

INTERNATIONAL HEALTH NEWS

Your Gateway to Better Health!

NUMBER 152

NOVEMBER 2004

13th YEAR



Welcome to the 152nd issue of International Health News. There is a great deal of valuable information contained in the past issues all 150 of them! You may not be aware, but all this information has been preserved in our databases – one for the period 1991-1998 and one for 1999-2004. You can check out the most recent database at www.yourhealthbase.com/database.htm where you will find well over 100 entries for vitamin C alone and around 80 entries each for breast and prostate cancer. And, most important, these entries contain vital information that you can put to good use in your everyday life to remain healthy. I invite you to explore this feature.

As usual, this issue is packed with fascinating new health information. Our New Zealand correspondent, Maurice Mckeown provides insight into the healing properties of tree barks with emphasis on cinnamon. William Ware contributes very timely reviews of three new books dealing with inflammation, and last, but not least, as always the abstracts and news briefs arm you with recent information that will help protect your health.

Enjoy!

Wishing you good health,
Hans Larsen, Editor

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New drug for prostate cancer prevention

EDINBURGH, UNITED KINGDOM. There is strong evidence that the cyclooxygenase (COX) pathway is involved in prostate cancer. Research has shown that the COX-2 enzyme is more prevalent in prostate cancer tissue than in normal tissue. There is also evidence that medications such as aspirin

and selective COX-2 inhibitors (Vioxx and Celebrex) can reduce the risk of prostate cancer. Both aspirin and the COX-2 inhibitors do, unfortunately, have some bad side effects and Vioxx was recently withdrawn from the market because it was found to double the risk of heart attack.

Fairly recently, French researchers developed a new drug called NO-ASA. NO-ASA or nitric oxide donating aspirin (nitroxy-butyl-acetylsalicylate) combines the proven anti-inflammatory properties of aspirin with the anti-bleeding properties of nitric oxide. Nitric oxide (NO) helps the immune system destroy tumour cells, bacteria, viruses, and other invading micro-organisms and also plays a role in planned cell death (apoptosis). NO is widely distributed in the body and is found in especially high concentrations in prostate tissue.

Researchers at the University of Edinburgh now report that NO-ASA and its cousin, NO-ibuprofen, may have important roles in preventing and halting prostate cancer. Although human trials are no doubt a long way off initial results are promising.

The researchers studied the effect of NO-ASA and NO-ibuprofen on hormone-sensitive and hormone-insensitive prostate cancer cell lines as well as on primary cultures of prostatic stroma (the cells forming the overall structure of the gland). They found that both NO-NSAIDs (NO-aspirin and NO-ibuprofen) were potent inhibitors of cell proliferation and strongly induced apoptosis (planned cell death) in all three cultures. The researchers conclude that

these new drugs show great promise for prostate cancer prevention and treatment and may also prove useful in the treatment of benign prostatic hyperplasia (enlarged prostate).

Royle, S, et al. Nitric oxide donating nonsteroidal anti-inflammatory drugs induce apoptosis in human prostate cancer cell systems and human prostatic stroma via caspase-3. Journal of Urology, Vol. 172, July 2004, pp. 338-44

Eating slowly is better

CHARLESTON, SOUTH CAROLINA. GERD (gastroesophageal reflux disease) is becoming increasingly prevalent in North America and Europe. There is substantial evidence that GERD symptoms increase after meals, particularly after fatty meals. There is also evidence that candy, chocolate, carbonated beverages, and citrus juices can aggravate symptoms. Now researchers at the University of South Carolina report that the speed with which a meal is consumed may also affect the degree of reflux experienced. Their study involved 20 healthy volunteers who consumed a standard meal (chicken burger with french fries) within a 5-minute or a 30-minute period. The researchers found that the study participants who consumed the

meal quickly had 40% more reflux episodes (14 versus 10 over a 2-hour period) than did participants who took their time to eat. They also noted that 45% of the reflux episodes were non-acid during the first hour after the meal, while only 22% were non-acid during the second hour. They suggest that their experiment be repeated with GERD patients to see if slow eating can be added to the list of modifiable lifestyle factors that will reduce GERD symptoms.

Wildi, SM, et al. The influence of rapid food intake on postprandial reflux. American Journal of Gastroenterology, Vol. 99, September 2004, pp. 1645-51

Chromium and heart disease

BOSTON, MASSACHUSETTS. Chromium is an important trace mineral and there is some evidence that low levels may be associated with an increased risk of diabetes and cardiovascular disease. As is the case with many other vital nutrients, most people are probably deficient in chromium. It is estimated that the common western diet provides only about 30 micrograms/day, while the estimated adequate intake is 50-200 micrograms/day.

Researchers at the Harvard School of Public Health now report that men with diabetes and men with diabetes-associated cardiovascular disease have lower chromium levels than do healthy men. Their study involved over 33,000 male health professionals who provided toenail clippings in 1987. The researchers compared chromium levels in the toenail clippings (indicative of long-term chromium intake) between 688 men with diabetes, 198 diabetic men with cardiovascular disease, and 361 healthy men. They found that healthy men had an average chromium level of 0.71 mcg/g, men with diabetes had an average level of 0.61 mcg/g, and

men with both diabetes and cardiovascular disease a level of 0.52 mcg/g. The researchers estimate that men with low chromium levels have a 25% greater risk of developing diabetes than do men with high levels and that diabetics with low chromium levels have a 55% greater risk of developing cardiovascular disease than do men with high levels. They conclude that long-term clinical trials are needed to determine whether chromium supplementation is beneficial for preventing cardiovascular disease among diabetic patients.

Rajpathak, S, et al. Lower toenail chromium in men with diabetes and cardiovascular disease compared with healthy men. Diabetes Care, Vol. 27, September 2004, pp. 2211-16

Editor's comment: While awaiting the results of these proposed trials, it would seem prudent to ensure an adequate daily chromium intake by supplementing with 200 micrograms/day – an amount found in most well-formulated multivitamins.

Footwear linked to risk of falls

SEATTLE, WASHINGTON. Having a fall is the most common cause of fatal injury among older Americans. Non-fatal falls are also common with about one third of live-at-home, older adults experiencing one each year. Overall health status and physical activity level are not significantly related to risk of falling; however, older adults with low hand grip strength and difficulty in getting up from a bed or chair do have a higher risk. The use of walking aids and gait abnormality also increase the risk of a fall.

Researchers at the University of Seattle now report that footwear type is perhaps the most important factor when it comes to preventing falls. The researchers monitored a group of 1371 adults aged 65 years or older for a 2-year period. During this time 327 falls to the ground occurred that met the criteria of being unintentional, not being associated with a loss of consciousness, and not resulting from being hit or pushed. Most falls occurred in or around the home with about 62% taking place while walking on a level surface, 23% occurring at a change of level such as stairs, steps or a curb, and

13% taking place on a slope. About 50% of the falls occurred between noon and 6 pm. Only 2% of all falls occurred during vigorous physical exercise as compared to 43% while walking outdoors and 31% while walking indoors.

The researchers compared the type of footwear worn by the fall victim at the time of the fall with the type worn by non-falling controls engaged in a similar activity at a similar time. They observed a strong correlation between footwear type and the risk of falling. The safest footwear, by far, would seem to be athletic shoes and canvas shoes (sneakers). Being barefoot or in stocking feet was associated with an 11 times higher risk of falling when compared to wearing athletic shoes. Other shoe styles, such as high heels and shoes without heels, increased falling risk by a factor of 2 or more. The researchers conclude that wearing athletic or canvas shoes may be a useful component in intervention programs designed to prevent falls.

Koepsell, TD, et al. Footwear style and risk of falls in older adults. Journal of the American Geriatrics Society, Vol. 52, September 2004, pp. 1495-1501

Herbal remedy alleviates dementia

TOKYO, JAPAN. There is increasing evidence that cognitive decline and dementia are associated with a deficit of the neurotransmitter acetylcholine. Acetylcholine is essential for the proper transmission of nerve impulses. Acetylcholine is synthesized from choline and acetate with the aid of the enzyme choline acetyltransferase and cofactor A. Once it has done its job acetylcholine is broken down to its constituent parts through the action of the enzyme cholinesterase. A current, not very successful, strategy for the treatment of Alzheimer's disease (a prevalent form of dementia) involves the use of cholinesterase inhibitors so as to increase the level of circulating acetylcholine. Another way of increasing acetylcholine levels would clearly be to promote the activity of choline acetyltransferase. Japanese researchers now report that they may have found a way of doing just that using an ancient Chinese herbal remedy.

The traditional Chinese remedy ba wei di huang wan (BDW), also known as eight ingredient pill with *Rehmannia*, has been used for at least 2000 years in Chinese, Japanese and Korean medicine to treat

mental decline and dementia. It has now been subjected to a randomized, double-blind, placebo-controlled clinical trial involving 33 patients diagnosed with dementia. The patients were assigned to receive placebo pills or 20 pills (2 grams) of BDW three times a day after meals for 8 weeks. At the end of the trial the patients on BDW became more cheerful and quicker to respond to caregivers, whereas no change was noted in the placebo group. Two clinical measures of dementia state, the Mini-Mental State Examination (MMSE) and the Barthel Index, also showed marked improvement in the BDW group, but no significant change in the placebo group. No adverse effects were noted in the BDW group, but its beneficial effects did disappear 8 weeks after the cessation of treatment. The researchers conclude that BDW is an effective treatment for dementia.

Iwasaki, K, et al. A randomized, double-blind, placebo-controlled clinical trial of the Chinese herbal medicine "ba wei di huang wan" in the treatment of dementia. Journal of the American Geriatrics Society, Vol. 52, September 2004, pp. 1518-21

Alcohol consumption increases risk of abortion

AARHUS, DENMARK. It is known that alcohol consumption by pregnant women may result in stillbirth, the delivery of a premature baby, or a baby suffering from fetal alcohol syndrome. Now Danish researchers report that alcohol consumption in the week prior to conception markedly increases the risk of spontaneous abortion (miscarriage). Their study included 430 couples who were attempting to have a baby for the first time. The couples were followed for a minimum of 6 months or until a pregnancy occurred. During follow-up 186 pregnancies were detected, 131 resulted in the birth of a child, while 55 resulted in spontaneous abortion (detected chemically or clinically). Both women and their male partners reported their alcohol intake during the likely cycle of conception (14-21 days from last menstrual bleeding).

A thorough analysis of data collected showed that a high caffeine intake by women or their partners doubles the risk of experiencing a spontaneous abortion. The researchers also observed that female alcohol intake was associated with a 2-3 times increase in the risk of spontaneous abortion with 10 drinks or more per week being particularly detrimental. Even more startling was the finding that alcohol consumption by the male partners during the cycle of conception was associated with a 2-5 times increase in the risk of abortion. The researchers speculate that the alcohol content of seminal fluid (similar to the concentration in blood) may interfere with the proper implantation of the fetus.

Henriksen, TB, et al. Alcohol consumption at the time of conception and spontaneous abortion. American Journal of Epidemiology, Vol. 160, No. 7, October 1, 2004, pp. 661-67

Natural folates poorly absorbed

DUBLIN, IRELAND. There is now substantial evidence that folic acid is very important for human health. A deficiency has been implicated in a wide variety of disorders from Alzheimer's disease to atherosclerosis, heart attack, stroke, osteoporosis, cervical and colon cancer, depression, dementia, cleft lip and palate, hearing loss, and of course, neural tube defects. Folic acid (folinic acid, folacin, pteroylglutamic acid) is essential for the synthesis of adenine and thymine, two of the four nucleic acids that make up our genes, DNA and chromosomes. It is also required for the proper metabolism of the essential amino acid methionine that is found primarily in animal proteins. A folic acid deficiency has been clearly linked to an elevated level of homocysteine, a sulfur-containing amino acid. High homocysteine levels, in turn, have been linked to cardiovascular disease and a host of other undesirable conditions.

It is, unfortunately, estimated that 88% of all North Americans suffer from a folic acid deficiency. Obviously, the standard diet does not supply what we need. This has led to the fortification of cereals and other foodstuffs to try to ensure a minimum daily intake of 0.4 mg/day. Although beans and green vegetables like spinach and kale are good sources of folic acid, relatively few people eat lots of vegetables and cooking destroys most of the folate anyway. Realizing the poor availability from the diet

many medical researchers now advocate daily supplementation with folic acid.

A group of researchers at Trinity College in Dublin recently completed a study to see just how poorly folic acid is absorbed from foods and whether a folic acid supplement increases serum level substantially more than an equivalent amount contained in food. Their randomized, placebo-controlled blind study included 74 healthy men who were assigned to one of eight treatment protocols for 30 days. Prior to the start of the study all participants had received 1.6 mg/day of vitamin B6 and 1.5 micrograms/day of vitamin B12 for 4 weeks to ensure that they were not deficient in these vitamins, which are required for folic acid to carry out its functions effectively. The supplementation with vitamins B6 and B12 was continued throughout the study period.

The 8 treatment protocols were as follows:

- Folate-depleted meal + placebo
- Meal fortified with spinach + placebo
- Meal fortified with yeast + placebo
- Folate-depleted meal + 200 mcg folic acid
- Mid-morning drink with no folate + placebo
- Mid-morning drink with spinach + placebo
- Mid-morning drink with yeast + placebo
- Mid-morning drink + 200 mcg folic acid

The meals and drinks fortified with spinach or yeast were all formulated to contain enough spinach or yeast to provide 200 mcg of folate. All study participants provided blood samples at the beginning and end of the study. Analysis of these samples showed that the bioavailability of folic acid from spinach and yeast was significantly lower than the bioavailability from the supplement. Overall, the bioavailability of folate from spinach was 30% of that observed for pure folic acid and the bioavailability from yeast was 59% of that observed for pure folic acid. The folic acid supplement increased the average serum level of folate by about 26% (from 17.2 nmol/L to 21.6 nmol/L) and reduced the plasma homocysteine level by 12%

(from 11.5 to 10.1 micromol/L). The corresponding values for spinach was a folate increase of 13% and homocysteine reduction of 3.3%.

Hannon-Fletcher, MP, et al. Determining bioavailability of food folates in a controlled intervention study. American Journal of Clinical Nutrition, Vol. 80, October 2004, pp. 911-18

Editor's comment: This clinical trial clearly shows that supplementation with folic acid is required in order to ensure an adequate daily intake. About 400 micrograms/day is an adequate and safe dosage and is the amount contained in most multivitamin pills.

Traffic is a killer

NEUHERBERG, GERMANY. Strenuous exercise, snow shoveling, anger and the use of cocaine or marijuana have all been linked with the acute risk of having a heart attack (myocardial infarction). Smoking, unemployment and conditions such as diabetes, hypertension and angina increase the vulnerability to heart attack, but are not considered acute triggers. Researchers at the German National Research Center for Environment and Health now add exposure to traffic as another acute risk factor. Their study involved 691 heart attack patients who survived for 28 days or longer. Interviews after their attack conducted by specially trained nurse researchers revealed that the risk of experiencing a heart attack was increased by a factor of 2 to 4 in the first hour following exposure to traffic; this, after correcting for other known acute risk factors such as severe exertion, being outside (air pollution), and getting up in the morning.

The risk increase applied to all common forms of transportation including driving a car, using public transportation, bicycling and driving a motorcycle. The odds that a woman would have a heart attack was 4.5 times higher in the first hour following traffic exposure than at any other time. The corresponding odds ratio for a man was 2.59. Having had a cold in the week before the attack also increased the risk, as did an age over 60 years, and being exposed to traffic in the morning. Bicycling, perhaps because it combines both traffic exposure and vigorous exercise, was associated with the highest risk (odds ratio of 3.94) of experiencing a heart attack within an hour of finishing the ride. The researchers believe that exposure to stress, noise and, in particular, traffic-related air pollution, are behind the observed increase in the risk of having a heart attack after traffic exposure.

Peters, A. Exposure to traffic and onset of myocardial infarction. New England Journal of Medicine, Vol. 351, October 21, 2004, pp. 1721-30

NEWSBRIEFS

Full-fat salad dressing is best. Salads are an important source of beneficial carotenoids such as beta-carotene and lycopene. Unfortunately, carotenoids are very poorly absorbed unless accompanied by fats. Researchers at Iowa State University report that using a fat-free dressing with a salad containing romaine lettuce, spinach, grated carrots, and cherry tomatoes produces a negligible increase in the carotenoid content of blood plasma

(chylomicron fraction). Using a low-fat salad dressing increases absorption of beta-carotene and lycopene to 25 nmol/L and 1.4 nmol/L respectively. Using a full-fat dressing increased absorption further to 45 nmol/L and 3.2 nmol/L respectively (4 hours after the meal). The researchers conclude that salads should be consumed with a dressing containing at least 6 grams of oil (fat) in order to ensure adequate absorption of carotenoids.

Pharmaceuticals from fish? Researchers at the University of Southampton in the UK are working on producing pharmaceutical drugs in farmed fish. Their first project involves the production of coagulation factor VII in genetically engineered tilapia, a fast-growing freshwater fish. Factor VII is used to treat people with hemophilia and accident victims suffering serious bleeding. It is currently extracted from genetically engineered hamster cells and is very expensive – about \$10,000 US per injection. The researchers have been able to match the quality and quantity of factor VII in human blood with blood from the tilapia. There is much more research ahead, but if this project is successful, it could pave the way for the production of other therapeutic proteins that could be used in the treatment of lung disease, liver problems, and cancer.

New Scientist, September 11, 2004, p. 8

Heart attacks can be predicted. Ninety per cent of all heart attacks are related to lifestyle factors. Delegates to the recent European Society of Cardiology meeting in Munich learned that 9 out of 10 heart attacks can be predicted based on 9 risk factors. Two-thirds of an individual's risk is related to smoking and an abnormal ratio of apolipoprotein A to apolipoprotein B. This ratio is a more sensitive risk indicator than is the high density to low density cholesterol ratio. An individual smoking 10 cigarettes a day doubles his or her risk of heart attack and 40 cigarettes a day gives rise to a 9-fold increase in risk. Other risk factors include diabetes, high blood pressure, abdominal obesity, stress, lack of exercise, and a low consumption of fruits and vegetables. A person with the complete range of risk factors would increase their risk by a factor of 335. Clearly, avoiding the 9 risk factors can go a very long way towards eliminating the risk of a heart attack.

British Medical Journal, Vol. 329, September 4, 2004, p. 527

Back pain and physiotherapy. Low-back pain is probably one of the most common conditions affecting both men and women. It is usually, at least in the western world, treated with physiotherapy involving joint manipulation,

stretching and strengthening exercises, and applications of heat and cold. Researchers at the University of Warwick in the UK now report that just staying active is as effective as physiotherapy in reducing the pain and lack of mobility associated with low-back pain. They monitored 280 patients with low-back pain for a year and concluded that those given a one-time consultation on the importance of staying active fared just as well as those given regular physiotherapy treatments.

New Scientist, October 2, 2004, p. 20

Watch out for the superbug. Antibiotic-resistant superbugs, like methicillin-resistant *Staphylococcus aureus* (MRSA), are becoming an increasing problem in hospitals. At a recent meeting of the Infectious Diseases Society of America doctors were told that superbugs have escaped from hospitals and are now associated with a number of diseases from boils in children to flesh-eating disease and fatal pneumonia. Jeffrey Hageman of the Centers for Disease Control reported that MRSA can cause fatal pneumonia in otherwise healthy young adults. Out of 17 cases of MRSA pneumonia 5 died even though the average age of the patients was only 28 years. Dr. Hageman points out that it is vital to check immediately which strain of bacteria is responsible for an infection, so that the correct antibiotic can be prescribed before it is too late.

New Scientist, October 9, 2004, p. 5

US Government sues tobacco companies. Federal prosecutors representing the US Government have launched a \$280 billion lawsuit against major tobacco companies. The suit alleges that the companies, over the past 50 years, have misled the public into believing that "light" and "low tar" cigarettes are safer than regular brands and have repeatedly lied about the health risk of smoking.

New Scientist, September 25, 2004, p. 7

Diabetes - Tree Bark a Sweet Solution?

by Maurice Mckeown
(our New Zealand correspondent)

Many of us believe that nature has as much, if not more, to offer than the pharmaceutical companies. Herbal medicine is the basis of most traditional healing systems. The judicious use of plants has eased human ills in the past and continues to do so. Many of our most important medicines have come from plants; yet we don't usually think of trees as important sources of medicinal products. They aren't particularly edible after all.

Some of our most important natural drugs come from trees. Aspirin originally came from the bark of the willow tree. The development of the anti-malarial drug quinine from the bark of the Cinchona tree - a native of South America, had a profound influence on human development. Today the best known tree bark medicine is tamoxifen, which comes from the Pacific Yew tree. It was originally used to treat ovarian cancer but now is the main weapon in the prevention of the recurrence of breast cancer.

There are lesser know medications which derive from tree bark. An extract of Pau D'Arco bark is used for its antibacterial, antifungal and immunostimulant properties. The bark of the Neem tree is used in Indian traditional medicine for its curative properties. Pygeum - a substance used primarily to combat prostate problems comes from the bark of the African tree *Pygeum africanum*. Yohimbe tree bark is believed to have beneficial effects in relieving anxiety disorders.

Other tree bark derivatives are now under scrutiny. One from a Samoan tree, used in their traditional medicine, is under investigation by the US National Cancer Institute. It may prove valuable in combating HIV. The South American Graviola tree is being investigated as its bark contains a group of phytochemicals called annonaceous acetogenins. Some of these substances have now been patented, as they are believed to have anti-tumor and pesticidal properties.

Today the best know tree bark extract that adorns the shelves of health food stores is known by its modern commercial name of pycnogenol. This pine bark extract was developed by the French researcher Jack Masquelier who has pioneered the use of the extract and grape seed extract which contains even higher concentrations of similar phyto

active compounds. The main value of these substances is known to lie in their rich content of oligomeric proanthocyanidins (OPC's - sometimes referred to as PA's or PCO's). They have many potentially valuable health applications - notably enhanced cardiovascular health.

It seems likely that many more beneficial tree components await discovery. It may not however be necessary to hack your way up the Amazon for additional medical help. Benefits could be as close as your pantry. The tree bark extract there may be more valuable than we all realise. It is, of course, cinnamon which comes from the inner bark of the young shoots of the cinnamon tree - *Cinnamomum zeylanicum* (or its close relative *Cinnamomum cassia*).

Only last year new research suggested that cinnamon powder may be of great value to sufferers of type 2 diabetes and those with blood sugar problems.(1) There are also indications that the oil fraction of cinnamon which contains a substance - cinnamaldehyde has related health values. It is known to inhibit aggregation of platelets and thus may reduce the tendency of blood to clot.

OPC's are present in small amounts in fruit, nuts and some beans. The best endowed fruit are berries and some pip fruit. It has been calculated that the best source in the regular US diet is apples, closely followed by chocolate (the cacao bean contains large amounts) and grapes. Daily consumption is calculated to be approximately 70 mg. (2)

Fruit is universally accepted as a healthy and valuable food. It could be that its OPC content is a major health-promoting factor. OPC's are believed to have valuable properties as potent antioxidants with specific beneficial effects on the cardiovascular system. A new database on the OPC content of common foods, just published by the USDA (US Department of Agriculture), puts cinnamon at the top of the list; far above grape seed extract.(3)

A 1999 study at the University of Munster in Germany concluded that pine bark extract, which contains similar OPC's, was much more effective at low doses than aspirin, in inhibiting platelet

aggregation in smokers. It was also noted that a single 200 mg dose of pine bark extract was effective over a 6-day period. Interestingly the researchers found that aspirin significantly increased bleeding time, while the pine bark (pycnogenol) did not. It was concluded that OPC's act by inhibiting the formation of thromboxane A-2, a platelet aggregating compound.(4)

Another study published in 2001 found that pycnogenol was able to reduce blood pressure in mildly hypertensive patients.(5) There was a concomitant fall in blood thromboxane levels. The authors discussed the various effects of elevated thromboxane levels and also pointed out that pycnogenol also increases production of nitric oxide (NO) by endothelial cells. NO is of course a vasodilator.

It seems that OPC's have great potential in improving the health of the cardiovascular system. The cinnamon study on human subjects identified an average 20% drop in blood sugar levels in weeks. More surprising was the finding that triglyceride, LDL cholesterol and total cholesterol levels all fell substantially. There doesn't appear to be any immediate explanation of the mechanisms involved in blood fat reduction. It is thought that a substance present in the water soluble fraction of cinnamon MCHP (methyl hydroxychalcone) acts as an insulin mimic activating cell surface receptors. Type 2 diabetics produce enough insulin. It is the ability of that insulin to activate target cells that is at fault. It is likely that the MCHP normalises blood sugar by enhancing insulin receptor sensitivity.

The good news is that the human cinnamon study found that modest daily amounts were just as valuable as higher doses. There were suggestions that smaller doses were more valuable in reducing blood fats than larger doses of three and six times as much. The study also noted that the 'cinnamon effect' persisted for at least 20 days after cessation of treatment. It may therefore not be necessary to consume cinnamon every day. It concluded that half a teaspoonful of cinnamon powder daily was sufficient to provide the desired reductions in blood sugar and fat levels. Cinnamon may have the potential to reduce the amount of insulin needed by diabetics. It might even eliminate the need for it in some individuals. Some authorities now believe that

currently accepted limits for blood sugar levels are too high. The authors believe that cinnamon may have a place in blood sugar control in non-diabetic individuals.

We can't conclude too much from one human study. Laboratory work is, however, providing some corroboration (6,7). Clearly further clinical studies must be done. As modest doses of cinnamon and pine bark or grape seed extracts have no known deleterious effects, it may be useful for those with type 2 diabetes to add some cinnamon to their diet. The anti-clotting properties of OPC's suggest that substances containing them will also be valuable in reducing the risk of blood clots as a result of air travel or after surgical procedures. Commercial preparations are now coming on the market containing OPC's to combat deep vein thrombosis.

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BOOK REVIEWS

The Inflammation Syndrome. Jack Challem. John Wiley & Sons, New Jersey, 2003. ISBN 0-471-20271 (hard cover edition)

The Inflammation Cure. William J. Meggs, M.D., Ph.D. with Carol Svec. Contemporary Books, New York, 2003. ISBN 0-07-141320-0 (hard cover edition)

Stop Inflammation Now! Richard M. Fleming, M.D. with Tom Monte. G.P. Putman's and Sons, New York, 2004. ISBN 0-399-15111-7 (hard cover edition)

There is currently considerable interest in the subject of inflammation both among medical researchers and clinicians and as well, the general public. The February 23, 2004 issue of *Time* magazine featured "Inflammation, The Secret Killer" as the cover story, and recent issues of several health oriented magazines have had inflammation as the feature topic. While inflammation is an essential and integral part of the normal immune reaction and the response to injury, chronic inflammation may be asymptomatic and present serious health risks which can be much more dangerous and extensive than one might expect. Chronic inflammation, which is involved in diseases such as rheumatoid arthritis, inflammatory bowel syndrome and Crohn's disease, is now implicated in diseases where the connection is far less obvious, such as atherosclerosis, cancer, and Alzheimer's disease. Thus from the layman's point of view, the obvious questions are:

- Do I have or am I at risk of having chronic inflammation?
- What are the causes?
- What can I do about it?

These are questions that might reasonably be put to one's physician, but the complexity of the subject does not lend itself to the fifteen minute office visit setting, and some, perhaps even many individuals are interested in acquiring a fairly detailed knowledge of what is now considered a serious health issue.

The three books address the above questions, although the approach, depth of treatment, and emphasis differ considerably. The principal authors of two of the books are MDs. Jack Challem is a leading health and medical writer and coauthor of the popular and widely-read book *Syndrome X*.

Challem's book introduces the reader to what he calls the Inflammation Syndrome, which he describes as the cumulative effect of low-grade

inflammation that grows into chronic, debilitating disease. He discusses six general categories of inflammatory triggers: (1) age-related wear and tear; (2) physical injuries; (3) infections; (4) environmental stresses including tobacco smoke, air pollution etc.; (5) allergies and food sensitivities; and (6) dietary imbalances and deficiencies. He carefully distinguishes between the triggers of inflammation and what causes the normal response to go out of control. There is a very strong emphasis on the dietary aspects of inflammation and his "anti-inflammation" approach is primarily through diet modification involving both the elimination of foods that trigger inflammation and adding and emphasizing foods he considers beneficial in this context. Challem also provides a simple questionnaire that readers can use to evaluate their level of inflammation.

Part II of the book outlines fifteen steps to fight the Inflammatory Syndrome, and both diet plans and recipes are presented. While anti-inflammatory drugs are discussed, Challem's attitude is somewhere between negative and highly cautious. Part III is titled "The Anti-inflammatory Supplement Plan" and includes a detailed discussion of omega-3 fatty acids, vitamin E, glucosamine, the B vitamins, etc. Finally, in Part IV there is an informative discussion of about twenty diseases and specific conditions that have a connection with chronic inflammation. This final section should leave little doubt in the reader's mind as to the importance of avoiding or dealing with chronic inflammation.

In *The Inflammation Cure*, Meggs and Svec, after a brief introduction to the nature of the inflammatory process, provide a lengthy and informative discussion of the connections, both proven and suspected, between inflammation and heart disease, stroke, diabetes, cancer, fatigue, obesity, depression, autoimmune diseases, allergies, asthma, arthritis and Alzheimer's disease. They then deal with the question "what does one do" by offering a game plan involving dietary and lifestyle

solutions, as well as suggestions regarding the modification of triggers at home and in the workplace. Considerable emphasis is placed on so-called mind-body solutions which reflect the connection between psychological stress and inflammation. The book also contains a quiz readers can take to estimate their level of susceptibility to inflammation-related disorders by measuring exposure to the most common sources and causes of inflammation. There is also a short discussion of laboratory inflammation tests, supplements and anti-inflammatory drugs. One of the merits of this book is the comprehensive approach to the problem of dealing with chronic inflammation and its risks.

Stop Inflammation Now! This book is sub-titled “A step-by-Step Plan to Prevent, Treat, and Reverse Inflammation—the Leading Cause of Heart Disease and Related Conditions.” The principal author, Richard Fleming, is a nuclear cardiologist. The main emphasis of this book is on heart disease, and the depth of the discussion of this topic is one of the book’s strengths. But aside from the title, it would seem appropriate to classify it as a diet book rather than a book on inflammation. It promotes a two-step, very low-fat (15% of energy intake in the phase 2 diet) and low-protein diet plan coupled with exercise. Inflammation is discussed here and there in the book, but the level of treatment of the subject is minimal compared to the books by Challem and by Meggs and Svec. It in fact differs from these two books in many respects. For example, Fleming considers fish to be an inflammatory food (page 20), and fish is a very minor part of his Phase II diet (page 163), whereas fish is a significant part of the anti-inflammatory diet plans of both Challem and Meggs. Fleming is also against fish oil supplements. But while Meggs recommends eating fish three to five times a week and imitating the Mediterranean

diet by the liberal use of olive oil, he is close to Fleming in suggesting very little meat, poultry, cheese, butter, milk, and other animal products. Challem deals with the meat issue by recommending meat from free-range or grass fed animals and eggs from free-range chickens or eggs enriched with omega-3 fatty acids. Challem is also enthusiastic about olive oil and eating lots of fish.

In the opinion of this reviewer, Fleming’s book should be viewed in the context of the high-carb vs. low-carb controversy and the debate as to the connection between fat and heart disease. The book, by and large, promotes one view favored by the very low-fat school. The philosophy is similar to that of Dean Ornish before he started recommending fish oil and fish in his diet (see www.ornish.com). Also, there are some, perhaps many, who would find the Phase II diet consisting of 17 servings of fruits and vegetables per day to be a bit difficult to manage. At issue is the balance of macronutrients and the emphasis on very low fat consumption that puts him at odds with other interpretations of the modern nutritional literature. This is a highly complex and controversial subject. Fleming’s book should be read along with such books as Walter Willett’s *Eat, Drink and be Healthy*, the *Harvard Medical School Guide to Healthy Eating*, Arthur Agatston’s *The South Beach Diet* (Agatston is also a cardiologist) and Stephen Sinatra’s *Heart Sense for Women* (Sinatra is also a cardiologist) to obtain a balanced picture (see also the IHN research reports “The Diet Zoo” and “Dietary Fat and Coronary Heart Disease. Is There a Connection?”).

Readers desiring a broad background on the subject of inflammation should be well served by either *The Inflammation Syndrome* or *The Inflammation Cure* or better, by both.

Reviewed by William R. Ware

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INTERNATIONAL HEALTH NEWS is published 10 times a year by:
Hans R. Larsen MSc ChE, 1320 Point Street, Victoria, BC, Canada, V8S 1A5

E-mail: editor@yourhealthbase.com World Wide Web: <http://www.yourhealthbase.com>
ISSN 1203-1933 Copyright 2004 by Hans R. Larsen

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Race: Prostate cancer is roughly twice as common in black men than in white men. What nutritional supplements should I take for prostate cancer prevention? Foundation Supplements. High potency multiple; Vitamin D3 2,000-5,000 IU/day; Fish oil, EPA+DHA 1,000 to 3,000 mg/day. To more accurately determine the degree of protection, researchers in New Zealand measured the level of EPA and DHA in red blood cells in a population-based study. A high content of EPA and DHA was associated with a significantly reduced prostate cancer risk. This study confirmed findings from previous population-based and lab studies showing that these omega-3 fatty acids inhibit prostate cancer cells from growing.