

Dr. Shari Lieberman

Dedicated to the Scientific Pursuit of Better Health

September, 2004 Newsletter

Dr. Shari Lieberman's Nutritional & Integrative Therapy Review Newsletter

Welcome to my newsletter. Each month I review the cutting-edge research in the field of nutritional and integrative medicine and give you my commentary. At the end of each newsletter, I give a specific nutritional protocol for a specific disorder. The newsletters and nutritional protocols can also be found on my website. You may also visit my website to view my numerous Powerpoint presentations given at medical conferences and visit my Q & A, library and more. As an ongoing commitment to excellence in product development, you can also view products I have developed and co-developed with leading experts all over the world.

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1. Plea for New RDA for Vitamin C: Experts Call for Review of Recommended Dietary Allowance for Vitamin C.

Tuesday August 24, 9:21 am ET, SAN DIMAS, Calif., Aug. 24 /PRNewswire

Abstract: With newly published research reports showing that higher

concentrations of vitamin C can be achieved in the blood plasma than previously thought possible, antioxidant researchers have penned their names to a plea for a scientific re-evaluation of the Recommended Dietary Allowance (RDA) for vitamin C. A dozen prominent antioxidant researchers, authors, and clinicians say that a prevalent belief has now been disproved. In the past, it was thought that 200 milligrams of oral vitamin C (an amount that can be obtained by eating five servings of selected fresh fruits and vegetables) can saturate the blood plasma and additional amounts are excreted in the urine. Now, however, two recently published papers indicate that blood plasma levels of ascorbic acid can be raised three times greater than a flawed 1996 study indicates. One of the published studies shows that blood plasma concentrations of vitamin C continue to rise with a single 1,000 milligrams dose of supplemental vitamin C. Drs. Steve Hickey and Hilary Roberts, pharmacology graduates of the University of Manchester in England, assert the initial studies used to determine the blood plasma saturation point for vitamin C failed to calculate for the half life of this vitamin. In their newly published book, Drs. Hickey and Roberts show that the original calculations used to establish the RDA were performed 12 hours, or 24 half lives, after oral consumption of vitamin C and are therefore invalid. (Ascorbate: The Science of Vitamin C, 264 pages, referenced, ebook: <http://www.lulu.com/ascorbate>) In addition to Drs. Hickey and Roberts, the list of researchers calling for a re-evaluation of the RDA for vitamin C includes: Thomas E. Levy, M.D., J.D., author of Vitamin C, Infectious Diseases, and Toxins: Curing the Incurable (Philadelphia, PA: Xlibris Corporation; 2002); Robert F. Cathcart III, M.D., a practicing physician and advocate of high oral-dose vitamin C therapy; Richard Passwater, Ph.D., antioxidant researcher and author of Supernutrition; Patrick Holford, London, author of the Optimum Nutrition Bible; Dr Archie Kalokerinos, M.D., Graduate Sydney University, Australia, author of Vitamin C: Nature's Miraculous Healing Missile; Joel M. Kaufman, Ph.D., Professor of Chemistry Emeritus, University of the Sciences in Philadelphia, special interest in medicinal chemistry; Professor Ian Brighthope, Managing Director, Nutrition Care Pharmaceuticals Pty Ltd, Australia; Hugh D. Riordan, M.D., Director -- Bio-Communications Research Institute, Wichita, Kansas; and Abram Hoffer, M.D., Ph.D., F.R.C.P., a practicing physician, advocate of nutritional medicine and editor of the Journal of Orthomolecular Medicine. The written plea was sent to the Institutes of Medicine, Food & Nutrition Board, which establishes the Recommended Dietary Allowances for essential nutrients.

Commentary: Bravo! But do I believe that the Institute of Medicine will change their tune? Absolutely not. The Institute of Medicine has been very slow to revise anything - mainly because their experts can't agree on most revisions. I equate the RDA or RDI for vitamin C to the minimum wage - barely enough to get by. They can't even agree if the RDI should be raised from 60 milligrams to a measly 200 milligrams per day. Our hunter gatherer ancestors consumed approximately 2,000 milligrams of vitamin C per day. And any animal that does not make their own vitamin C will consume the equivalent per body weight of as much as 10,000 milligrams per day when under extreme stress. The most important aspect of this rebuttal is that a group of world class experts reviewed the scientific literature and found it was flawed with respect to future vitamin C recommendations. And the flaw had to do with the timing of plasma collection in a 1996 study - as much as 12 hours after consumption of vitamin C. Newer research demonstrates that plasma levels can be raised three times greater than an earlier study indicates and that plasma concentrations continue to rise with a single 1,000 milligram dose of vitamin C if measured from the time of consumption - not just 12 hours later. So this rebuttal puts to bed the concept that taking more vitamin C just results in expensive urine. Therapeutic

intervention studies on cancer, heart disease, allergies, sick building syndrome, asthma as well as other illnesses used at least 1,000 milligrams of vitamin C. And newer research has utilized extremely high levels of vitamin C - as much as 60 grams intravenously to selectively kill cancer cells.

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2. Hypovitaminosis D is associated with insulin resistance and beta cell dysfunction.

Chiu KC, Chu A, Go VL, Saad MF. Am J Clin Nutr. 2004 May;79(5):820-5.

Abstract: Although the role of vitamin D in type 2 diabetes is well recognized, its relation to glucose metabolism is not well studied. Researchers investigated the relation of 25-hydroxyvitamin D [25(OH)D] concentrations to insulin sensitivity and beta cell function. Participants were 126 healthy, glucose-tolerant subjects living in California. Analyses showed that 25(OH)D concentration was positively correlated with insulin sensitivity index (ISI). A negative relation of 25(OH)D concentration with plasma glucose concentration was observed at fasting, 60 min, 90 min, and 120 min during the oral-glucose-tolerance test. Subjects with hypovitaminosis D (<20 ng/mL) had a greater prevalence of components of metabolic syndrome than did subjects without hypovitaminosis D (30% compared with 11%). The data show a positive correlation of 25(OH)D concentration with insulin sensitivity and a negative effect of hypovitaminosis D on beta cell function. Subjects with hypovitaminosis D are at higher risk of insulin resistance and the metabolic syndrome. Further studies are required to explore the underlying mechanisms.

Commentary: This landmark study demonstrates that higher vitamin D levels are correlated with better insulin sensitivity and that vitamin D deficiency has adverse effects on beta cell function. Those who had hypovitaminosis D (vitamin D deficiency) were at higher risk of developing insulin resistance and metabolic syndrome. Despite the fortification of milk with vitamin D, it appears that vitamin D deficiency and insufficiency is quite widespread in the United States. And many Americans simply do not go in the sun or use sunscreens that may also affect vitamin D levels. Recent studies have shown that vitamin D deficiency is implicated in fractures and that supplementation reduces fracture risk; and vitamin D supplementation reduces the risk of multiple sclerosis by as much as 40% in high-risk patients. It would be interesting to see an intervention study next where vitamin D supplementation is given to patients with insulin resistance to see if it improves insulin sensitivity and beta cell function in the pancreas once it has already deteriorated.

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3. Lifetime nonnarcotic analgesic use and decline in renal function in women.

Curhan GC, Knight EL, Rosner B, Hankinson SE, Stampfer MJ. Arch Intern Med. 2004;164(14):1519-24.

Abstract: Analgesics are commonly used and may impair kidney function. However, limited prospective information is available on the long-term effects of aspirin, other nonsteroidal anti-inflammatory drugs (NSAIDs), and acetaminophen on renal function. A total of 1,697 women participating in the Nurses' Health Study provided information on a mailed questionnaire in 1999 about lifetime use of acetaminophen, aspirin, and NSAIDs and provided blood samples in 1989 and 2000. The main outcome was change in estimated glomerular filtration rate (GFR) in 11 years. There were no substantial differences in the unadjusted or estimated GFR levels among the categories of lifetime intake for the 3 analgesic groups at baseline or after 11 years. Acetaminophen use was associated with an increased risk of a GFR decline but aspirin and NSAID use were not. Women who had taken between 1,500 and 9,000 tablets over their lifetimes raised their risk of kidney impairment by 64%. For those who took more than 9,000 tablets the risk more than doubled. Higher lifetime use of aspirin and NSAIDs is not associated with renal function decline, but high acetaminophen use may increase the risk of loss of renal function. The absolute risk of renal function decline due to even high lifetime analgesic intake seems to be modest.

Commentary: This study shows that women who had taken between 1,500 and 9,000 acetaminophen tablets over their lifetimes raised their risk of kidney impairment by 64 percent. For those who took more than 9,000 tablets, the risk more than doubled. This is quite serious and should not be brushed under the table. Acetaminophen is one of the most dangerous over-the-counter (OTC) drugs available if used inappropriately. The warning labels on this OTC are simply not good enough. Acetaminophen over dose is the second leading cause of emergency room visits and one of the major causes of liver failure resulting in a need for liver transplantation. Now we have data that simply using this drug long term can result in a decline in renal function. This is yet another warning that should be added to the label. The FDA has been very lax in alerting the public to the dangers and inappropriate use and dosing of this drug.

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4. No alteration in platelet function or coagulation induced by EGb761 in a controlled study.

Bal Dit Sollier C, Caplain H, Drouet L. Clin Lab Haematol. 2003 Aug;25(4):251-3.

Abstract: Some cases of spontaneous bleeding have been reported in patients

treated with Ginkgo biloba. A prospective, double-blind, randomized, placebo-controlled study was carried out in 32 young male healthy volunteers to evaluate the effect of three doses of Ginkgo biloba extract (120, 240 and 480 mg/day for 14 days) on hemostasis, coagulation and fibrinolysis. This study did not reveal any alteration of platelet function or coagulation. This suggests that the reported clinical bleeding events in patients receiving Ginkgo biloba extract are not related to pharmacological properties of EGb761.

Commentary: There has been great concern about Ginkgo's effect on bleeding time. This is based on just 4 (yes 4!) reports of spontaneous bleeding in patients who were taking blood thinning medications with Ginkgo including aspirin, warfarin and ibuprofen. There are also two reports of postoperative bleeding in patients taking Ginkgo. Even worse, the manufacturer of the Ginkgo that these folks were taking was never identified. There are superb companies like Dr. Willmar Schwabe Pharmaceuticals (WSP), Karlsruhe, Germany who put their money where their mouth is. WSP has funded numerous human and animal studies on their proprietary Ginkgo extract - EGB 761. These studies have looked at the therapeutic nature of Ginkgo on dementia, Alzheimer's, and other aspects of brain function and circulation with stellar results. This study enrolled normal, healthy men to evaluate the effect of a usual dose of Ginkgo (120 mg) as well as higher doses (240 mg and 480 mg) on bleeding time and platelet function. The result of this study is that EGB 761 does not increase bleeding time or have any adverse effect on platelet function in normal, healthy individuals. However, it would still be prudent to measure bleeding time and platelet function in patients who are taking medications, in particular, those that have the potential to thin the blood. It would be great to see a future study examining the interaction of Ginkgo with aspirin, warfarin (Coumadin) and ibuprofen to see if there is any potential negative interaction.

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5. Pycnogenol, French maritime pine bark extract, improves endothelial function of hypertensive patients.

Liu X, Wei J, Tan F, Zhou S, Wurthwein G, Rohdewald P. Life Sci. 2004 Jan 2;74(7):855-62.

Abstract: A placebo-controlled, double-blind, parallel group study was performed with 58 patients to investigate effects of French maritime pine bark extract, Pycnogenol, on patients with hypertension. Supplementation of the patients with 100 mg Pycnogenol over a period of 12 weeks helped to reduce the dose of the calcium antagonist nifedipine in a statistically significant manner from an average of 20 milligrams to 10 milligrams. The intake of Pycnogenol significantly improved endothelial function compared to the group receiving the blood pressure medication and placebo. Heart rate, electrolytes and blood urea nitrogen were not changed during treatment in both groups of patients. Unwanted effects observed in both groups were of mild and transient nature, such as gastrointestinal problems, vertigo, headache and nausea. Differences in

rate of side effects were not statistically significant between the two groups. Study results support supplementation with Pycnogenol for mildly hypertensive patients and that it helps reduce the effective dose of blood-pressure-lowering medication.

Commentary: Pycnogenol is yet another standardized, proprietary plant compound with a wealth of scientific data. Studies have examined Pycnogenol's therapeutic effect on circulatory disorders, strengthening veins and capillaries and antioxidant activity among other health benefits. This study specifically looked at the interaction between Pycnogenol and the blood pressure lowering medication nifedipine. Those patients that received Pycnogenol were able to significantly reduce the amount of blood pressure medication from 20 mg or more to as little as 10 mg per day. Also, most of the patients achieved normal blood pressures at the end of the 12-week study under treatment with 10 mg of nifedipine and 100 mg of Pycnogenol. Earlier studies have demonstrated that Pycnogenol may act as a natural ACE (angiotensin converting enzyme) inhibitor and reduce inflammation. Pycnogenol also improves the function of the endothelium (lining of the blood vessels), inhibits platelet aggregation and may also lower blood pressure by increasing vasodilation and lowering vasoconstriction.

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6. Dietary glycemic load and risk of colorectal cancer in the Women's Health Study.

Higginbotham S, Zhang ZF, Lee IM, Cook NR, Giovannucci E, Buring JE, Liu S. J Natl Cancer Inst. 2004 Feb 4;96(3):229-33.

Abstract: Although diet is believed to influence colorectal cancer risk, the long-term effects of a diet with a high glycemic load are unclear. The growing recognition that colorectal cancer may be promoted by hyperinsulinemia and insulin resistance suggests that a diet inducing high blood glucose levels and an elevated insulin response may contribute to a metabolic environment conducive to tumor growth. Researchers followed 38,451 women for an average of 7.9 years and identified 174 with incident colorectal cancer. Food-frequency questionnaires were used to examine the associations of dietary glycemic load, overall dietary glycemic index, carbohydrate, fiber, nonfiber carbohydrate, sucrose, and fructose with the subsequent development of colorectal cancer. Dietary glycemic load was statistically significantly associated with an increased risk of colorectal cancer and those eating the highest glycemic load had almost three times the risk of colon cancer. This study indicates that a diet with a high dietary glycemic load may increase the risk of colorectal cancer in women.

Commentary: High sugar, processed food and junk food consumption would result in a high glycemic load diet. This is a diet that is extremely low in fiber, fresh fruits and vegetables and would be described as a typical American diet. This is not the first study that demonstrates hyperinsulinemia and insulin

resistance are culprits in the development of certain cancers. Since obesity is associated with Type 2 diabetes and insulin resistance it is a risk factor for certain cancers as well. Our government still supports the sugar industry - so much that it boycotted the World Health Organizations recommendation to lower sugar consumption of sugar to 10% of calories. Sugar also raises cholesterol. It is metabolized to acetyl Co A - which is one of the starting compounds for cholesterol metabolism. Our ancestors and indigenous people who have not yet been corrupted by our eating habits eat a low glycemic index or glycemic load diet.