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The Better Health News2

Special Interest Articles:

Name that food:
Whole wheat crackers

Can Broccoli Protect from the Sun?

Research appearing in the *Proceedings of the National Academy of Sciences of the United States of America* (2007 Oct 30;104(44):17500-5) found that the topical application of a broccoli extract may protect from UV rays. The research, performed at Johns Hopkins University School of Medicine found that the extract, called sulforaphane, works differently from traditional sunscreens.

The researchers measured the reddening and inflammation caused by the UV rays. The broccoli extract reduced the reddening of the skin (erythema) by over 37%. In addition, the protective effect lasted long after the extract had been applied. Three days after the application of the extract, subjects still experienced a reduction in skin reddening when exposed to UV radiation.

Sulforaphane does not absorb UV rays, but helps the cells' defense against sun damage. The extract somehow enhances the activity of proteins that are part of the cell's defensive system. That defensive system acts to inhibit carcinogens, helps dispose of damaged, potentially cancerous cells, and suppresses the inflammatory response. The reason the broccoli extract works for several days after application is that it does not merely block UV rays, it actually enhances the health of the cells.

Value of Calcium for Bone may be Overstated

A meta-analysis is a review of several earlier research studies to analyze the results. One such analysis appearing in the *American Journal of Clinical Nutrition* (Dec. 2007, Vol. 86, No. 6, pp 1579-1580) found that calcium supplements offer no protection from hip fracture. The Harvard researchers looked at seven studies involving over 170,000 women with nearly 3000 documented hip fractures and five studies involving over 68,000 men with over 200 documented hip fractures and found that 300 mg. per day of calcium offered no benefit for the prevention of fractures. Even in clinical trials where the calcium dose was between 800 and 1600 mg. per day, no significant reduction in hip fracture or other non-vertebral fracture was found. Adding vitamin D to the calcium does seem to help to reduce the instance of fracture.

An Article about Statins

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Recently there was a great article about statins in, of all places the January 28, 2008 issue of *Business Week*. The article entitled "Do Cholesterol Drugs do any Good?" asks some very pointed questions about the practice of putting people with high cholesterol on these drugs. Some doctors have gone so far as to recommend these drugs for children. One ad for a statin claims a 36% reduction in patients with multiple risk factors for heart disease. The ad has a asterisk stating that the study performed had 3% of the placebo group having a heart attack compared to 2% of the group receiving the drug. The 36% figure is very misleading. In reality taking the drug will lead to one fewer heart attack for every 100 people taking the drug. That means that you need to treat 100 people in order to prevent one heart attack. The article goes on to say that the drugs are virtually useless in anyone who has not had a heart attack or who does not have signs of active heart disease.

Statins work by inhibiting the enzyme methylglutaryl coenzyme A (HMG-CoA) reductase. They prevent the production of mevalonate from HMG-CoA. The body converts mevalonate to cholesterol and a variety of other products. One of the things that melvalonate produces is Coenzyme Q 10; so these drugs ultimately prevent the production of coenzyme Q 10. Low coenzyme Q 10 has been associated with heart failure. Patients taking these drugs tolerate exercise poorly. Studies show that these drugs have the potential to cause muscle pain and muscle breakdown and kidney failure. The FDA has warned about liver failure in conjunction with these drugs. These more serious side effects occur in about 1% of the population taking the drugs.

Mediterranean Diet Protects from Diabetes

A study published in the *British Medical Journal* (2008;336:1348-1351 (14 June)) found that adherence to the Mediterranean Diet can protect from the development of diabetes. The diet is high in vegetables, and vegetable oil, but low in trans fatty acids and saturated fats. The diet contains a lot of virgin olive oil, which is high in monounsaturated fatty acids. The ratio of saturated fatty acids to monosaturated fatty acids is low, even though the diet is relatively high in fat.

The subjects of the study were 13,000 former college students, average age 38 and no history of diabetes. For a period of four years, the researchers kept track of the subjects' diets and general health. Those who strictly kept to the Mediterranean diet had a reduced chance of developing diabetes. The protective effect of the diet even extended to people with risk factors like family history of diabetes and smoking.

A Few Words about Fibromyalgia

Research has shown a link between magnesium deficiency and fibromyalgia. In *The Journal of Nutritional Medicine* (1994;4:165-167) research on 100 fibromyalgia patients and 12 controls with osteoarthritis found that the patients with fibromyalgia had very low red blood cell magnesium levels. Other research published in *The Journal of Nutritional Medicine* (1992;3:49-59) 15 patients with fibromyalgia were treated with a combination of magnesium and malic acid for eight weeks. Those receiving the supplementation experienced a decrease in the sensitivity of the tender points. Within two days of the start of supplementation, the patients experienced decreased muscle pain. Subjects receiving the placebo actually got worse. Magnesium and malic acid are necessary for energy production in the cell. Magnesium is also necessary for many enzymes to work.

In the *Journal of Advancement in Medicine* (Summer 1992;5(2):105-113) there was an article about the connection between fibromyalgia and vitamin B_1 (also called thiamin). Researchers tested erythrocyte transketolase (a means of measuring thiamin need) in 137 subjects. Seventy-five of the subjects experienced chronic pain. The researchers found low levels of thiamin in fibromyalgia patients and in alcoholics. The authors of the article note that fibromyalgia patients have responded to thiamin injections.

Adrenal function may be an issue for fibromyalgia patients. A small study appearing in the *American Journal of Medicine* (May, 1999;106:534-543) looked at cortisol levels and ACTH levels in 15 women with fibromyalgia and in 13 healthy controls. The fibromyalgia patients had an poor adrenal response to low blood sugar.

About 90% of fibromyagia sufferers are women. A small study was published in the *Annals of Rheumatic Disease* (2001; 60: 21-26), involving 21 women. Eleven went through a strength training program, 10 received no special care. After a 21-week strength training program, women with fibromyalgia experienced a reduction in their levels of depression and fatigue. Their pain levels, however, did not change. In another study, published in the *British Medical Journal* (Volume 325, Number 7357, Issue of 27 Jul 2002), point-tenderness did improve with exercise.

The British study, involving 130 firbormyalgia patients, had the subjects performing either progressive aerobic exercise (on a treadmill or stationary bike), or relaxation and stretching. Researchers found that subjects performing exercise were twice as likely to rate themselves as much better or very much better, as compared to those who did flexibility training and relaxation techniques. The benefits of the exercise were sustained when patients were checked at a one-year follow up. Patients in the exercise group also showed larger reductions in terms of the number of tender points. Tender points, or "trigger points," are locations on patients that produce a sharp pain if pushed on during an examination.

Supplementation with magnesium, thiamin and malic acid may be worth a try. Exercise can improve your energy and possibly your pain. This is very low-risk therapy and it may produce results. Adrenal support may also be of benefit.

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Restless Legs Syndrome

Restless legs syndrome (RLS) is a neurological disorder causing restlessness and the urge to move the legs. A recent study, published in the January 1, 2008 issue of *Neurology* suggests that people with RLS have an increased risk for stroke or heart disease.

The subjects of the study were 3,433 men and women, with an average age of 68. They were participants in the Sleep Heart Health Study. Nearly 7% of the female participants and about 3.3% of the men had RLS, as determined by a questionnaire. The participants also answered questions about cardiovascular disease and stroke. The presence of RLS was associated with a two-fold likelihood of cardiovascular disease or stroke. This association was especially strong among those with severe symptoms more than 16 times each month.

Nutrition may play a role. In the journal *Age, Ageing* (May 1994;23(3):200-203), a small study was published, involving 18 elderly subjects with RLS and 18 controls. Low serum ferritin (a way of determining iron status) was associated with the severity of RLS symptoms. An iron supplement was given to 15 of the subjects and the RLS score improved in eleven of the patients—with greater improvement going to those with the lowest ferritin levels. Another article in the journal *Sleep* (June 15, 1998;21(4):371-377) looked at 27 patients between the ages of 29 and 81 and found a correlation between the severity of symptoms and low ferritin levels.

Magnesium supplementation was used in a small pilot study published in the journal *Sleep* (1998;21(5):501-505). Ten subjects with RLS were given magnesium supplementation over a period of four to six weeks. There was a reduction in leg movements (from 33 to 21 per hour). The quality of sleep also improved.

Exercise may also be beneficial. Another small study appearing in the *Journal of the American Board of Family Medicine* (2006; 19(5): 487-93) involved 23 subjects with RLS. They were divided into two groups. On group was put on an exercise program that included aerobic activity and lower body resistance training, and the other served as a control. At the end of the 12 weeks of the study, the group doing the exercise had a significant improvement in symptoms.

Granted, these are small studies. Considering that the treatments in these studies are very low-risk, they may be worth a try. Iron should only be given if there is a deficiency, so it is wise to check ferritin levels before supplementation. Magnesium is a very common deficiency and there are no side-effects with supplementation (although taking too much magnesium can make the stools loose). Exercise is good for everyone, even if RLS is not a problem.

Chemicals in Baby Products

A class of chemicals, called phthalates, is found in baby shampoos, lotions and powders. Phthalates are used to stabilize fragrances and to help make plastics flexible. A recent study, published in the journal *Pediatrics* (Vol. 121 No. 2 February 2008, pp. e260-e268) found elevated phthalate levels in the urine of babies on whom baby lotion, shampoo, or baby powder (containing the chemical) had been used.

Earlier studies on animals indicate that these chemicals are animal carcinogens and can cause fetal death, malformations, and reproductive toxicity in laboratory animals. To quote the researchers, “Phthalate exposure is widespread and variable in infants. Infant exposure to lotion, powder, and shampoo were significantly associated with increased urinary concentrations … This association was strongest in young infants, who may be more vulnerable to developmental and reproductive toxicity of phthalates given their immature metabolic system capability and increased dosage per unit body surface area.”

At present, U.S. manufacturers are not required to list phthalate contents on products' package labels, making it difficult for parents to make informed decisions. Some countries have limited their use.

Babies don't need special lotions and powders. Water alone or shampoo in very small amounts is generally enough to clean infant hair. Concerned parents can seek products labeled "phthalate-free."

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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. Look at the information taken from the label of a commonly consumed “food” and see if you can guess what it is:

ENRICHED FLOUR (WHEAT FLOUR, NIACIN REDUCED IRON, THIAMIN MONONITRATE [VITAMIN B_1], RIBOFLAVIN[VITAMIN B_2], FOLIC ACID), PARTIALLY HYDROGENATED SOYBEAN AND/OR COTTONSEED OIL WITH THBQ FOR FRESHNESS, WHOLE GRAIN WHEAT FLOUR, SUGAR, TOASTED WHOLE GRAIN WHEAT, SESAME SEEDS, DEFATTED WHEAT GERM, CONTAINS TWO PERCENT OR LESS OF SALT, CORN SYRUP, LEAVENING (BAKING SODA, SODIUM ACID PYROPHOSPHATE, MONOCALCIUM PHOSPHATE), MALT FLAVOR, ONION, CARAMEL COLOR, SODIUM SULFITE, SOY LECITHIN.

Answer on page 1

Reason's whole pleasure, all the joys of sense,
Lie in three words,—**health**, peace, and competence.—
Alexander Pope
Essay on Man.
Epistle iv. Line 79.

Fiber Protects from Lung Disease

You can add one more thing to the benefits of dietary fiber, improved lung health. According to research appearing in the *American Journal of Epidemiology* (2008 167(5):570-578), dietary fiber can reduce the risk from chronic obstructive pulmonary disease (COPD). COPD includes emphysema and chronic bronchitis. Most COPD patients have both. In chronic bronchitis, airways narrow and get tight, swollen, and filled with mucus. These changes limit airflow into and out of the lungs. In Emphysema, the tiny air sacs (alveoli) in your lungs are damaged. They become inefficient at delivering oxygen to the body. Also, old air gets trapped in the air sacs and there is no room for new air to get in.

Researchers reported results from the Atherosclerosis Risk in Communities study, which involved 11,897 subjects. Lung function was tested by forced expiratory volume (FEV1); this is a measurement of the amount of air that can be forced out of the lung in one second. People with the highest level of fiber intake had, on average, a 60.2 ml higher FEV1 than people with low fiber intake. Forced vital capacity (FVC) is the volume of air expelled by a forced maximal expiration from a position of full inspiration. On average the FVC was 55.2 ml higher in people with the highest fiber intake when compared to the people with lowest fiber intake.

Overall, the researchers report a 15% lower risk for COPD in people with high fiber intake. If fruit was the primary source of fiber, the risk was reduced by 28%, according to researchers.