

The Nutrition Reporter™

© Jack Challem November 2002 Vol 13 No 11

The independent newsletter that reports vitamin, mineral, and food therapies

Large Dosages of Coenzyme Q₁₀ Slow the Progression of Parkinson Disease

Large supplemental dosages of coenzyme Q₁₀, a popular supplement sold in health food stores, can significantly slow the progression of Parkinson disease. The condition, which affects about 1 percent of people over age 65, is characterized by tremors, slowness of movement, and muscle rigidity.

CoQ₁₀ is a potent antioxidant, but its primary role is in helping cells shuttle around energy-producing electrons. This function occurs in miniscule organ-like cell structures called mitochondria.

In the study, Clifford W. Shults, MD, of the University of California, San Diego, and his colleagues from 10 medical centers treated 80 patients who had been diagnosed with Parkinson disease. The patients were divided into four groups, and they received either 300, 600, or 1,200 mg of CoQ₁₀ daily or placebos for 16 weeks.

The condition of the patients was measured using the standard Unified Parkinson Disease Rating Scale, which assesses the severity of the disease. The scale has three components that address mental acuity, daily living activities, and motor abilities.

By the end of the study, all of the patients taking CoQ₁₀ had lower scores – meaning less severe Parkinson symptoms. However, the most significant difference occurred in patients taking 1,200 mg daily of CoQ₁₀. These subjects had a score increase of only 6.69 during the study, whereas patients taking the placebo had a score increase of 11.99.

The patients taking 1,200 mg of CoQ₁₀ has a slower progression of symptoms in all three components of the test, but the greatest effect was seen in daily living activities. That means the patients were able to better maintain their normal daily activities.

Shults and his colleagues also reported that the CoQ₁₀ significantly increased the activity of energy-producing mitochondria in the subjects' blood platelet cells.

These findings are significant because no medical treatment has been shown to slow the progression of Parkinson disease.

In a related editorial, Roger N. Rosenberg, MD, editor of *Archives of Neurology*, wrote, "Clearly, the data of the Parkinson Study Group in this article are intriguing and provocative findings and offer considerable potential hope for future allied therapies."

Reference: Shults CW, Oakes D, Kieburtz K, et al. Effects of coenzyme Q₁₀ in early Parkinson disease. Evidence of slowing of the functional decline. *Archives of Neurology*, 2002;59:1541-1550. □

High Levels of Vitamin E May Reduce Very Early Indicator of Heart Disease

Coronary heart disease takes years to develop before clinical symptoms are visible. However, one early sign is the formation of atherosclerosis, or fatty deposits, or in a critical juncture of the carotid artery.

According to a study by Italian researchers, women with high intake of vitamin E have less fatty buildup at the "carotid bifurcation," where this major blood vessel branches out.

Arcangelo Iannuzzi, MD, of Cardarelli Hospital, Naples, and his colleagues measured vitamin E levels in the diets and blood of 307 women, age 30-69 years. They used a sophisticated ultrasound technique to study the carotid artery of the subjects and then looked at possible relationships to vitamin E.

Women with either low dietary intake or low blood levels of vitamin E were more likely to have fatty deposits at the carotid bifurcation.

In contrast, women with the highest intake or blood levels of the vitamin were least likely to have early signs of atherosclerosis. For example, women with low blood levels of vitamin E were twice as likely to have signs of early cardiovascular disease. Meanwhile, postmenopausal women with the lowest intake of vitamin E were three times more likely to have signs of cardiovascular disease.

Reference: Iannuzzi A, Celentano E, Panico S, et al. Dietary and circulating antioxidant vitamins in relation to carotid plaques in middle-aged women. *American Journal of Clinical Nutrition*, 2002;76:582-587. □

Perspectives...

The Acrylamide Story

Earlier this year, Swedish researchers garnered headlines after reporting that large amounts of a known cancer-causing substance, acrylamide, were found in fries, breakfast cereals, crackers and many other foods.

Not unexpectedly, representatives of processed-food companies reacted skeptically, the U.S. Food and Drug Administration took the issue under advisement, and at least one scientist was quoted as saying the whole controversy was “dumb, dumb, dumb.”

Well, it's not so dumb after all.

Two teams of researchers have since reported how acrylamide, a plastic ingredient known to cause cancer in laboratory rats, forms when high-carbohydrate foods are cooked in a particular way.

Acrylamide is similar in chemical structure to the amino acid asparagine. When asparagine is heated to very high temperatures, such as during frying or high-temperature baking, it forms acrylamide. The chemical was not found in uncooked foods.

Fries can contain up to almost 3,000 mcg of acrylamide per kilogram (2.2 pounds). But in contrast, boiled potatoes contain almost none.

Admittedly, no one knows how much acrylamide will increase a person's risk of cancer. But there are probably more than enough carcinogens already in the food we eat and the air we breathe.

All in all, this may be another lesson about the health cost of junk foods and what we should or should not be eating. Most of us know that fries, bathed in hot trans-fatty acids (known to cause heart disease) and highly refined high-carbohydrate foods are not good for health. People did not historically consume these carbohydrates, let alone processed or deep fried. The discovery of acrylamide in these foods may be another reminder that we shouldn't tamper with nature and that we should eat more wholesome foods. — *Jack Challem*

Two Studies Report Success with Natural Treatments for Migraine Headaches

Migraine headaches can be debilitating. But two teams of European researchers have shown that natural substances can reduce the frequency of migraines.

In the first study, Dutch researchers at the University of Limburg asked 20 patients, who typically suffer two to eight migraine headaches per month, to take 1 mg of vitamin B12 daily for three months. The vitamin was in the form of hydroxocobalamin in an intranasal inhaler.

Ten of the patients had more than a 50 percent

reduction in migraine frequency, and two other had 30 percent fewer headaches. On average, the average number of migraines dropped by about 42 percent, from about five to two headaches per month.

In addition, the researchers reported that the length of migraines and the amount of medication needed to treat acute attacks declined.

In the second study, researchers at the University of Essen, Germany, reported that an extract of the herb feverfew reduced the number of migraine attacks in a subgroup of patients.

Their study of 147 patients did not show an overall benefit from feverfew. However, the herb did help 49 people who had four migraines during a month-long pretreatment period and, because of the frequency of their headaches, were most likely to improve. These people received 6.25 mg of the feverfew extract three times daily for 12 weeks.

References: van der Kuy PHM, Merkus FWHM, Lohman JJHM, et al. Hydroxocobalamin, a nitric oxide scavenger, in the prophylaxis of migraine: an open pilot study. *Cephalalgia*, 2002;22:513-519. Pfaffenrath V, Diener HC, Fischer M, et al. The efficacy and safety of *Tanacetum parthenium* (feverfew) in migraine prophylaxis – a double-blind, multicentre, randomised placebo-controlled dose-response study. *Cephalalgia*, 2002;22:522-532. □

High Folic Acid Levels Reduce Women's Chances of Having a Miscarriage

Folic acid is well known for preventing a particular type of birth defect, called a neural-tube defect. Now, Swedish researchers have found that high blood levels of the B vitamin seem to reduce the risk of a pregnant woman having a spontaneous abortion, or miscarriage.

Lena George, MD, of the Karolinska Institute, Stockholm, and her colleagues compared blood levels of folic acid in 468 women who had a spontaneous abortion and 921 healthy women. Folic acid measurements were taken at the sixth and twelfth week of pregnancy.

Overall, women with low blood levels of folic acid were almost 50 percent more likely to have a spontaneous abortion. And women with low folic acid levels and signs of abnormal fetal chromosomes – indicative of serious birth defects – had twice the risk of miscarriage.

Low folic acid levels were associated with poorer education, smoking, and being obese, according to George.

Women who took folic acid supplements tended to be older, but they experienced significantly less nausea during their pregnancy.

Folic acid plays key roles in the synthesis and

repair of deoxyribonucleic acid (DNA), the molecule that forms genes. Rapidly developing fetal cells may be damaged by a lack of folic acid, and the inability to produce sufficient DNA might set the stage for a spontaneous abortion.

Reference: George L, Mills JL, Johansson ALV, et al. Plasma folate levels and risk of spontaneous abortion. *JAMA*, 2002;288:1867-1873. □

Got Tea? Long-Term Tea Drinkers Have Stronger Bones

Tea, a beverage rich in antioxidant flavonoids and many other compounds, may increase bone density – if you drink it regularly for at least 10 years. That’s the finding of researchers at the National Cheng Kung University Hospital, Taiwan.

Chih-Hsing Wu, MD, and colleagues studied 497 men and 540 women, age 30 years and older. They were surveyed about their tea-drinking habits, and a sophisticated x-ray technique was used to measure their total body, lumbar spine, and hip bone-mineral density.

Forty-eight percent of the subjects were regular tea drinkers, with 91 percent of them drinking green or oolong tea and 9 percent drinking black tea.

Both men and women who regularly consumed any tea for more than 10 years had the highest total body, lumbar spine, and hip bone-mineral density. Those who had regularly consumed tea for six to 10 years had high lumbar-spine bone-mineral density. And those who consumed tea for less than five years had the same bone-mineral density as nondrinkers.

Green tea is nonfermented, oolong tea is partially fermented, and black tea is fermented. After water, tea is the most widely consumed beverage worldwide.

Reference: Wu CH, Yang YC, Yao WJ, et al. Epidemiological evidence of increased bone mineral density in habitual tea drinkers. *Archives of Internal Medicine*, 2002;162:1001-1006. □

Incontinence May Be Related to Low Levels of Vitamin B12, Researchers Find

A study from the University of Nebraska Medical Center suggests that low levels of vitamin B12 may be a factor in severe cases of incontinence.

Jane F. Potter, MD, and her colleagues studied 929 male and female patients with urinary incontinence, fecal incontinence, or both (double incontinence).

They found that urinary incontinence increased the risk of fecal incontinence, but vitamin B12 did not seem to be a factor in either condition.

However, Potter reported that low vitamin B12 levels may play a role in double incontinence. In

addition, the use of various medications, including laxatives, diuretics, antihistamines, and anticonvulsants were associated with increases in at least one form of incontinence.

“A possible association of low B12 levels with double incontinence is intriguing because of the implications for treatment and prevention,” Potter wrote. “More immediately, medication side effects should be considered when evaluating the problem.”

Reference: Endo JO, Chen SJ, Potter JF, et al. Vitamin B-12 deficiency and incontinence: is there an association? *Journals of Gerontology Series A – Biological Sciences and Medical Sciences*, 2002;57:M583-M587. □

Can Vitamin C Supplements Improve Libido? Study Suggests the Possibility

Vitamin C helps regulate the activity of brain chemicals called catecholamines, improve vascular function, and reduce stress and anxiety. Can these benefits translate into improved sexual function?

According to a German study, they just might.

Stuart Brody, PhD, of the University of Trier, Germany, conducted a double-blind, placebo-controlled study on 81 healthy young men and women. Forty-two of the subjects received 3,000 mg of vitamin C daily, and 39 received placebos for 14 days.

The subjects kept daily diaries in which they recorded the frequency of penile-vaginal intercourse, noncoital sex with a partner, and masturbation. They also completed a test to evaluate their mood and degree of depression.

The subjects taking vitamin C reported an increased frequency of penile-vaginal intercourse, but not other types of sexual activity. This group also had a decrease in depression scores, meaning an improved mood.

Reference: Brody S. High-dose ascorbic acid increases intercourse frequency and improves mood: a randomized controlled clinical trial. *Biological Psychiatry*, 2002;52:371-374. □

Study Finds that Ginkgo Supplements Reduce Tinnitus, Improve Hearing

Research on *Ginkgo biloba* for tinnitus, generally described as a ringing in the ears, has produced conflicting results. Many researchers believe the condition is related to a circulatory disorder in the ear, and ginkgo is known to improve circulation.

Recently, German researchers used ginkgo extract to treat 52 patients who had suffered from tinnitus for an average of three years. At the beginning of the study, all of the patients received an intravenous infusion of 200 mg ginkgo extract daily for 10 days. This was followed by the patients receiving

Continues on next page

Quick Reviews of Recent Research

• Beta-carotene may help in cystic fibrosis

Cystic fibrosis, a genetic disorder, significantly reduces absorption of fat-soluble nutrients. Researchers measured blood levels of beta-carotene and vitamin E, as well as markers of free radicals in 18 children with cystic fibrosis, 15 children with bronchiectasis (a condition with some similar pulmonary complications), and 15 healthy children. All of the sick children had low blood levels of beta-carotene, and those with bronchiectasis also had low vitamin E levels. Weight-adjusted beta-carotene supplements, equivalent to roughly 50,000 IU daily for a 100 pound child, were given to the children for six months. Blood levels of both beta-carotene and vitamin E increased and markers of free radicals and inflammation decreased in the children.

Cobanoglu N, et al. *Acta Paediatrica*, 2002;91:793-798.

• Topical antioxidants reduce allergic dermatitis

Researchers applied a chemical known to cause allergic dermatitis to the skin of guinea pigs. This particular allergen induced a reaction through free radical reactions. Some of the animals were pretreated topically with a combination of vitamins E and C, before initial sensitization or after reexposure to the allergen. Only about half of the animals pretreated with the vitamins became sensitized to the allergen, but nearly all of the untreated animals reacted. Furthermore, significantly fewer of the sensitized animals reacted when reexposed to the allergen, if they had been pretreated with

Ginkgo, Tinnitus...

Continues from previous page

either 80 mg of oral ginkgo extract or placebos daily for 12 weeks. Their overall hearing and degree of tinnitus was measured at the beginning of the study and then every four weeks.

After the first month of supplements, patients taking ginkgo had a significant – almost 6 decibel – decline in tinnitus, while the placebo group had no consistent improvement. Inexplicably, the improvement in the ginkgo group declined slightly by the 12th week, though it was still far superior to that of the placebo group.

In addition, people taking the ginkgo supplements, but not the placebos, tended to have improved hearing.

Reference: Morgenstern C, Biermann E. The efficacy of Ginkgo special extract EGb 761 in patients with tinnitus. *International Journal of Clinical Pharmacology and Therapeutics*, 2002;40:188-197.□

vitamins E and C. The researchers noted that “the protective effect of antioxidants...could be of practical therapeutic value.”

Gafvert E, et al. *British Journal of Dermatology*, 2002;146:649-656.

• Mineral imbalance may influence varicose veins

A variety of nutritional and lifestyle factors influence the development of varicose veins. Researchers compared 15 tissue samples of varicose veins from patients undergoing vein surgery and 15 samples of normal veins from patients undergoing heart bypass surgery. Analysis of mineral levels found that varicose veins had high copper and low zinc levels. In addition, a marker of free radical activity was elevated, suggested that vitamin E levels were inadequate.

Ercan M, et al. *Trace Elements and Electrolytes*, 2002;19:75-77.

• Micronutrients can benefit a failing heart

Carnitine, taurine, coenzyme Q10, and other vitamin-like nutrients have been found to help patients with cardiomyopathy, a degenerative disease of the heart muscle. In studies with hamsters with cardiomyopathy, researchers supplemented the animals with taurine, CoQ10, carnitine, vitamin B1, creatine, vitamins E and C, and selenium for three months. After supplementation, the researchers noted improvement in the animals' heart cells. In a related human trial, the researchers found that this combination of supplements restored nutrient levels in the heart and improved heart function.

Sole MJ, et al. *Herz*, 2002;27:174-178.

• Review supports use of hawthorn in heart disease

Researchers cited 54 hawthorn studies, some of which found that it improved heart function and reduced blood pressure. Ten of the studies with strong scientific controls confirmed these benefits.

Chang Q, et al. *Journal of Clinical Pharmacology*, 2002;42:605-612.

The Nutrition Reporter™ (ISSN 1079-8609) is published monthly except for August and December and is distributed only by prepaid subscription. This issue, Vol 13 No 11, © November 2002 by Jack Challem. All rights reserved. Reproduction without written permission is prohibited. Phone: (520) 529-6801. Fax: (520) 529-6840. Email addresses: Jchallem@aol.com or jack@thenutritionreporter.com. The Nutrition Reporter™ is strictly educational and not intended as medical advice. For diagnosis and treatment, consult your physician. Subscriptions are \$26 per year in the U.S.; either \$33 U.S. or \$48 CND for Canada; and \$40 for other countries, payable in U.S. funds through a U.S. bank. The Nutrition Reporter is a trademark(TM) of Jack Challem.

THE NUTRITION REPORTER™

Post Office Box 30246 • Tucson AZ 85751-0246 USA

Editor and Publisher: **Jack Challem**

Copy Editor: **Mary E. Larsen**

Medical and Scientific Advisors:

Richard P. Huemer, MD Lancaster, California

Ralph K. Campbell, MD Polson, Montana • **Peter Langsjoen, MD** Tyler, Texas

Marcus Laux, ND San Francisco, California • **James A. Duke, PhD** Fulton, Maryland