

INTERNATIONAL HEALTH NEWS

Your Gateway to Better Health!

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Editorial

In our review of more than 100 medical journals every month we have noticed a steadily growing emphasis on the many benefits of antioxidant supplementation. In this issue we report compelling evidence that antioxidants can help prevent both breast and prostate cancer and that they also help prevent lung damage induced by ozone particularly during heavy, outdoor exercise.

The most fascinating evidence comes from researchers at the National Center for Toxicological Research in the United States. They found that the body's own antioxidant, manganese superoxide dismutase, comes in two different forms one of which is much less effective than the other. Whether you produce the effective or less effective form is decided by your genes. So it would appear that some people have inherently poorer defenses against oxidative stress than others. Fortunately, supplementation with vitamins E and C can compensate fully for this genetic anomaly and specifically can lower women's risk of breast cancer very significantly.

There is also good news for men concerned about prostate cancer. Researchers at the Harvard Medical School report that men who have high blood levels of lycopene (abundant in tomato products) are at much lower risk for prostate cancer. Men who supplement with beta-carotene (25 mg/day) are also at lower risk for prostate cancer.

It all adds up to two conclusions - the benefits of antioxidant supplementation are now clear and the medical profession is increasingly supportive of supplementation.

Yours in health,

Hans R. Larsen, Editor

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LETTERS TO THE EDITOR

Do you have any information on Rett's disease?

Sally, Australia

Editor: *Rett syndrome (cerebroatrophic hyperammonemia) is an inherited disorder which occurs only among females. It involves an enzyme defect which interferes with the metabolism of amino acids. Seizures, autism, dementia, lack of progression of head growth,*

and the loss of purposeful use of the hands are prominent symptoms. Diet and vitamin supplementation may be helpful. American researchers have reported that supplementation with L-carnitine (50 mg/kg/day) was effective in the treatment of a 17-year-old girl with Rett syndrome.

The studies on folic acid and pregnancy do not make it clear how long a woman should take folic acid for. My wife is now 4 months pregnant and is unsure whether to continue to take it.

Gerard H., Malaysia

Editor: Folic acid is entirely safe in dosages of up to 1000 micrograms (1 mg) per day and many doctors use far higher amounts to treat specific diseases. Many people are deficient in folic acid and plans are underway in the United States to fortify cereals and breads with this vitamin. An adequate folic acid intake has been found to protect against such diverse disorders as Alzheimer's disease, colon cancer, heart disease, neural tube defects (spina bifida), and hearing loss. So unless your wife's doctor has some specific objection I would recommend that she continues with folic acid supplementation (400 to 800 micrograms/day) through her pregnancy and beyond. Folic acid is best taken in combination with other B vitamins, especially vitamins B6 and B12.

I have been asked to join a study for patients with early Parkinson's disease using ropinerole. We will be given either ropinerole or L-dopa at low dosage levels. Is there any literature on ropinerole and L-dopa?

Maurice B., Canada

Editor: I am afraid I don't know much about ropinerole, but it seems that some field tests

have already been done. You can find out more about this at the following web sites:

http://www.wemove.org/ema/ewmove_98_012.html

<http://www.ionet.net/~jcott/homepage/drugdb/119a.html>

As I am sure you are aware, early use of L-dopa is now discouraged as it tends to lose its effectiveness after 5 to 6 years of use. It is hoped that ropinerole can delay the need for L-dopa by about a year. Earlier research (see <http://vww.com/healthnews/parkinsons.html>) has shown that large doses of vitamins E and C can achieve the same delay. Coenzyme Q10 and grape seed extract or pycnogenol may also be useful in this respect, but I have not come across any medical trials which support this.

My mom has just been diagnosed with non-Hodgkins lymphoma. Are you aware of any issues with up and coming medical treatments for this?

Carolyn M., New Jersey

Editor: I have done some research regarding new treatments for non-Hodgkins lymphoma. There does not seem to be much new other than variations in the type of chemotherapy agents used. Of course, the treatment depends very much on the stage of the disease. From an alternative point of view I would think that the best approach would be to follow a diet and supplement regimen as outlined in my research report on cancer. I have seen some research data which indicates that taking 100 mg of coenzyme Q10 daily for 3 to 5 days before undergoing chemotherapy with adriamycin markedly reduces the toxic effects of this agent. There is also data which shows that taking plenty of antioxidants during chemotherapy is beneficial.

Folic acid deficiency implicated in hearing loss

ATHENS, GEORGIA. Hearing loss is the most common impairment among the elderly after heart problems, hypertension, and arthritis and affects more than 28 million Americans. Researchers from the Centers for Disease Control and Prevention and the University of Georgia believe that age-related hearing loss may be partially caused by vitamin deficiencies. They have just released a report which supports this hypothesis. Their study involved 55 healthy women between the ages of 60 and 71 years. The women were all given a hearing test using a diagnostic audiometer according to Standard S3.6 of the American National Standards Institute and also had fasting blood samples taken. The blood samples were analyzed for

serum vitamin B12, serum folate, and folate levels in the red blood cells. The researchers discovered that women with impaired hearing (less than 20 dB hearing level) had a 38 per cent lower serum level of vitamin B12, a 31 per cent lower folate level in the red blood cells, and a 25 per cent lower folate level in the blood serum. They speculate that poor folate and vitamin B12 status may somehow lead to deterioration of the nerves and blood vessels supplying the auditory system perhaps through a mechanism involving homocysteine.

Houston, Denise K., et al. Age-related hearing loss, vitamin B-12, and folate in elderly women. American Journal of Clinical Nutrition, Vol. 69, March 1999, pp. 564-71

Antioxidants protect against air pollution

ROTTERDAM, THE NETHERLANDS. Several studies have shown that exposure to ambient levels of ozone reduces breathing capacity in people doing heavy exercise such as jogging and bicycling. Now Dutch researchers report that supplementing with vitamins C and E prevents this ozone-induced decline in lung function. Their 15-week experiment involved 38 cyclists who were randomly assigned to two groups. One group received 100 mg of vitamin E and 500 mg of vitamin C daily while the other group received placebos. The researchers measured the participants' lung function (FEV1 = forced expiratory volume in 1 second and FVC = forced vital capacity) before and after bicycling in the Dutch countryside on 380 different occasions. The ozone level in the ambient air was measured over an eight-hour period on each occasion and varied between 14 and 186

micrograms/cubic meter. The results showed that the lung function in the control group (placebo takers) declined significantly after each cycling session with an average drop in FEV1 of 95 ml and a drop in FVC of 125 ml. In contrast FEV1 decreased by only 1 ml in the vitamin group and FVC decreased by only 42 ml. Adjustment for temperature, humidity, pollen concentration, and other airborne pollutants (particulates) did not significantly affect the results. The researchers conclude that supplementation with vitamins C and E helps protect the lungs against the acute effects of low levels of ozone.

Grievink, Linda, et al. Double-blind intervention trial on modulation of ozone effects on pulmonary function by antioxidant supplements. American Journal of Epidemiology, Vol. 149, February 15, 1999, pp. 306-14

Breast cancer screening made easy

SYDNEY, AUSTRALIA. A team of Australian, American, and Japanese researchers report the development of a new, highly-accurate test for breast cancer. The test uses a single scalp or pubic hair and was found to be 100 per cent accurate in predicting the presence of breast

cancer. The hair sample is examined by X-ray diffraction using synchrotron radiation. Hair samples from breast cancer patients exhibit a characteristic change in their X-ray scattering patterns. In one trial, 23 out of 23 hair samples from breast cancer patients showed the

characteristic pattern while only four out of 28 samples from healthy women had an abnormal scattering pattern. The test was also found to be useful in identifying women who were at greater risk of developing breast cancer either because of the presence of a genetic mutation or because of a family history of breast cancer. The researchers recommend further research

into the sensitivity and specificity of the new test and conclude that this may lead to a simple and reliable screening method for breast cancer using a single hair.

James, Veronica, et al. Using hair to screen for breast cancer. Nature, Vol. 398, March 4, 1999, pp. 33-4 (scientific correspondence)

Lycopene and prostate cancer

BOSTON, MASSACHUSETTS. Several studies have shown that a high dietary intake of tomatoes and tomato-based products especially tomato sauce is associated with a lower risk of prostate cancer. It is assumed that the carotenoid lycopene is the component which is primarily responsible for the protective effect. Now researchers at the Harvard Medical School confirm the validity of this assumption. Their study involved over 22,000 male American physicians aged 40 to 84 years at the start of the study in 1982. The original purpose of the study was to investigate the effects of beta-carotene supplementation (50 mg every other day). However, the availability of stored blood samples made it possible to investigate the effects of other carotenoids as well. By 1995 578 men had developed prostate cancer. These were matched with 1294 cancer-free men according to age and smoking status. Analysis of the blood levels of carotenoids and vitamin E

showed that men with the highest lycopene levels and no beta-carotene supplementation had a 41 per cent lower risk of prostate cancer than did men with the lowest levels. No risk reduction associated with lycopene levels was observed in physicians who received beta-carotene supplementation. However, beta-carotene in itself also appeared to be protective with men assigned to supplementation having a 37.3 per cent lower risk than men with low lycopene levels assigned to placebos. Men with high vitamin E (alpha-tocopherol) levels were found to have a lower incidence of aggressive prostate cancer. The researchers conclude that increased consumption of tomato products might reduce prostate cancer risk.

Gann, Peter H., et al. Lower prostate cancer risk in men with elevated plasma lycopene levels: results of a prospective analysis. Cancer Research, Vol. 59, March 15, 1999, pp. 1225-30

L-arginine and heart disease

STANFORD, CALIFORNIA. The inside of blood vessels are lined with a layer of single cells called the endothelium. Among other functions, the endothelium produces nitric oxide which serves to relax (vasodilate) the blood vessels so as to facilitate the flow of blood. It is now generally accepted that many heart problems involve a dysfunction of the endothelial vasodilator mechanism. This dysfunction can, in a number of cases, be reversed by antioxidants, estrogen, exercise, folic acid, and fish oils. Now researchers at the Stanford University School of Medicine report that supplementation with the amino acid L-arginine is highly effective in reversing endothelial dysfunction. It has been established that L-arginine is the precursor for

endothelium-derived nitric oxide (EDNO). EDNO, in turn, is a potent vasodilator and inhibits platelet aggregation and the adherence of circulating blood cells to blood vessel walls. L-arginine administration, either orally or intravenously, has been found useful in preventing and reversing atherosclerosis, in increasing coronary blood flow in heart disease patients, in alleviating intermittent claudication, and in improving functional status of heart failure patients. L-arginine infusions have been found to lower blood pressure and to inhibit restenosis (reclosing of arteries) after balloon angioplasty. The most common used dosage of L-arginine is between six and thirty grams per day (113 references).

Flaxseed lowers cholesterol levels

TORONTO, CANADA. Oil seeds, especially soy and flax seed, are coming under increasing scrutiny regarding their role in the prevention and treatment of heart disease and cancer. There is evidence that whole flaxseed lowers cholesterol levels and now researchers at the University of Toronto report that partially defatted flaxseed (containing less than 10 per cent fat) is also effective in lowering cholesterol levels. Their study involved 22 men and 7 postmenopausal women with LDL cholesterol levels greater than 4.1 mmol/L (160 mg/dL) or triacylglycerol levels greater than 2.3 mmol/L (200 mg/dL). All participants completed two three-week test periods during which they consumed either four muffins containing partially defatted flaxseed (about 50 grams/day of flaxseed) or four muffins containing wheat bran (controls). Both regimens provided a daily fiber intake of about 20 grams. The two test periods were separated by a two-week washout period. Blood samples were taken and analyzed at the beginning and end of each test period. After three weeks on the defatted flaxseed muffins the average reduction in cholesterol was 4.6 per

cent while LDL cholesterol was down by 7.6 per cent. Apolipoprotein B was down by 5.4 per cent and apolipoprotein A-I by 5.8 per cent. There was no significant effect on HDL cholesterol or lipoprotein ratios. A significant increase in triacylglycerol level (up by 10.2 per cent) was noticed when the study participants were consuming the flaxseed muffins. The researchers also noted a significant increase in oxidative stress (protein thiol groups decreased by 10.8 per cent) in the flaxseed muffin group and state that this may be cause for concern although it could also be a beneficial effect in slowing the progression of cancer. They found no effects which might indicate that flaxseed may protect against prostate cancer. **NOTE:** This study was partially funded by Omega Nutrition Canada, a manufacturer of flaxseed oils.

Jenkins, David J.A., et al. Health aspects of partially defatted flaxseed, including effects on serum lipids, oxidative measures, and ex vivo androgen and progesterin activity: a controlled crossover trial. American Journal of Clinical Nutrition, Vol. 69, March 1999, pp. 395-402

Drinking water and blood pressure

BERLIN, GERMANY. Orthostatic hypotension (low blood pressure when in the upright position) is a common complication of a failure of the autonomic nervous system. A team of American and German researchers now report that drinking water is an effective way of raising the blood pressure in individuals suffering from orthostatic hypotension brought on by autonomic failure. Their experiment involved 19 patients with severe hypotension and 11 controls. Participants were seated in a chair with their feet on the floor. Blood pressure and heart rate were measured with an automated brachial blood pressure cuff. After 30 minutes of baseline recording each participant drank 480 ml of tap water. About 35 minutes after drinking the water the systolic blood pressure had increased by an average of 11 mm Hg (millimeter of mercury) in

both healthy controls and autonomic failure patients. The researchers also observed a significant increase in the blood level of norepinephrine in the healthy individuals about 30 minutes after drinking the water. They conclude that drinking water can provide a rapid relief of symptoms due to orthostatic hypotension in autonomic failure patients. They warn though that drinking water can result in dangerously high blood pressure in patients lying down (supine position). They also conclude that water should be considered to be an active substance rather than a placebo when blood pressure is involved.

Jordan, Jens, et al. A potent pressor response elicited by drinking water. The Lancet, Vol. 353, February 27, 1999, p. 723 (research letter)

Antioxidants help prevent breast cancer

JEFFERSON, ARKANSAS. Oxidative stress damages DNA, proteins, cell membranes and mitochondria, and is believed to play a role in breast cancer. The body produces certain enzymes (glutathione, catalase, and superoxide dismutase) which along with antioxidants obtained from the diet (vitamins E and C, selenium, and carotenoids) help protect against oxidative stress. Manganese superoxide dismutase (MnSOD) has the specific task of protecting the mitochondria (the cells' "powerplant") from oxidative damage. MnSOD is a complex protein and comes in two genetically different forms (alleles). Researchers at the National Center for Toxicological Research have just published a fascinating study which shows that the two MnSOD alleles are not equally effective in protecting the mitochondria and that women who are genetically predisposed to produce the less effective form are at greater risk of developing breast cancer. The study involved 266 women with breast cancer and 295 matched controls. The researchers found that premenopausal women who had the less effective MnSOD version were four times more likely to develop

breast cancer than were women with the more effective version. Among postmenopausal women the ratio was 2:1. It was also clear from the study that premenopausal women who had the less effective MnSOD allele, but consumed a diet rich in antioxidants (from fruit and vegetables) were at no higher risk than were women with the more effective MnSOD version. Vitamin C and E supplements were found to be particularly effective in counteracting the "poor" MnSOD form. Premenopausal women who did not supplement with vitamin C had a 4.8 higher risk of developing breast cancer than did women who did supplement. Women who did not take vitamin E were found to have a 3.8 times higher risk than did women who supplemented with vitamin E. The researchers conclude that a high intake of antioxidants (from supplements or fruits and vegetables) will help prevent breast cancer.

Ambrosone, Christine B., et al. Manganese superoxide dismutase (MnSOD) genetic polymorphisms, dietary antioxidants, and risk of breast cancer. Cancer Research, Vol. 59, February 1, 1999, pp. 602-06

Iron intake and heart attacks

ROTTERDAM, THE NETHERLANDS. Several studies have shown that there is an association between iron intake and the incidence of heart attacks. There has been some disagreement as to whether iron from all sources is detrimental or whether it is just iron from meat products that increases the risk of a heart attack. Researchers at the Erasmus University Medical School now weigh in with the results of a major study which clearly points the finger at heme iron, ie. iron derived from meat and meat products including fish and poultry. Their study involved 4802 elderly people without a prior history of heart attacks (myocardial infarction) who had completed a food frequency questionnaire at the start of the study. During a four-year follow-up period 124 of the participants had a heart attack 30 of which were fatal. The researchers found no correlation between total iron intake and the risk of myocardial infarction,

but did find a clear association between the intake of heme iron and heart attacks. The total iron intake among the study participants varied between 9.3 mg/day and 14.3 mg/day while the heme iron intake ranged from 0.48 mg/day to 1.36 mg/day. Subjects in the group (tertile) with the highest heme iron intake were found to have an 83 per cent higher risk of having a first heart attack than did people in the lowest tertile. The risk of having a fatal first heart attack was particularly high for subjects with a high heme iron intake (a 277 per cent increase in risk). High cholesterol levels, hypertension, smoking, and diabetes were found to add very considerably to the risk of having a heart attack. Thus diabetic participants who also had a high intake of heme iron increased their risk more than five-fold when compared to diabetics with a low heme iron intake.

Folic acid and colon cancer

NEW YORK, NY. Colorectal cancer (cancer of the colon or rectum) is the third-leading cancer in the United States with more than 130,000 new cases reported every year. Previous research has shown that a high consumption of meat and a low intake of fruits and vegetables substantially increase the risk of developing colorectal cancer. Now researchers at the New York University School of Medicine report that women with a low level of folate (folic acid) in their blood serum have twice the risk of colorectal cancer than do women with higher levels. Their study involved 15,785 women who were part of the New York University Women's Health Study begun in 1985. By the end of 1994 105 of the women had developed colorectal cancer. These women were matched with 523 controls and folate intake and blood

levels of folate and homocysteine were compared. Women with the highest serum level of folate (more than 31 nanomol/L) had about half the risk of developing colorectal cancer than did women with levels below 12 nanomol/L. Women with the highest levels of homocysteine (more than 12 micromol/L) had a 70 per cent increase in risk compared with women whose levels were below 8 micromol/L. About 39 per cent of the total folate intake reported came from vitamin/mineral supplements. The researchers conclude that folates may protect against colorectal cancer, but recommend larger clinical trials to further support this contention.

Kato, I., et al. Serum folate, homocysteine and colorectal cancer risk in women: a nested case-control study. British Journal of Cancer, Vol. 79, No. 11/12, April 1999, pp. 1917-21

Cooking in iron pots combats anemia

MONTREAL, CANADA. It is estimated that more than two billion people worldwide suffer from iron-deficiency anemia. In less-developed countries the disease affects about 50 per cent of all children and women and about 25 per cent of men. Researchers at McGill University now propose a low-tech solution to the problem - cook food in iron pots. They evaluated this approach in a year-long study carried out in Ethiopia. Participants were 407 children (mean age of 2.5 years) from poor families (annual income of \$32 US). Families were assigned to cook their food in either an iron pot (195 households) or an aluminum pot (212 households). After three months the mean hemoglobin level among the iron-pot children had increased by 1.5 g/dL. At the end of the study the proportion of anemic children in the iron-pot group had decreased from 57 per cent to 13 per cent as compared to a decrease from 55 per cent to 39 per cent in the aluminum-pot

group. Iron-pot children also showed an increase of 11.2 micrograms/L in ferritin concentrations while no change was observed in the aluminum-pot group. Also after only three months, the average height in the iron-pot group had increased by more than 0.7 cm and the weight by more than 0.3 kg than the height and weight gains observed in the aluminum-pot group. The researchers conclude that providing poor families with iron pots for cooking may be a cost-effective way of solving the anemia problem in under-developed countries.

Adish, Abdulaziz A., et al. Effect of consumption of food cooked in iron pots on iron status and growth of young children: a randomised trial. The Lancet, Vol. 353, February 27, 1999, pp. 712-16

Brabin, Bernard. Iron pots for cooking: wishful thinking or traditional common sense? The Lancet, Vol. 353, February 27, 1999, pp. 690-91 (commentary)

Vitamin supplementation lowers pregnancy-related mortality

BALTIMORE, MARYLAND. Vitamin A deficiency is widespread in developing countries. It can lead to night blindness and has also been associated with an increased risk of infections, diarrhea and dysentery. Now a team of American and Nepalese researchers report that deficiencies in vitamin A and beta-carotene may be associated with an increase in pregnancy-related mortality and that this excess mortality can be prevented by supplementing with the missing vitamins. Their double-blind, randomized trial involved over 44,000 Nepalese women who had a total of 22,189 pregnancies during the 3.5-year study period. The women were divided into three groups. Group 1 received a weekly oral supplement of 23,300 IU (7000 Retinol Equivalents) of vitamin A. Group 2 received a weekly oral supplement of 42 mg of beta-carotene (7000 Retinol Equivalents) and Group 3 received placebo capsules. All capsules also contained 5 mg of synthetic vitamin E as an antioxidant. The researchers

measured the number of deaths from any cause among the women during pregnancy or within the 12 weeks following delivery. There were 704 deaths per 100,000 pregnancies in the placebo group, 426 in the vitamin A group, and 361 in the beta-carotene group. This corresponds to a mortality reduction of 40 per cent in the vitamin A group and 49 per cent in the beta-carotene group. The researchers conclude that regularly supplementing women of childbearing age with vitamin A or beta-carotene can materially lower pregnancy-related mortality in rural, under-nourished populations.

West, Keith P. Jr., et al. Double blind, cluster randomised trial of low dose supplementation with vitamin A and beta-carotene on mortality related to pregnancy in Nepal. British Medical Journal, Vol. 318, February 27, 1999, pp. 570-75

Olsen, Sjurpur F. Effect of vitamin A and beta-carotene supplementation on women's health. British Medical Journal, Vol. 318, February 27, 1999, pp. 551-52 (editorial)

Natural treatment for ulcerative colitis

BADALONA, SPAIN. Ulcerative colitis is characterized by intestinal pain, diarrhea, and malabsorption of nutrients and involves an inflammation of the lining of the colon. The disease is often intermittent in nature and is conventionally treated with anti-inflammatory agents such as sulfasalazine, ACTH, and mesalamine. It is known that short-chain fatty acids, especially butyric acid has anti-inflammatory effects and butyrate enemas have been used with some success in maintaining remission of ulcerative colitis. A group of researchers from a number of Spanish hospitals (the Spanish Group for the Study of Crohn's Disease and Ulcerative Colitis) now reports that *Plantago ovata* seeds are effective in maintaining remission in ulcerative colitis patients. *Plantago ovata* (a cousin of Psyllium) is known to generate butyrate in the colon through a fermentation process. The study involved 105 patients taking mesalamine whose ulcerative colitis was in remission. At the start

of the experiment the patients were randomized into three groups. Group 1 was given two 10-gram sachets of *Plantago ovata* seeds twice a day (with 300 ml of water), Group 2 was given a 500 mg tablet of mesalamine three times a day, and Group 3 was given both *Plantago ovata* seeds and mesalamine in the dosages indicated above. After 12 months 60 per cent of the patients in the *Plantago ovata* group were still in remission as compared to 65 per cent in the mesalamine group, and 70 per cent in the group taking both the seeds and mesalamine. The researchers conclude that *Plantago ovata* seed therapy is useful in maintaining remission in ulcerative colitis patients and may also reduce the risk of colon cancer in these patients.

Fernandez-Banares, F., et al. Randomized clinical trial of Plantago ovata seeds (dietary fiber) as compared with mesalamine in maintaining remission in ulcerative colitis. American Journal of Gastroenterology, Vol. 94, February 1999, pp. 427-33

Hyperbaric oxygen therapy in Crohn's disease

NEW YORK, NY. Perineal lesions (sores and ulcerations in the area between the anus and the genitals) are a frequent complication of Crohn's disease. Conventional treatment involves drugs such as metronidazole, methotrexate, and cyclosporine. Unfortunately, these drugs are not very effective for the condition and have serious side effects. Medical doctors at the Albert Einstein College of Medicine have just released a review of the literature concerning the use of hyperbaric oxygen therapy in the treatment of perineal lesions associated with Crohn's disease. Hyperbaric oxygen therapy involves the intermittent inhalation of pure oxygen at higher than atmospheric pressure. Although most often used in the treatment of decompression sickness it has also been found useful in the treatment of *Clostridia*-related gangrene, chronic

wounds, and necrotizing soft tissue infection. It is believed that the added oxygen content in the blood helps kill the bacteria involved in these conditions. Experiments carried out in 1989 showed that hyperbaric oxygen is highly effective in curing perineal lesions. A total of 22 patients were involved and 16 (73 per cent) of these experienced complete disappearance of the lesions while two (9 per cent) saw a partial response. The researchers, Drs. Noyer and Brandt, recommend that further clinical trials be undertaken to evaluate the benefits of using hyperbaric oxygen therapy in the treatment of perineal lesions associated with Crohn's disease.

Noyer, Charles M. and Brandt, Lawrence J. Hyperbaric oxygen therapy for perineal Crohn's disease. American Journal of Gastroenterology, Vol. 94, February 1999, pp. 318-21

A daily vitamin pill helps combat atherosclerosis

CLEVELAND, OHIO. A high blood level of the amino acid homocysteine has been linked to an increased risk of atherosclerosis and thrombosis. It is known that oral supplementation with folic acid will lower homocysteine levels to acceptable norms, but it is not clear just how much folic acid is required to achieve this effect. Now researchers at the Cleveland Clinic Foundation report that the amount of folic acid (400 micrograms) found in most multivitamin preparations is sufficient to lower homocysteine levels in heart disease patients. Their experiment involved 95 patients who had either had a heart attack or suffered from advanced atherosclerosis. The patients were divided into four groups with one group receiving 400 micrograms/day (0.4 mg/day) of folic acid, one group receiving 1 mg/day, one group receiving 5 mg/day, and the fourth group receiving a placebo. All patients receiving folic acid also received 12.5 mg of vitamin B6 per day and 500 micrograms of vitamin B12. After 90 days the plasma homocysteine levels had

dropped from 13.8 to 9.6 micromol/L in the 400 micrograms/day folic acid group, from 13.0 to 9.8 micromol/L in the 1 mg/day group, and from 14.8 to 9.7 micromol/L in the 5 mg/day group. Also after 90 days the plasma levels of folic acid had risen from 28 nanomol/L in the placebo group to 63 nmol/L in the 400 micrograms/day supplement group, to 80 nmol/L in the 1 mg/day group, and to 162 nmol/L in the 5 mg/day group. Vitamin B6 levels rose from 75 nmol/L to about 250 nmol/L in the supplemented groups and vitamin B12 levels rose from about 300 picomol/L to 525 picomol/L. The researchers conclude that a daily dose of 400 micrograms of folic acid combined with vitamins B6 and B12 will normalize homocysteine levels in heart disease patients.

Lobo, Arlene, et al. Reduction of homocysteine levels in coronary artery disease by low-dose folic acid combined with vitamins B6 and B12. American Journal of Cardiology, Vol. 83, March 15, 1999, pp. 821-25

NEWSBRIEFS

Your heart needs friends. Researchers at the Karolinska Institute in Stockholm may have found the link between social isolation and an increased risk of heart disease. Studying 300 healthy women over a 24-hour period revealed that women who lived alone and had few friends had a significantly lower heart rate variability than women with a support network of family and friends. A low heart rate variability has been linked to early death particularly from heart disease.

Tobacco company fined for concealing information. A terminal cancer patient and ex-smoker has just been awarded \$51.5 million by a jury in San Francisco. The decision was based on the fact that Philip Morris, the defendant in the case, had concealed information regarding the health risks of smoking.

Long trips can be dangerous. French researchers report that travellers who sit for more than four hours at a time increase their risk of forming blood clots in their legs. The increased risk applies to both car, train, and plane passengers. However, air travel may pose additional dangers in that it can cause fluid retention and thickening of the blood even in healthy people. So it is a good idea to get up and move around once in a while.

Organic solvents and pregnancy - a dangerous combination. Canadian researchers report that pregnant women who are exposed to organic solvents have a 13 times greater risk of giving birth to a malformed baby than do women with no such exposure. Women who work in factories where they are exposed to solvents are particularly vulnerable, but laboratory technicians, chemists, graphic designers, and printers were also found to be in a high risk category.

Most pharmaceutical drugs are not approved for children. It is estimated that 80 per cent of prescription drugs available in the United States are not licensed for use in children. Researchers at the National Institutes of Health believe that only 5 of the 80 drugs commonly used by children are actually licensed for this purpose. Many life-threatening adverse reactions have been reported as the result of using drugs designed for adults in children. The U.S. Food and Drug Administration is now demanding that drug companies provide information about the safety of their drugs if they are likely to be prescribed to children. European doctors hope that similar regulations will be enacted in their countries.

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