placebo was given to 160 women following episiotomy in research appearing in the journal *Obstetrics and Gynecology* (February 1967;29(2):275-278). The women were given two tablets, 4x/day for three days beginning within four hours after delivery. One person in the treatment group and four in the placebo group had an episiotomy infection. The amount of medication, especially narcotics, was reduced in patients on the bromelain therapy. The incidence of episiotomy infections was also lower in the group treated with the enzymes. Another study on episiotomy patients appearing in *Current Therapeutic Research* (May 1962;4(5):229-237), showed that another vegetable enzyme (from papaya) reduced inflammation and swelling after the surgery. In general, treatment with enzymes had little or no side-effects.

Research appearing in the *Journal of Strength and Conditioning Research* (2007 Aug;21(3):661-7) looked at the effect protease

enzyme supplements had on muscle damage after exercise. The double-blind, placebo-controlled study involved twenty male subjects who were tested for the strength, pain (rated by subjective questionnaire), and indicators of muscle damage (creatin kinase activity and myoglobin concentration). They were given either an enzyme supplement or a placebo. It was found that supplementation with the enzyme preparation reduced strength loss immediately after exercise.

In *Clinical Experimental Rheumatology* (Jan-Feb, 2006;24(1):25-30) compared enzyme supplementation to NSAID use in patients with osteoarthritis of the hip. The double-blind, placebo controlled study lasted six weeks and involved 90 subjects and found that enzyme supplementation was comparable to the drug in relieving pain, joint stiffness and improving function.

