

The Nutrition Reporter™

© Jack Challem February 2013 Vol 24 No 2



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

It's Not Too Late to Protect Yourself Against the Common Cold and Flu

It's February – and the annual cold and flu season is around its peak. Still, there are natural ways to reduce your risk of contracting an infection and to reduce your symptoms if you do catch the bug.

In one recent study, Ronald Eccles, PhD, DSc, of the Common Cold Center and Healthcare, Wales, and his colleagues asked 755 healthy people to take either an echinacea tincture (Echinaforce®) or placebo for four months. The dose was about 20-25 drops in a small amount of water, taken three times daily, equivalent to a daily extract dose of 2,400 mg. During an active cold, subjects were asked to increase the frequency to five times daily (equivalent to 4,000 mg extract), while retaining the solution in the mouth for 10 seconds “to provide maximum local antiviral effects” before swallowing.

People taking echinacea benefited from a 59 percent reduction in recurrent colds. They also had fewer cold symptoms and were able to reduce their use of analgesic drugs by 52 percent. Benefiting the most were those who had the greatest risk of contracting colds, along with those who had high stress levels, were poor sleepers, or were smokers.

Meanwhile, people taking placebos experienced 26 percent more sick days and were 59 percent more likely to develop a second cold during the study.

In a separate study, Peter Bergman, MD, PhD, of the Karolinska Institute, Sweden, and his colleagues asked 140 patients with various types of immune disorders – and greater susceptibility to respiratory tract infections – to take 4,000 IU of vitamin D₃ daily for one year.

Patient responses were scored on a composite of five parameters, including symptoms from their respiratory tract, ears, and sinuses, as well as general malaise and antibiotic use.

People taking vitamin D had almost a one-fourth decrease in respiratory tract infections, compared with those taking placebos.

Other studies have found that vitamin D is needed

to activate a variety of immune cells and compounds.

Editor's note: My personal favorite natural remedy for colds and influenza is the antioxidant N-acetylcysteine (NAC), based on a European study published in 1997. People taking 600 mg twice daily had few flu symptoms, even when lab tests confirmed their infection. It's important to increase the amount of NAC on the first day symptoms appear, going up to 2,000-4,000 mg daily.

References: Jawad M, Schoop R, Suter A, et al. Safety and efficacy profile of *Echinacea purpurea* to prevent common cold episodes: a randomized, double-blind, placebo-controlled trial. *Evidence-Based Complementary and Alternative Medicine*, 2012; doi 10.1155/2012/841315. Bergman P, Norlin AC, Hansen S, et al. Vitamin D₃ supplementation in patients with frequent respiratory tract infections: a randomised and double-blind intervention study. *BMJ Open*, 2012; doi 10.1136/bmjopen-2012-001663. De Flora S, Grassi C, and Carati L. Attenuation of influenza-like symptomatology and improvement of cell-mediated immunity with long-term N-acetylcysteine treatment. *European Respiratory Journal*, 1997;10:1535-1541. □

Perspectives

Heirloom Seeds and Foods

Don't let the large produce sections of supermarkets fool you. The growth of large-scale agribusiness and the streamlining of agricultural production has led to more food being available, but in some ways far fewer choices than in the past.

As an example, in most supermarkets you'd be lucky to find two varieties of garlic, not the dozens that actually exist. The same is true for almost every other type of vegetable and fruit.

I was reminded of the great variety of produce when I recently received a thick paper catalog from Baker Creek Heirloom Seeds. Have you heard of Bronze Beauty lettuce? Oran's Melon? Or Ferris Wheel tomatoes? I never did, not even growing up with my father in the produce business.

You're not likely to find these or hundreds of other varieties of vegetables and fruit in

More research summaries on next page

supermarkets or even natural food stores. If you're lucky, you might just find a few of them at farmer's markets.

However, if you're a gardener, you can buy heirloom (or heritage) seeds and plant them yourself. They're one of the real bargains in today's world. You can find more information at these websites rareseeds.com and territorialseed.com. After all, it's not too early to think about springtime. –*JC*

Fish Oil Supplements Appear to Protect Infants from Allergies

Several studies have found that mothers who take fish oil supplements are less likely to deliver babies with allergies. In the most recent study along these lines, researchers reported that fish oil supplements given to infants can reduce their risk of allergies.

Susan L. Prescott, MB, PhD, of the University of Western Australia, Perth, and her colleagues obtained ethics committee approval to give 150 infants either fish oil supplements or placebos every day from birth to six months. The supplements contained 650 mg of fish oils, including 280 mg of docosahexaenoic acid (DHA) and 110 mg of eicosapentaenoic acid (EPA).

The supplements modified the immune systems in ways that were “potentially allergy-protective,” wrote Prescott.

Allergy-specific Th2 (a type of immune cell) levels decreased, while Th1 levels increased – both in relationship to DHA levels – reflecting a lower risk of allergies. Among the other changes was a significant reduction in interleukin-13 responses to house dust mites.

“Highly processed modern diets are associated with declining intake of a number of important immunomodulatory factors, which may be important for suppressing inflammation,” Prescott wrote. “This includes a decrease in anti-inflammatory long chain n-3 PUFA (mainly from oily fish) and a concurrent rise in relatively pro-inflammatory n-6 PUFA.”

Reference: D'Vaz N, Meldrum SJ, Dunstan JA, et al. Fish oil supplementation in early infancy modulates developing infant immune responses. *Clinical & Experimental Allergy*, 2012; 42:1206-1216. □

Analysis Finds That CoQ10 Has Benefits in Treating Heart Failure

Studies since the 1980s have found that vitamin-like coenzyme Q10 (CoQ10) can improve heart function in patients diagnosed with heart failure. The problem with some of these studies, however, is that the dosages of CoQ10 and the duration of the studies varied greatly.

Now, in an analysis of 13 of the better studies, A. Domnica Fotino, MD, of Tulane University, New Orleans, Louisiana, and her colleagues reported that supplemental CoQ10 leads to improvements in patients with heart failure.

Based on the analysis, which included 395 patients, CoQ10 led to a 3.7 percent improvement in ejection fraction – that is, the heart's ability to pump blood. The benefits were most clear in studies less than 12 weeks, studies published before 1994, dosages less than 100 mg of CoQ10, and patients with less severe heart failure.

“Our findings were consistent with those of previous studies, which reported a net increase in ejection fraction after supplementation with CoQ10,” wrote Fotino.

CoQ10 was the basis of the 1978 Nobel Prize in Chemistry. The nutrient is involved in the production of adenosine triphosphate, the chemical form of energy. The heart has the highest concentration of CoQ10 of any organ in the body.

Reference: Fotino AD, Thompson-Paul AM, Bazzano LA. Effect of coenzyme Q10 supplementation on heart failure: a meta-analysis. *American Journal of Clinical Nutrition*, 2012; doi 10.3945/ajcn.112.040741. □

Case Report: CoQ10 Helpful in Treating Lou Gehrig's Disease

Lou Gehrig's disease, also known as amyotrophic lateral sclerosis (ALS), is a progressive neuro-degenerative disease. Several studies have suggested that CoQ10 supplements might slow the progression of ALS.

In a case report, a 75-year-old Japanese medical scientist developed symptoms of ALS, including weakness and cramps in one leg, muscle twitching, exaggerated reflexes, and muscle wasting. His hand grip power decreased significantly, followed by weight loss, weakness, and an inability to walk or engage in regular activities.

He began taking 500 mg of a well-absorbed form of CoQ10 daily with fatty meals. After improvements, he reduced the dosage to 200 mg twice daily.

“Treatment with ubiquinol [CoQ10] ... resulted in better hand grip power, mood and sensation within a month ... [and the following year] he reported that hand grip power and wasting of muscles are not progressing as rapidly as before administering CoQ10,” wrote the authors, who were from Japan, India, and the United States.

Reference: Kawasaki T, Singh RB, Germaine C, et al. Effects of coenzyme Q10 administration in amyotrophic lateral sclerosis (ALS). Report of a case and review. *The Open Nutraceuticals Journal*, 2012;5:187-192. □

Vitamin D May Influence Disease Activity in Multiple Sclerosis

Studies have suggested that the risk of multiple sclerosis (MS) increases in populations living farther from the equator – meaning less year-round sun exposure and lower blood levels of vitamin D.

In a new study, researchers at Johns Hopkins University, Baltimore, and the University of California, San Francisco, have found that patients' vitamin D levels are related to disease activity.

Ellen M. Mowry, MD, and her colleagues studied 469 MS patients over five years. The patients had their blood levels of vitamin D measured at the beginning of the study, and they underwent periodic magnetic resonance imaging (MRI) scans to measure disease activity.

People with lower vitamin D levels had more brain lesions and were more likely to have active MS. In the disease, the immune system attacks the myelin sheath that surrounds nerves.

For each 10 ng/ml increase in vitamin D, people were 15 percent less likely to have new brain lesions, as well as a one-third lower risk of spots indicating an active disease process. In addition, each 10 ng/ml increase in vitamin D was associated with less disability.

“Higher vitamin D levels were associated with lower, but not statistically significant, relapse risk,” wrote Mowry.

Reference: Mowry EM, Waubant E, McCulloch CE, et al. Vitamin D status predicts new brain magnetic resonance imaging activity in multiple sclerosis. *Annals of Neurology*, 2012;72:234-240. □

Low Vitamin D May Be Factor in the Risk of Type 1 Diabetes

In type 1, or insulin-dependent, diabetes, the body's immune system attacks and destroys the insulin-producing beta cells of the pancreas. Low vitamin D may be a predisposing factor.

Edward D. Gorham, PhD, of the Naval Health Research Center, San Diego, California, and his colleagues studied 1,000 military personnel whose blood was drawn between 2002 and 2008, and who later developed type 1 diabetes.

The subjects were compared with similar healthy subjects of the same sex, who had blood draws within the same time frame, were the same age, and had been in the military for the same length of time.

People with vitamin D blood levels of 17 ng/ml or less – a serious deficiency – were 3.5 times more likely to develop type 1 diabetes. Similarly, those with blood levels between 17 and 23 ng/ml were

twice as likely to develop type 1 diabetes.

The study showed an association, not necessarily cause and effect.

People in the study with blood levels of vitamin D above 40 ng/ml had a 70 percent lower risk of developing type 1 diabetes, compare with those who had levels of 17 ng/ml or less.

Reference: Gorham ED, Garland CF, Burgi AA, et al. Lower prediagnostic serum 25-hydroxyvitamin D concentration is associated with higher risk of insulin-requiring diabetes: a nested case-control study. *Diabetologia*, 2012;55:3224-3227. □

Nutrient Combination Helps Build Bone in Postmenopausal Women

Adding vitamin K to calcium and vitamin D leads to greater improvements in bone density, according to a study by Greek researchers.

Spyridon Kanellakis, MSc, a nutritionist at Harokopio University, Greece, and his colleagues studied 173 postmenopausal women. The women were divided into three intervention and one control group. Each day the intervention groups consumed milk and yogurt fortified with 800 mg of calcium and 400 IU of vitamin D; calcium, vitamin D and 100 mcg of vitamin K1; or calcium, vitamin D, and 100 mcg of vitamin K2.

After 12 months, bone-density scans show “significant increases in total-body bone-mineral density” in all of the intervention groups, compared with the control group. The two groups getting vitamin K also benefited from significant increases in lumbar spine bone-mineral density.

Reference: Kanellakis S, Moschonis G, Tenta R, et al. Changes in parameters of bone metabolism in postmenopausal women following a 12-month intervention period using dairy products enriched with calcium, vitamin D, and phylloquinone (vitamin K(1)) or menaquinone-7 (vitamin K (2)): the Postmenopausal Health Study II. *Calcified Tissue International*, 2012;90:251-262. □

Three Supplements Found to Reduce Inflammation Marker

Every disease process involves inflammation as a cause, consequence, or complication. Over the past 15 years, many doctors have begun to routinely measure blood levels of high-sensitivity C-reactive protein (CRP), which is both a marker and promoter of inflammation.

Weight loss, dietary improvements, and smoking cessation are known to reduce CRP levels. So can some nutritional supplements. In the most recent study along these lines, researchers found that regular use of glucosamine, chondroitin, and omega-3 fish oils are associated with lower levels of inflammation.

Continues on next page

Quick Reviews of Recent Research

• IP-6 may slow prostate cancer

Inositol hexaphosphate (IP-6) has been investigated in recent years as a possible adjunct treatment for cancer. Researchers at the University of Colorado tested this nutrient, added to drinking water, on mice bred to develop prostate cancer. Mice receiving IP-6 had significantly reduced tumor sizes, due mainly to blocking the growth of new blood vessels needed to feed the tumor.

Raina K. *Cancer Prevention Research*, 2013; 6: doi: 10.1158/1940-6207.CAPR-12-0387.

• Calcium and vitamin D might aid weight loss

If you're overweight and consume very little calcium, taking calcium and vitamin D supplements might help you lose some body fat. Researchers at the Shanghai Institute of Health Sciences selected 52 people who were overweight or obese and who also consumed relatively little calcium. All of the subjects were placed on a low-calorie diet, but some were given 600 mg of calcium and 125 IU of vitamin D daily – very modest amounts of both supplements. People getting the supplements lost just over six pounds over the 12-week study, while those on the low-calorie diet alone lost only about four pounds of

weight. Both calcium and vitamin D are involved in insulin function and blood sugar regulation.

Zhu W. *Nutrition Journal*, 2013;12: doi 10.1186/1475-2891-12-8.

• Soft drinks, coffee affect diabetes risk

Researchers from Harvard University investigated the relationship between sugar-sweetened soft drinks and coffee and the risk of developing type 2 diabetes. They analyzed 24 years of data from 74,749 women and 39,059 men – all health professionals. Sugar-sweetened soft drinks, particularly caffeine-free ones, were strongly associated with a higher risk of diabetes. In contrast, coffee and decaffeinated coffee were associated with a lower risk of diabetes. It is possible that coffee enhances the liver's ability to metabolize sugars.

Bhupathiraju SN. *American Journal of Clinical Nutrition*, 2013;97:155-166.

• Fish consumption lowers stroke risk

An international team of researchers analyzed 38 studies, including 794,000 people, and their consumption of fish and risk of stroke. People who consumed two to four servings of fish weekly had a 6 percent lower risk of stroke, compared with those who consumed less than one serving per week. People who consumed more than five servings of fish each week had a 12 percent lower risk of stroke.

Chowdhury R. *BMJ*, 2012: doi 10.1136/bmj.6698.

• Ginger reduces nausea in cancer patients

Iranian doctors reported the treatment of 100 women with advanced breast cancer. The women received chemotherapy, plus drugs to reduce nausea. Women who received 1,500 mg of supplemental ginger (in addition to anti-nausea drugs) daily experienced less nausea in the first six to 24 hours after chemotherapy. However, ginger did not help with nausea beyond this period.

Panahi Y. *Integrative Cancer Therapies*, 2012;11:204-211.

Inflammation...

Continues from previous page

Elizabeth Kantor, PhD, of the Fred Hutchinson Cancer Research Center, Seattle, and her colleagues analyzed data from 9,947 adults who had participated in the National Health and Nutrition Examination Survey. She found that people who were consistently taking glucosamine supplements had 17 percent lower CRP levels compared with people who did not. Similarly, chondroitin was related to 22 percent lower CRP, and fish oils were related to 16 percent lower CRP. Methylsulfonylmethane, garlic, ginkgo, saw palmetto, and Pycnogenol® supplements were not associated with CRP levels in this study.

Other studies have also found that fish oil supplements can lower CRP levels. Citing other research, Kantor wrote that one likely mechanism of these supplements is their ability to lower nuclear factor kappa beta, a transcription factor that turns on genes involved in inflammation.

“Given the number of diseases with which inflammation is associated...there is a need to find safe and effective ways to reduce inflammation,” Kantor wrote.

Reference: Kantor ED, Lampe JW, Vaughan TL, et al. Association between use of specialty dietary supplements and C-reactive protein concentrations. *American Journal of Epidemiology*, 2012;176:1002-1013.

The Nutrition Reporter™ newsletter (ISSN 1079-8609) publishes full monthly issues except for August and December and is distributed only by prepaid subscription. This issue, Vol 24 No 2, © February 2013 by Jack Challeng. All rights reserved. Reproduction without written permission is prohibited. Phone: (520) 529.6801. Email: nutritionreporter@gmail.com. The Nutrition Reporter™ is strictly educational and not intended as medical advice. For diagnosis and treatment, consult your physician. Subscriptions are \$30 per year in the U.S.; either \$36 US or \$42 CDN for Canada; and \$44 for all other countries, payable in U.S. funds through a U.S. bank. The Nutrition Reporter™ is a trademark of Jack Challeng.

The Nutrition Reporter™

Post Office Box 30246 • Tucson AZ 85751-0246 USA

Editor and Publisher: Jack Challeng

Copy Editor: Mary E. Larsen

Medical and Scientific Advisors

Ronald E. Hunninghake, MD Wichita, Kansas • Ralph K. Campbell, MD Polson, Montana

Peter Langsjoen, MD Tyler, Texas • Marcus Laux, ND San Francisco, Calif.

James A. Duke, PhD Fulton, Maryland • Andrew W. Saul, PhD Rochester, New York