

**Special Interest
Articles: Colds,
Flu and the
Immune
System**

- Black Cohosh
- HRT and CoQ10
- Osteoporosis Drugs
- Magnesium
- Magnesium and PMS
- Name that food
- Exercise and Menopause
- Bioflavonoids and Menopause

Name that food:
Chicken flavored rice
and noodle dish

Hot Flashes and Flax

A study that was published in *Family Practice News* (February 1, 2005:48) looked at 85 women suffering with menopausal hot flashes or night sweats. The subjects selected had at least five hot flash or night sweat episodes per day. The women were divided into two groups and for a period of three months were given either a placebo or flax seed supplement (40 g/day). After the initial three months, they switched therapies, with the placebo group receiving the supplement and the treatment group receiving the placebo for a second three months. Flax seed supplementation resulted in a 38% reduction in the median

number of hot flashes when compared to placebo.

The group receiving the flax had an increase in lignan markers like enterodiol, enterolactone, and others. Lignans are phytoestrogens found in flax seed. In this study, the flax seed supplementation reduced follicle stimulating hormone and apolipoprotein A1. Another study, published in the journal *Nutrition in Cancer* (2001;39(1):58-65) found that supplementation with ground flax seed reduced 17 beta estradiol and estrone sulfate, and increased prolactin in the serum.

Vitamin E and Hot Flashes

A small, double-blind, and placebo-controlled study, published in *Gynecologic and Obstetric Investigation* (2007; 64(4): 204-207), showed that vitamin E supplementation may have a favorable effect on menopausal hot flashes. The subjects of the study were 51 menopausal women who were

given a placebo for four weeks. After a week, they were given 400 IU of vitamin E per day for another period of four weeks. The authors found a significant reduction in the number of hot flashes and concluded that vitamin E may be useful for the treatment of hot flashes.

Black Cohosh for Menopause Symptoms?

"According to scores on the Menopause Rating Scale, the group receiving the standardized black cohosh extract fared much better than the placebo group. The extract seemed especially effective in treating hot flashes. There were no adverse effects to the supplementation."

There is some research that supports the safety and efficacy of using black cohosh (*Cimicifuga racemosa*) extract to relieve menopausal symptoms like hot flashes and night sweats. The substance has been used in Germany for the past 50 years for menopausal symptoms, and even for menstrual symptoms. A 12-week long, double-blind, randomized, multi-center study involving 304 women with menopausal symptoms appeared in the journal *Obstetrics and Gynecology* (2005; 105(5 Pt 1): 1074-83). Subjects were given 40 mg of black cohosh extract (standardized 5 mg isopropanolic extract) each day.

According to scores on the Menopause Rating Scale, the group receiving the standardized black cohosh extract fared much better than the placebo group. The extract seemed especially effective in treating hot flashes. There were no adverse effects to the supplementation.

Research appearing in the *Journal of Women's Health* (1998;7(5):525-529) compared black

cohosh extract to conjugated estrogen as well as placebo. The group receiving the black cohosh had a notable increase in the proliferation of vaginal epithelium—even outperforming the conjugated estrogen. Black cohosh has been used to reduce genital pain. The group receiving the black cohosh also had improved scores in the Menopausal Index and the Hamilton Anxiety Scale score.

A combination of black cohosh and St. John's Wort was used in research appearing in *Obstetrics and Gynecology* (2006; 107(2 Part 1): 247-55). In a randomized, double-blind placebo controlled study, the subjects were 301 women with depression, as well as menopausal symptoms. Utilizing the Menopause Rating Scale, there was a 50% reduction of symptoms in the treatment group, compared to just under 20% in the placebo group. The treatment group had a 41.8% reduction in the Hamilton Depression Rating Scale score compared to 12.7% in the placebo group.

HRT Depletes CoQ10

Research appearing in the journal *Biofactors* (2005; 25(1-4): 61-6) looked at the effect hormone replacement therapy (HRT) had on CoQ10 levels. Subjects included 50 premenopausal women, 33 postmenopausal women (healthy, and not on hormone replacement therapy), and 15 postmenopausal women on HRT. The serum levels of antioxidants, CoQ10,

alpha tocopherol, gamma tocopherol, beta carotene and lycopene, were measured. In general, postmenopausal women had higher levels of CoQ10 than premenopausal women. However, postmenopausal women on HRT had lower levels of CoQ10 and gamma tocopherol. The women on HRT did have higher levels of alpha tocopherol.

Osteoporosis Drugs

According to the January 18, 2008 issue of the *British Medical Journal*, the benefits of osteoporosis drugs are exaggerated. The drugs are being prescribed to women with osteopenia, which is a less serious situation than osteoporosis and affects about half of all older women.

The drug companies are marketing their drugs to women with osteopenia, basing their actions on reanalyzing data from four earlier drug trials. This new analyses were funded by drug companies and tend to overstate the benefits of the drugs. The reanalysis cite statistics in terms of “relative risk”, which will present a high percentage, making the drug look very effective. Analyzing the absolute risk reduction shows that the reduction in the number of fractures is actually a very low number.

The new analyses also tended to downplay the risks and side-effects of these drugs. Raloxifene, for example, increases the risk of blood clots.

A Canadian study performed by researchers at the University of British Columbia and Vancouver Coastal Health Research Institute found that a class of osteoporosis drugs can increase the risk of bone necrosis. Necrosis is a situation where there is not adequate blood

supply to the bone, causing it to die and collapse. This is extremely painful. The study, published in the online *Journal of Rheumatology* (January 16, 2008) found that biophosphonates (including drugs like Fosomax) can triple the risk of bone collapse. Biophosphonates can also cause inflammation of the eye (published in a letter in the *New England Journal of Medicine* [March 20, 2003; 348 (12):1187-8])

The authors of the *British Medical Journal* article believe that the osteoporosis drugs are being prescribed unnecessarily to a relatively healthy population. They feel that it is a case of a risk factor being turned into a disease in order to sell tests and drugs. The calculation of the benefits of the drugs is presented in a way to make them look more effective than they actually are. For example, a 75% relative risk reduction for fracture is cited. In reality, this is actually less than a 1% reduction in absolute risk.

This means that 270 women with pre-osteoporosis would have to be treated with drugs for three years to avoid a single fracture. Women with osteopenia have such a low risk of fracture to begin with, that the drugs offer almost no benefit to them.

A Canadian study performed by researchers at the University of British Columbia and Vancouver Coastal Health Research Institute found that a class of osteoporosis drugs can increase the risk of bone necrosis.

A Few Words About Magnesium

Magnesium plays such an important role in patient health. It can help with depression, bone strength, cardiovascular health, insulin and blood sugar control, and it is nature's muscle relaxer. An article appearing in *Hospital Practice* (April 30, 1993;79-92) had a few things to say about magnesium. Magnesium is an important cofactor in over 300 chemical reactions in the body. It is important for ATP synthesis (cellular energy), and is found in tissues with high metabolic activity. The heart, liver, brain and kidney all have the highest intracellular concentrations of magnesium.

Many other journal articles discuss the importance of magnesium. There is a connection between magnesium deficiency and insulin resistance. Magnesium levels are low in diabetics. Magnesium deficiency is associated with insulin resistance in obese children, according to research appearing in *Diabetes Care* (May 2005;28(5):1175-1181). Magnesium, when given to type-2 diabetics helps decrease platelet aggregation, and ultimately may help protect against coronary artery blockage and heart attacks. It is also useful for bringing irregular heart beats under control. It has been postulated that magnesium deficiency may be responsible for heart damage experienced by endurance athletes. An article appearing in *Patient Care* (January 30, 1984;79-81), states that magnesium is useful for treating heart arrhythmias and that patients given magnesium after cardiac surgery have fewer problems with both arrhythmias and with uncontrolled high blood pressure from coronary vasospasm that occurs postoperatively. An article appearing in the *Archives of Internal Medicine* (November 1992;152:2189-2196) also states that magnesium is cardioprotective (protects the heart).

Magnesium deficiency may play a role in allergies. An animal study appearing in the

Journal of The American College of Nutrition (1990;9(6):616-622) found that rats that were magnesium deficient had higher histamine levels than rats that were not deficient. Asthmatics may benefit from magnesium supplementation. Magnesium given in an IV has been used to stop asthma attacks. Also, magnesium can make the bronchial tubes less reactive to noxious substances, according to research appearing in *Clinical Pharmacologic Therapy* (2001;69:365-371).

Magnesium is valuable for treating preclampsia. An article appearing in *Gynecologica Scandinavica* (1994;73:95-96) shows magnesium to have a beneficial effect on the mother's blood pressure and on the birth weight of the child. Magnesium helps inhibit convulsions, suggesting a peripheral and a central action. Several studies have shown that magnesium may cause vasodilatation (opening of blood vessels). This effect on the vascular system is probably the reason for magnesium's blood pressure lowering effect in pregnancy-induced high blood pressure and preeclampsia. Studies have shown that magnesium infusion reduces blood pressure, increases cardiac output and decreases total peripheral resistance. In high blood pressure that occurs with pregnancy, there is an inverse relationship between serum magnesium concentration and blood pressure. In a double-blind study, IV magnesium reduced blood pressure not only during the infusion phase, but afterward.

There are few, if any, side effects with magnesium supplementation. It can be depleted with certain medications, like diuretics and is low in people who eat a highly refined diet. Magnesium deficiency is fairly common and should be considered with a variety of health problems.

Magnesium and PMS

A study in the *Annals of Clinical Biochemistry* (1986;23:667-670) found that the level of magnesium found in the red blood cells of PMS sufferers was significantly lower than those of healthy controls. Other studies have shown the value of magnesium supplementation for PMS sufferers. Subjects of another study, appearing in *Clinical Drug Investigation* (2007; 27(1): 51-8), were supplemented with magnesium (250 mg/day) after being observed for three months without supplementation. The women were given the magnesium for only part of their cycle (from 20 days after the start of the last cycle until the beginning of the next cycle). The study lasted for three cycles and found a 33.5% reduction in symptoms according to the Moos' Modified Menstrual Distress Questionnaire. An article appearing in *Family Practice News* (March 1,

1996;33) cites two small studies that show magnesium supplementation to be useful for patients who have migraine headache associated with their cycles.

Magnesium is the cofactor for over 300 chemical reactions in the body. Deficiency can cause a variety of health problems. According to an article appearing in *Pediatric Asthma, Allergy and Immunology*, (1993;7(4):211-215), symptoms of magnesium deficiency can include PMS and headaches. Other symptoms include high blood pressure, nervous irritability, hives, fibromyalgia and even heart problems. Mood swings and breast tenderness associated with the menstrual cycle are commonly seen in women who are magnesium deficient.

Magnesium deficiency can cause a variety of health problems. According to an article appearing in Pediatric Asthma, Allergy and Immunology, (1993;7(4):211-215), symptoms of magnesium deficiency can include PMS and headaches.

Name That "Food"

Diet and lifestyle play a large role in health and disease. Many of the things that pass for food in our society act to undermine our health. Dietary indiscretion can cause health problems. According to government figures, the average American consumes 10 pounds of food additives each year. Look at the information taken from the label of a commonly consumed "food" and see if you can guess what it is:

RICE, WHEAT FLOUR, SALT, SUGAR, AUTOLYZED YEAST EXTRACT, HYDROLYZED (SOY AND CORN PROTEIN,

CORN GLUTEN), ONIONS, CALCIUM CARBONATE, MONOSODIUM GLUTAMATE, NATURAL FLAVORS, PARSLEY, GARLIC, CHICKEN BROTH, CHICKEN FAT, TURMERIC, NIACIN, IRON (FERRIC ORTHOPHOSPHATE), DISODIUM GUANYLATE, DISODIUM INOSITNATE, THIAMIN MONONITRATE, TURMERIC EXTRACT, FOLIC ACID, RIBOFLAVIN

Answer on page 1

Do not consider
painful what is
good for you.
—Euripides

Bioflavonoids and Menopause

Hesperidin is a bioflavonoid that is found in citrus fruit. It offers similar nutritional support to other bioflavonoids, like quercetin. It acts to support the vascular system by strengthening the capillaries and it also acts as an antioxidant. In research appearing in *Chicago Medicine* (March 7, 1964), 94 patients who had undergone menopause (36 surgically and 58 physiologically) were given a supplement containing 50 mg of hesperidin complex, 150 mg. of hesperidin methyl chalcone and 200

mg of vitamin C. The control group was given calcium carbonate, salicylamide and an estrogenic substance. The group receiving the vitamin C/bioflavonoid supplement experienced more relief from hot flashes than the control group. It is possible the mechanism for the vitamin C/bioflavonoid supplement in improving hot flashes involves strengthening the capillary bed and reducing vasodilation.

Exercise Helps Menopause Symptoms

According to Australian researchers published in the *Medical Tribune* (April 20, 1995;20), exercise can help to reduce the symptoms of menopause. Participants of the study were 220 women, over the age of 40. About 57% of the women (127) were either menopausal or post-menopausal, with 41 of these women taking hormone replacement therapy. Of the 220 subjects, 109 worked out regularly and 111 did not exercise at all. The women who exercised had less depression and a better mood in general than those in the group that did not exercise. Menopausal symptoms like hot flashes, night sweats, and sleep disorders were less pronounced in the group that exercised regularly.

