

INTERNATIONAL HEALTH NEWS

Your Gateway to Better Health!

NUMBER 114

JUNE 2001

10th YEAR



Editorial

Dr. Jay Cohen, MD, a professor at the University of California, San Diego has reached the startling conclusion that 75% of the more than 2 million adverse drug reactions occurring in US hospitals every year are entirely avoidable. Dr. Cohen undertook a painstaking study of the medical literature to determine the dosages of common drugs that had been found to be effective in clinical trials. He compared these dosages with the ones recommended in the "Physicians' Desk Reference", the prescription 'bible' for 80 to 90% of all American physicians. Dr. Cohen concludes that the "Desk Reference" recommendations are almost invariably twice as high as what is actually required. He believes this widespread usage of excessive doses of drugs leads to innumerable adverse drug reactions – some of them fatal. So next time your physician looks up your dosage in the "Desk Reference" ask him if you could start out with half of that – unless, of course, the effect of the drug is being closely monitored through periodic blood tests.

*Yours in health,
Hans*

June Highlights

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what it is for. Do you have any information on Flucinom?

AM, USA

Editor: *Flucinom is a non-steroid antiandrogen developed by Shering Plough. I have only seen one report on a clinical trial of the product. It involved 28 patients with prostate cancer who were given 250 mg three times daily. The cancer regressed in 62 per cent of the patients, stabilized in 24 per cent, and continued to get worse in 14 per cent. The treatment was well tolerated and had no side effects even in patients with heart disease and renal failure. I don't know what happened to the product after this initial trial in 1991.*

LETTERS TO THE EDITOR

My father has prostate cancer that has spread to his spine. The doctor in Europe has prescribed Flucinom besides the radiation and I don't know

I am having trouble figuring out what a proper dosage of fish oil is and what the concentration of DHA and EPA should be. Can you help?

RM, USA

Editor: *The official recommendation is a minimum of 220 mg/day of EPA and 220 mg/day of DHA - preferably a total of 650 mg/day of EPA and DHA combined.*

I am a 10-year-old girl living in California. My Mom makes me drink milk and won't let it be organic. I have heard that milk makes girls grow up and develop faster especially if it has hormones in it. I am so worried! Could you please give me the names of several brands of milk that have growth hormones so I can avoid them? My Mom will let me choose the milk brand as long as it is not organic.

SC, USA

Editor: *Sorry, I do not have a list of brands of milk with or without growth hormones that would apply to California. I live in Canada where bovine growth hormone is banned. I don't see why your*

mother has a problem with organic milk; as long as it is pasteurized it is as safe or safer than regular milk. You could try www.notmilk.com. They are based in the USA and may have the list you are looking for.

Could you tell me if there is any truth that the FDA has pulled all red rice yeast products off the shelves and has an ongoing suit against Pharmanex?

MO, USA

Editor: *It is correct that the FDA has sued Pharmanex claiming that they were selling an unregulated drug for cholesterol reduction. The courts ruled that Cholestin could be sold as a food supplement. It is freely available on the Internet where the FDA's jurisdiction is apparently a bit murkier.*

ABSTRACTS

Thiamine combats hepatitis B

HANOVER, NEW HAMPSHIRE. It is estimated that 400 million people worldwide suffer from chronic hepatitis B virus infection. The infection may lead to cirrhosis, liver cancer, liver failure and death. Current medical therapy using interferon or lamivudine (Heptovir, Combivir) is not terribly effective and can have devastating side effects. Researchers at Dartmouth Medical School and the Veteran Administration Medical Center now report the exciting discovery that oral supplementation with thiamine (vitamin B1) is effective in the treatment of hepatitis B (HBV). The rate of progression of HBV is usually judged by measuring aminotransferase levels and the presence of DNA from the hepatitis B virus in blood samples. The researchers describe three cases where the aminotransferase levels dropped dramatically (to normal levels) and the presence

of HBV DNA became undetectable after oral supplementation with 100 mg/day of thiamine. Biopsies performed on two of the patients also showed decreased inflammation of the liver after extended thiamine therapy. The researchers speculate that thiamine has antiviral properties and may slow or reverse liver damage due to iron toxicity. They conclude, based on their three cases studies and a larger study performed earlier in China, that "thiamine may be a useful treatment for hepatitis B and, potentially, for other viral syndromes". They emphasize that thiamine therapy is safe, has no side effects, and is inexpensive.

Wallace, Amy Elizabeth and William Brinson Weeks. Thiamine treatment of chronic hepatitis B infection. American Journal of Gastroenterology, Vol. 96, March 2001, pp. 864-68

Vitamins help prevent diabetes

ATLANTA, GEORGIA. The incidence of diabetes is growing in the United States and it is estimated that about 16 million Americans now suffer from

this disease. Researchers at the National Center for Chronic Disease Prevention and Health Promotion now report that vitamin

supplementation helps prevent diabetes. The study, which involved 9,573 men and women between the ages of 25 and 74 years, began in 1971-1975 and was continued for 20 years. At the end of the study 1010 (11 per cent) of the participants had developed diabetes. All the participants were asked if they used supplements (vitamins, minerals, and other supplements) at the beginning of the study and again 10 years into the study. Regular vitamin users were found to have a 24 per cent lower risk of developing diabetes than did non-users even when adjusted for the effects of age, race, education, smoking, blood pressure, cholesterol, body mass index, exercise, alcohol consumption, fruit and vegetable intake,

fat intake and total energy intake. The risk reduction was somewhat smaller for women (16 per cent) than for men (30 per cent). The risk reduction for the participants who supplemented with both vitamins and minerals was even more impressive at 33 per cent. The researchers speculate that vitamin E, chromium and magnesium may be particularly effective in preventing diabetes. They modestly conclude "the judicious use of vitamins may play a role in the prevention of diabetes".

Ford, Earl S. Vitamin supplement use and diabetes mellitus incidence among adults in the United States. American Journal of Epidemiology, Vol. 153, May 1, 2001, pp. 892-97 [58 references]

Drug dosages are often excessive

SAN DIEGO, CALIFORNIA. Iatrogenic (doctor-caused) illness is a very serious problem in the United States and many other countries. A recent study concluded that over two million hospital patients suffer serious adverse drug effects (ADEs) every year in the US alone and more than 100,000 die from these effects. It is estimated that 75 per cent of ADEs are caused by excessive doses of drugs.

Dr. Jay Cohen, MD of the University of California has just completed a fascinating study that compares dosages recommended in the pharmaceutical industry sponsored *Physicians' Desk Reference* (PDR) with the dosages that have actually been found effective in independent scientific studies. Generally the dosages recommended in the PDR are twice as high as the independently determined dosages. Unfortunately, most (82-90 per cent) American physicians use the PDR as their sole guide to prescribing and few are aware of the independent findings. Dr. Cohen gives the following examples of the effective doses of popular medicines as determined by independent research (PDR recommendations are given in brackets):

- Amitriptyline HCL (Elavil) – 10-25 mg/day (50-75 mg/day)
- Atenolol (Tenormin) – 25 mg/day (50 mg/day)
- Cimetidine HCL (Tagamet) – 400 mg/day (800 mg/day)
- Estrogen, conjugated (Premarin) – 0.3 mg/day (.625 mg/day)
- Fluoxetine HCL (Prozac) – 2.5-10 mg/day (20 mg/day)
- Lovastatin (Mevacor) – 10 mg/day (20 mg/day)
- Propranolol HCL (Inderal) – 40 mg/day (80 mg/day)

Dr. Cohen firmly believes that many, if not most, adverse drug reactions could be avoided if physicians were aware of the fact that the dosages recommended in their prescription "bible", the PDR, are almost invariably twice as high as needed for effective therapeutic effects.

Cohen, Jay S. Dose discrepancies between the Physicians' Desk Reference and the medical literature, and their possible role in the high incidence of dose-related adverse drug events. Archives of Internal Medicine, Vol. 161, April 9, 2001, pp. 957-64 [124 references]

St. John's wort in major depression

NASHVILLE, TENNESSEE. Numerous clinical trials have attested to the effectiveness of St. John's wort (*Hypericum perforatum*) in the treatment of mild to moderate depression. A team of researchers from 11 American

universities now concludes that St. John's wort is not effective for the treatment of major depression. Their randomized, double blind trial included 200 adult outpatients (mean age of 42.4 years, 67 per cent female) who had a baseline

Hamilton Rating Scale for Depression (HAM-D) score of at least 20. After a one-week run-in on a placebo 98 of the participants were assigned to receive 900 mg/day of St. John's wort extract (increased to 1200 mg/day if no effect after four weeks) or a placebo for a total of eight weeks. At the end of the experiment 26.5 per cent of the members of the St. John's wort group showed a positive response (HAM-D rating less than 12) as compared to 18.6 per cent in the placebo group. The researchers deem this difference to be statistically insignificant. They did conclude though that the remission rate (HAM-D score less than 7) in the St. John's wort group was

significantly greater at 14.3 per cent than in the placebo group (4.9 per cent). Nevertheless, their overall conclusion is that St. John's wort is not effective in the treatment of major depression. NOTE: This study was funded and partially designed by Pfizer Inc., a major manufacturer of pharmaceuticals. Thirteen of the 16 researchers involved in the study had received funding from Pfizer and other pharmaceutical companies. *Shelton, Richard C., et al. Effectiveness of St. John's wort in major depression: a randomized controlled trial. Journal of the American Medical Association, Vol. 285, April 18, 2001, pp. 1978-86 [58 references]*

Vitamin C deficiency in intermittent claudication

GHENT, BELGIUM. Intermittent claudication is a cramping pain induced by exercise (walking) and relieved by rest. It is caused by an inadequate supply of blood to the affected muscles and is most often a result of atherosclerosis. There is now considerable evidence that atherosclerosis is caused by a continual low-grade inflammation and the resulting oxidative stress. Medical doctors at the Ghent University Hospital reasoned that patients with intermittent claudication might have low levels of vitamin C, a primary defense against oxidative stress.

Their study involved 85 patients with peripheral arterial disease (PAD), the cause of intermittent claudication, 106 patients with high blood pressure, but no PAD and 113 age-matched healthy subjects. The analysis of fasting blood samples from all the participants showed that PAD patients had low serum vitamin C

concentrations. Fifty-two per cent had concentrations below the lower reference limit of 28.4 micromol/L and 14 per cent had a clinical vitamin C deficiency. Vitamin C levels were normal in the healthy subjects and in the patients with hypertension. The researchers noted that smokers had vitamin C levels that were about 40 per cent lower than those found in non-smokers. They conclude that the vitamin C deficiency found in PAD patients is due to their increased level of oxidative stress (low-grade inflammation). They point out that a recent clinical trial found that antioxidant supplementation may prevent cardiovascular events in PAD patients, but does not improve walking distance.

Langlois, Michel, et al. Serum vitamin C concentration is low in peripheral arterial disease and is associated with inflammation and severity of atherosclerosis. Circulation, Vol. 103, April 10, 2001, pp. 1863-68

Asthma associated with C-section birth

LONDON, UNITED KINGDOM. A team of British and Finnish researchers has previously reported their finding that birth by Caesarean section is associated with a 40 per cent increase in asthma among seven-year-old children. They now report that the prevalence of asthma in 30-year-old men and women born by C-section is more than three times higher than among adults born via a normal vaginal delivery. Their study involved 1953 men and women born in 1966. At that time C-sections were used in emergencies only so only five per cent of the births involved this procedure. The study participants were interviewed and examined in 1997. The researchers discovered that while

the prevalence of asthma in the normal delivery group was only 4.5 per cent it was 13.6 per cent in the C-section group corresponding to a three-fold increase in risk even after adjustment for possible confounding variables. There were no significant differences in the incidence of hay fever or eczema between the two groups. The researchers point out that the use of C-sections has skyrocketed in recent years and now accounts for as many as 25 per cent of all deliveries in some hospitals. Given the clear association between asthma and C-section delivery, this should be cause for considerable concern.

Probiotics help prevent allergies

TURKU, FINLAND. Allergies are a rapidly growing problem particularly in more economically advanced countries. A Finnish survey of 11,000 children aged 13 to 14 years found that 10-20 per cent had symptoms of asthma, 15-23 per cent allergic rhinitis, and 15-19 per cent atopic eczema. Atopic eczema is a superficial inflammation of the skin and may be associated with a family history of allergy.

Researchers at the University of Turku have discovered that probiotics, specifically the *Lactobacillus rhamnosus* bacterium, are effective in preventing atopic eczema. *Lactobacillus rhamnosus* is part of the gut (intestinal) flora of a healthy person. The randomized, double blind study involved 132 pregnant women who were given either placebo capsules or two capsules providing a total of 10 to the tenth units of *Lactobacillus rhamnosus* daily for two to four weeks before the expected delivery. After

delivery either the mother (if breastfeeding) or the baby continued to receive the placebo or the probiotic for another six months.

The children were examined for allergies at ages 3, 6, 12, 18 and 24 months. At the two-year examination the researchers noticed that the incidence of atopic eczema in the probiotics group was half that of the incidence in the placebo group (23 per cent versus 46 per cent). They conclude that probiotics supplementation helps establish a healthy gut flora early in life resulting in a decreased risk of developing allergies later on.

Kalliomaki, Marko, et al. Probiotics in primary prevention of atopic disease: a randomised placebo-controlled trial. The Lancet, Vol. 357, April 7, 2001, pp. 1076-79

Murch, Simon H. Toll of allergy reduced by probiotics. The Lancet, Vol. 357, April 7, 2001, pp. 1057-59 (commentary)

Night work increases breast cancer risk

COPENHAGEN, DENMARK. Researchers at the Danish Institute of Cancer Epidemiology report that women who predominantly work at night have a 50 per cent higher risk of developing breast cancer than do women who mainly work during the day. Their study involved 7035 women with breast cancer and 7035 healthy controls. The researchers found that women who had worked predominantly (more than 60 per cent) at night for as little as six months of their working career had a 50 per cent greater incidence of breast cancer. The risk increase was particularly pronounced among flight attendants and catering employees and rose to 70 per cent with long-term (longer than six years) nighttime employment. The increased risk was independent of social

status, number of children, and other known breast cancer risk factors. The researchers conclude that exposure to light during the night suppresses the production of melatonin. Melatonin has been found to protect against tumor development, possibly through an enhanced immune response and the scavenging of free radicals. **Editor's Note:** Even exposure to relatively weak light during the night rapidly decreases melatonin production. It may well be that one of the best protective measures against breast cancer is to sleep in a totally dark room.

Hansen, Johnni. Increased breast cancer risk among women who work predominantly at night. Epidemiology, Vol. 12, January 2001, pp. 74-77

Ginseng and blood sugar

TORONTO, CANADA. An excessive rise in blood glucose level after a meal (postprandial glycemia) is a prominent feature of diabetes and impaired glucose tolerance. Researchers at the University of Toronto now report that taking American

ginseng (*Panax quinquefolius* L.) before a meal markedly reduces postprandial glycemia. Their clinical trial involved 12 healthy individuals who, in a random crossover design, received a placebo or 1, 2 or 3 grams of American ginseng at 40, 20, 10

or 0 minutes before a 25-gram oral glucose challenge. Blood samples were taken before the challenge and at 0, 15, 30, 45, 60 and 90 minutes after the challenge. The researchers conclude that taking 1 to 3 grams of ginseng 40 minutes before the challenge markedly reduced the rise in blood glucose levels. They speculate that as little as 100 mg of ginseng may be as effective as the 1-gram dose and point to earlier research that showed that supplementing for eight weeks with

200 mg/day of ginseng resulted in an improvement in glycemic control. Other research has shown that American ginseng is also highly effective in reducing postprandial glycemia in diabetics.

Vuksan, Vladimir, et al. American ginseng (Panax quinquefolius L.) attenuates postprandial glycemia in a time-dependent but not dose-dependent manner in healthy individuals. American Journal of Clinical Nutrition, Vol. 73, April 2001, pp. 753-58

Exercise and heart disease: perseverance counts

BIRMINGHAM, ALABAMA. A group of American and South Korean researchers sheds new light on the long debated question concerning the most important factor in determining the benefits of exercise for cardiac patients. Is it intensity, frequency or duration? Their study involved 185 middle-aged men with diagnosed heart disease. They were randomized into two groups – the high-intensity group and the low-intensity group. The high-intensity group exercised three non-consecutive days each week at a target heart rate of 85 per cent of maximum oxygen uptake while the low-intensity group exercised at a target heart rate of 50 per cent. All exercise sessions consisted of 30 minutes of walking or jogging, 15 minutes of stationary cycling, with 5- to 15-minute warm-up and cool-down sessions. The experiment lasted for 12 months and all the participants had a thorough clinical evaluation at baseline, after six months, and again after 12

months. There was little overall effect on cholesterol parameters in the two groups and the high-intensity group did not derive any greater benefits from exercise than did the low-intensity group. The researchers did note, however, that the more exercise sessions a participant attended the greater the benefits. Frequent attendees showed a significant increase in their blood levels of “good” (HDL) cholesterol and a marked improvement in the all-important HDL:LDL (“bad”) cholesterol and HDL:total cholesterol ratios. The researchers conclude that exercise frequency may be more important than intensity for favourably influencing cholesterol levels.

Kim, Jang-Rak, et al. Effect of exercise intensity and frequency on lipid levels in men with coronary heart disease: Training Level Comparison Trial. American Journal of Cardiology, Vol. 87, April 15, 2001, pp. 942-46

Circadian variation in pulmonary embolism

BOSTON, MASSACHUSETTS. Pulmonary embolism is a serious medical emergency in which a blood clot is carried in the circulation to lodge in the pulmonary artery. Pulmonary embolism (PE) is frequently fatal and often follows surgery. Researchers at the Harvard Medical School have discovered that 74 per cent of all cases of non-fatal PE events occur during the autumn and winter months and that 76 per cent of them occur in the morning hours with a peak at 8 AM. A similar event distribution has previously been noted for fatal PE and it is also known that the incidence of heart attack, stroke and sudden death peaks in the morning.

It is believed that the reason for this pattern relates to increased platelet aggregability and decreased antithrombin III levels and fibrinolytic activity in the morning hours. The researchers suggest that their findings can be used to help prevent PE after surgery. They suggest that subcutaneous heparin injections should be administered at 6 AM and 10 PM instead of at 9 AM and 6 PM as is the current practice.

Sharma, G.V.R.K., et al. Circadian and circannual rhythm of nonfatal pulmonary embolism. American Journal of Cardiology, Vol. 87, April 1, 2001, pp. 922-24

The GlucoWatch for hypoglycemia

REDWOOD CITY, CALIFORNIA. The GlucoWatch is a device for measuring blood sugar level automatically without the need for drawing blood. It is non-invasive, is worn on the wrist like a watch, and provides readings every 20 minutes. With the trend towards more aggressive treatment of diabetes the GlucoWatch fills the need for the more frequent glucose measurements required to support this approach. Aggressive treatment means more insulin injections, dietary adjustments or taking of oral diabetes drugs throughout the day in order to keep glucose on an even keel. Unfortunately, this approach can create a “yo-yo” effect whereby periods of high glucose levels alternate with low (hypoglycemic) levels.

Researchers at Cygnus Inc., the manufacturer of the GlucoWatch, and the University of California Medical School now report that the GlucoWatch can be used effectively to warn of hypoglycemia. Their study involved over 3,000-paired

GlucoWatch and blood glucose readings. The researchers found that the GlucoWatch would “catch” 24 per cent of all hypoglycemic events (blood glucose at or below 3.9 mmol/L [70 mg/dL]) with an accuracy of 99 per cent. In other words, the sensitivity was 24 per cent and the specificity 99 per cent. Setting the alarm to 5.6 mmol/L (100 mg/dL), on the other hand, produced a sensitivity of 75 per cent and a specificity of 10 per cent. Although these results are still not optimal they are significantly better than what could be obtained by standard blood sample testing even four times per day. NOTE: This study was partially funded by Cygnus Inc., the manufacturer of the GlucoWatch.

Pitzer, Kenneth R., et al. Detection of hypoglycemia with the GlucoWatch biographer. Diabetes Care, Vol. 24, May 2001, pp. 881-85

Reach, Gerard. Which threshold to detect hypoglycemia? Diabetes Care, Vol. 24, May 2001, pp. 803-04 (editorial)

Vitamin D and calcium lower blood pressure

BAD PYRMONT, GERMANY. Calcium and vitamin D deficiencies are common both in Europe and the United States and so is hypertension (high blood pressure). Researchers at the Institute of Clinical Osteology Gustav Pommer have just released the results of a study that clearly links the two. Their randomized, double blind clinical trial involved 148 women (mean age of 74 years) who had a low blood level of 25-hydroxycholecalciferol (25OHD3)- the active form of vitamin D. Half the women were assigned to take 600 mg of elemental calcium (in the form of calcium carbonate) with breakfast and dinner. The other half took 600 mg of calcium plus 400 IU of vitamin D3 twice a day.

After eight weeks of supplementation the average (mean) systolic blood pressure in the vitamin D plus calcium group had dropped by 10 per cent

(from 144 mm Hg to 131 mm Hg) and the blood level of 25OHD3 had increased by 72 per cent. The diastolic pressure also dropped slightly (from 84.7 to 77.5 mm Hg), but this change was not statistically significant. The systolic pressure also dropped in the calcium only group, but only by 4 per cent. The researchers conclude that short-term supplementation with calcium plus vitamin D is more effective in lowering blood pressure than is supplementation with calcium alone. NOTE: This study was partially funded by Strathmann, Inc. a manufacturer of calcium and vitamin D supplements.

Pfeifer, Michael, et al. Effects of short-term vitamin D3 and calcium supplementation on blood pressure and parathyroid hormone levels in elderly women. Journal of Clinical Endocrinology & Metabolism, Vol. 86, April 2001, pp. 1633-37

NEWSBRIEFS

Asthma linked to chronic infection. A team of American researchers has discovered a link between chronic infection and chronic asthma. They found that 31 (56 per cent) of 55 patients with asthma tested positive for *Mycoplasma* or

Chlamydia bacteria in biopsy samples from their lungs. This compares to only one of 11 (9 per cent) testing positive in a group of healthy controls. Their findings open up the possibility of

using specific antibiotics in the treatment of chronic asthma.

Journal of Allergy and Clinical Immunology, April 2001, pp. 595-601

Cellular phones and eye cancer. German researchers report an association between the use of cellular phones and radio sets and the incidence of eye cancer (uveal melanoma). They found a three to four times higher risk among users of these devices than among controls. They caution though that their findings are preliminary and need to be confirmed in larger studies.

Epidemiology, January 2001, pp. 1-4, 7-12

Arsenic and shortness of breath. Arsenic contaminated drinking water is a growing problem in the United States, Taiwan, Mexico, Chile, Argentina, and India. Indian researchers report a strong link between arsenic contamination and respiratory illnesses. Women drinking highly contaminated water (greater than 500 micrograms/liter of arsenic) were found to have an eight times greater incidence of cough, a 23 times greater incidence of shortness of breath, and a 10-fold increase in abnormal chest sounds. The corresponding numbers for men were 5, 7 and 4 times increased incidence.

International Journal of Epidemiology, December 2000, pp. 1047-52

Bio-Strath good for pregnant women. Canadian researchers report that pregnant women who take the herbal yeast food supplement Bio-Strath during their pregnancy are able to maintain their iron and hemoglobin levels without additional vitamin or iron preparations. The 31 women participants in the clinical trial also reported a greater sense of well-being and vitality while taking Bio-Strath.

Schweiz. Zschr. GanzheitsMedizin, Vol. 12, No. 6, 2000, pp. 327-28

Vitamin B6 also lowers homocysteine. High homocysteine levels are a potent risk factor for heart disease. They can be lowered safely and effectively by supplementing with folic acid. Researchers at Trinity College in Dublin have discovered that vitamin B6 (pyridoxine) can also lower homocysteine levels (by about 7.5 per cent) even in people who are fully "saturated" with folic acid. The researchers recommend that protocols to reduce homocysteine include both folic acid and vitamin B6.

American Journal of Clinical Nutrition, April 2001, pp. 759-64

Sunscreens implicated in cancer. Researchers at the Institute of Pharmacology and Toxicology at the University of Zurich warn that many of the active components in sunscreens (benzophenone-3, octyl-methoxycinnamate, and octyl-dimethyl-PABA, etc.) behave like estrogen and make cancer cells grow faster. These chemicals have also been found to accumulate in fish inhabiting lakes where people swim. Margaret Schlumpf, the lead researcher, isn't advising people not to use sunscreens, but suggests that zinc oxide-based ones may be a healthier alternative.

New Scientist, April 21, 2001, p. 5

Painkillers and childbirth. Swedish researchers have found that babies born to mothers given painkillers (epidurals) during childbirth are much slower to start nursing. This in turn may affect the level of the hormone oxytocin that helps mother and child bond shortly after birth. Says Susan McGrath of the Children's Hospital in Cleveland, "These results highlight the importance of reducing or eliminating the use of these agents (painkillers), especially in US hospitals, where epidural analgesia use during labour has become almost routine."

New Scientist, March 31, 2001, p. 12

THE AFIB REPORT

Welcome to the sixth issue of The AFIB Report. In this issue we continue the reporting of the results of the LAF survey with at least one rather startling conclusion. Afibbers who take drugs have more episodes than afibbers who do not. The reason would seem to be that over 70% of afibbers with the vagal variety are prescribed drugs that are directly contraindicated for their condition. Why would cardiologists so persistently prescribe the wrong drugs? The explanation is probably fairly simple. Upwards of 95% of all the afib patients that a cardiologist sees have underlying heart disease. Afib connected with heart disease is, without exception, adrenergic in nature. So the standard protocol for atrial fibrillation is geared towards adrenergic afib and is exactly wrong for vagal afibbers. In part IV of the survey we will try to get a handle on

which drugs, if any, work for adrenergic and vagal type LAF. Enjoy – and as always – your comments are most welcome!

SURVEY RESULTS – PART III

A quarter of all respondents have hypoglycemia (low blood sugar) and another 24% have symptoms of hypoglycemia. About half the ones having diagnosed hypoglycemia felt that there was a definite correlation between a hypoglycemia episode and a LAF episode. This, in a way, is good news as it is fairly simple to quickly abort a hypoglycemic episode.

A full 44% reported digestive problems and many felt that there was a correlation between these problems (bloating, belching, reflux, etc.) and their LAF episodes.

In general respondents were healthy with only 36% reporting other disorders than LAF. Anxiety, asthma, and high cholesterol were most prevalent. Only 17% were taking pharmaceutical drugs for disorders other than LAF.

Most (56%) could feel an episode coming on. This again is good news as they may have enough time to abort the event by getting up and exercising (vagal) or taking a beta-blocker (adrenergic). Almost 90% experience ectopic (premature) heart beats from time to time and 70% of those felt there is a correlation between ectopic beats and a LAF event.

The most common side effect of a LAF episode is fatigue which is felt by 63% of all respondents. This is followed by dizziness (33%), anxiety or fear (17%), shortness of breath (11%), increased urination frequency (11%), nausea (9%), and tightness across the chest (9%). Seventeen per cent reported no side effects at all. Please note that the percentages do not add up to 100 as many respondents reported more than one symptom.

The maximum pulse rate during an episode ranged from 60 to 260 bpm with an average of 145. The minimum rate was between 35 and 100 bpm with an average of 72.

Most people with intermittent (paroxysmal) LAF did not go to the hospital or emergency clinic when experiencing an episode. The remaining 13% did go to the hospital with about half of them receiving cardioversion. Interestingly, only two of the six respondents who did go to the hospital felt that this helped to convert to sinus rhythm quicker.

The most popular drug used to speed conversion to sinus rhythm was flecainide (Tambocor) which was used by 12% (either at home or in hospital). However, most people (53%) just rested or otherwise waited out the episode. Seven per cent found light exercise to be beneficial and 5% found sexual intercourse to shorten a long episode. One respondent was able to terminate a hypoglycemia-related episode within 5 minutes by eating a "power bar".

Atenolol (Tenormin) was used by 22% to slow down the heart rate during an episode followed by verapamil at 13%, propafenone (Rythmol) at 9%, and sotalol (Betapace) at 7%. Forty-eight per cent of all respondents did not use any drugs for slowing down the rate.

The time to recover fully from an episode varied from a few minutes to two weeks with an average time of 32 hours. About 13% of all respondents did not feel that having LAF had affected their quality of life. Forty-two per cent felt they had been moderately affected and 17% felt their life had been severely affected if not devastated. Here are some of the more poignant comments from the survey:

"Basically it has, over the last 30 years, changed my life. While I look at it as a life lesson(s) - HA! I really do not have any other option. It concerns me to the extent that you never know when an episode will occur – while it is not that frequent – I still know that it could happen anytime or anywhere. It has and will have input on travelling, activities etc. It is just a limitation on my system – and one that I have to understand – or it will remind ME!!! I guess it's like having a 30-year electrical short in your car and not being able to find it!! It

does influence where you take it and where you park it. I have always looked on life as a glass half full – so in all honesty, while afib is my albatross, it has taught me a lot about myself that I never would have learned. So, for that reason, I am very thankful. You learn to play with the cards that the dealer gives you!!”

“I'm nervous travelling, I drink much less, I have completely changed my eating patterns, I get depressed easily, I have quit my job - apart from that, not much!! On the other hand, I've had to re-evaluate what matters in life, slow down, and learn to accept the unfairness and try to reach a state of calm.”

“It has wrecked my love of racquetball because I'm afraid I am going to have an attack while I play since the meds don't feel like they hold anymore like they used to. I am leery of travel now until I find out what stage I am at.”

“LAF has had an enormous affect on my life. I am anxious about travelling and making any kind of arrangement in advance.”

“Causes restrictions in planning too far ahead, increases food cravings during episodes (because of stomach "butterflies", etc.). I am prematurely retired and feel constrained from taking on any work commitments. When the attacks occur, I strongly feel the symptoms and the irregular beats and this generates depression and negative outlooks for the future.”

“I was once a very active long distance runner and bicyclist. I have had to curtail those activities. I have been far less active physically in the past 2 years – inhibited mainly by LAF.”

“Very badly affected. I used to play a lot of sports and be very active physically, but I can't even swing a golf club for 30 minutes now without going into AF. I don't eat out much now and my social life and travel have been dramatically reduced.”

Most (78%) took supplements. Almost 18% thought they definitely helped, but the majority (63%) was not sure whether they helped or not. The most popular supplements taken were:

- 70% magnesium
- 60% multivitamins
- 53% vitamin C
- 50% vitamin E
- 43% coenzyme Q10
- 40% fish oil
- 25% calcium
- 23% potassium
- 20% B-complex
- 18% selenium
- 13% hawthorn
- 13% l-carnitine
- 13% vitamin B12

The most popular supplements felt to be beneficial were:

- 100% fish oil
- 86% magnesium
- 71% vitamin E
- 57% multivitamins
- 57% vitamin C
- 43% coenzyme Q10
- 43% selenium
- 43% B-complex

Overall 39% supplemented with fish oil (tissue oil) and 4% with cod liver oil. This is encouraging as fish oil has been found to help prevent arrhythmias, heart attacks, angina, and sudden cardiac death. There is also evidence that eating fish or supplementing with fish oils (eicosapentaenoic acid and docosahexaenoic acid)

help prevent breast and prostate cancer. For more information on the benefits of fish oil see www.oilofpisces.com.

Most (39%) took a daily aspirin to help prevent a stroke. Another 20% took Coumadin (warfarin) on a regular basis. Twelve per cent used fish oil or cod liver oil specifically for stroke prevention, 4% used ginkgo biloba while 8% took an aspirin only at the beginning of an episode. Actually as blood clots are more likely to be released after the episode ends and particularly if it lasts more than 24 hours it is advisable to continue with the aspirin for a week or two after a long episode. The remaining 17% took no specific precautions against stroke.

The official recommendations for anti-thrombotic therapy for people with lone atrial fibrillation (no other risk factors) are:

- age under 65 years – no therapy or aspirin if desired;
- age between 65 and 75 years – daily aspirin;
- age over 75 years – warfarin (Coumadin) if no contraindication.

Afibbers with risk factors such as rheumatic heart disease, prior stroke, heart failure, echo systolic dysfunction, diabetes or hypertension are advised to use warfarin at all ages. Warfarin is also prescribed for 3 weeks before and 3 weeks after attempted cardioversion.

Ninety per cent of respondents reported no adverse effects from their stroke prevention regimen and some had been on it for 10 years or more.

Sixty-four per cent (of non-chronic afibbers) took one or more pharmaceutical drugs to prevent future LAF episodes. The most widely used drugs were:

Atenolol (Tenormin)	21%
Other beta-blockers	25%
Flecainide (Tambocor)	18%
Sotalol (Betapace)	14%
Propafenone (Rythmol)	11%
Verapamil	7%
Digoxin (Lanoxin)	7%

About half of the drug users had side effects with the most common symptoms being fatigue (25%) and dizziness (11%).

A preliminary comparison of the number of episodes experienced by afibbers on preventive drugs and afibbers who took no drugs showed that drug users tended to have more episodes (23 versus 19 average over 6 months) than did non-drug users. The episodes were similar in duration. At first glance this seems rather improbable; that preventive drugs would actually make things worse. However, taking a closer look at the prescription pattern it becomes clear why this could indeed be the case. Over 70% of afibbers with the vagal variety were prescribed drugs that are known to worsen their condition (digoxin or beta-blockers).

I intend to look into the evidence for potential benefits of individual drugs – if properly prescribed – in phase 4 of the evaluation of survey results. Stay tuned for more in the July issue of “The AFIB Report”.

Dealing with Hypoglycemia

Almost 50% of participants reported hypoglycemia or symptoms of hypoglycemia (low blood sugar). Common symptoms are:

- craving for sweets;
- irritability or weakness if meal is missed;
- dizziness when standing up suddenly;
- heart palpitations;

- afternoon fatigue;
- tiredness an hour or so after eating;
- depression or mood swings.

Hypoglycemia can be formally diagnosed through a 3-hour or, better yet, a 6-hour glucose tolerance test. Basically if your fasting glucose level is below 50 mg/dL or if your glucose level 4 to 6 hours after a meal falls below the fasting value you have hypoglycemia. However, the actual blood glucose level that causes hypoglycemic reactions can vary considerably between individuals. Hypoglycemia has been implicated in such diverse conditions as criminal behaviour, premenstrual syndrome, migraine headaches, atherosclerosis, and atrial fibrillation.

It is best controlled by religiously avoiding foods with a high glycemic index (sugar, white and whole grain bread, bananas, raisins, potatoes, rice, and wheat cereal) and by eating frequent small meals throughout the day. Alcohol should also be avoided and the intake of dietary fiber increased. A daily multivitamin (and minerals) capsule is very important and a minimum intake of 200-400 micrograms/day of chromium is essential.

A hypoglycemic-induced LAF episode can often be aborted by quickly consuming a "power bar" or a high glycemic index food like bananas or raisins. It is best to follow up with a snack of low glycemic index food (apple, orange, raw carrot or some nuts) in order to avoid a "yo-yo" effect. Hypoglycemia is relatively easy to keep in check and doing so may significantly reduce the number of LAF episodes.

The Exercise Connection

Long-term endurance training (vigorous regular exercise) profoundly affects the body's physiology. Among other things it significantly lowers the heart rate and testosterone levels(1,2). It is also known that, while exercise in the short term increases adrenergic tone (activates sympathetic nervous system), its long-term effect is an increase in vagal tone (predominant parasympathetic system)(3,4).

Most vagal type afibbers are heavy exercisers. This raises the tantalizing possibility that they might actually be able to reduce their number of episodes by cutting back on the exercise. A recent study carried out in Spain found that "detraining", i.e. cessation or reduction in exercise resulted in profound changes. Blood volume decreased, heart rate increased, and adrenergic tone increased after 2 to 4 weeks without training(5).

One of the members of our group has actually observed that giving up on exercise one week out of every four significantly reduced his frequency of episodes.

Of course, abruptly stopping all exercise carries with it a whole new set of problems so a gradual approach is definitely in order. Might be worth experimenting with if you are a vagal afibber!

AFIB News

Timing of aspirin intake may be important. Researchers at Columbia University have discovered that aspirin exerts a significant influence on the autonomic nervous system. They used a double blind, crossover study where 22 participants received either an aspirin (325 mg) or a placebo with each meal for 2.5 days. At the end of the trial the researchers noted a significant decrease in adrenergic tone and a slight increase in vagal tone in the aspirin group. What does this mean to afibbers? Probably not a lot, but it might confer a slight advantage to take the daily aspirin with breakfast rather than with dinner.

Clin Auton Res, Vol. 10, August 2000, pp. 197-201

Magnesium prevents atrial fibrillation. Researchers at the Acybadem Hospital in Istanbul report that magnesium infusions (1.5 grams of magnesium sulfate in 100 ml 0.9% saline solution) given 1 day before,

during, and 4 days after heart (bypass) surgery reduce the incidence of postoperative atrial fibrillation by a factor of 10 (from 21% to 2%). The lead researcher, Dr. Huseyin Cem Alhan, explains "There are no contraindications to magnesium therapy, we give it to patients with normal as well as low magnesium levels. In the elderly it has been shown that patients may be total body magnesium deficient, but have normal serum levels. We are not sure if the therapeutic mechanism is replenishment of a deficiency or a pharmacologic effect of the drug (magnesium)".

Reuters Medical News, February 2001

Incidence of AF growing in the USA. A recent study carried out by the Kaiser Permanente concludes that the incidence of atrial fibrillation, which now affects 2.3 million Americans, will double over the next 50 years. Atrial fibrillation is more common in men than in women (1.1% versus 0.8%) and also more common in Caucasians than in African Americans (2.2% versus 1.5%). The incidence of AF increases with age from about 0.1% among individuals younger than 55 years to 9% in the group 80 years and over. Other studies have estimated that anywhere from 6% to 31% of all atrial fibrillation cases are of the lone variety.

Journal of the American Medical Association, Vol. 285, 2001, pp. 2370-75

References

- (1) Steinacker, J.M., et al. Training of junior rowers before world championships: effects on performance, mood state and selected hormonal and metabolic responses. *Journal of Sports Medicine and Physical Fitness*, Vol. 40, December 2000, pp. 327-35
- (2) Hackney, A.C. Endurance exercise training and reproductive endocrine dysfunction in men: alterations in the hypothalamic-pituitary-testicular axis. *Curr Pharm Des*, Vol. 7, March 2001, pp. 261-73
- (3) Matsuo, S., et al. Cardiac sympathetic dysfunction in an athlete's heart detected by 123I-metaiodobenzylguanidine scintigraphy. *Japanese Circ J*, Vol. 65, May 2001, pp. 371-4
- (4) Hautala, A., et al. Changes in cardiac autonomic regulation after prolonged maximal exercise. *Clin Physiol*, Vol. 21, March 2001, pp. 238-45
- (5) Mujika, I. And Padilla, S. Cardiorespiratory and metabolic characteristics of detraining in humans. *Medicine & Science in Sports & Exercise*, Vol. 33, March 2001, pp. 413-21

INTERNATIONAL HEALTH NEWS is published monthly by:
Hans R. Larsen MSc ChE, 1320 Point Street, Victoria, BC, Canada, V8S 1A5
E-mail: health@pinc.com World Wide Web: <http://www.yourhealthbase.com>
ISSN 1203-1933 Copyright 2001 by Hans R. Larsen

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