

Dr. Shari Lieberman

Dedicated to the Scientific Pursuit of Better Health

November, 2003 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. Effects of oral 5-hydroxy-tryptophan on energy intake and macronutrient selection in non-insulin dependent diabetic patients.

Cangiano C, Laviano A, Del Ben M, Preziosa I, Angelico F, Cascino A, Rossi-Fanelli F. Int J Obes Relat Metab Disord. 1998 Jul;22(7):648-54.

Abstract: In obese patients, brain serotonergic stimulation via orally administered 5-hydroxy-tryptophan (5-HTP), the precursor of serotonin, causes decreased carbohydrate intake and weight loss. Diabetes mellitus is associated with depressed brain serotonin, hyperphagia and carbohydrate craving. Previous studies demonstrated that orally administered 5-HTP stimulates brain serotonergic activity and thus normalizes eating behavior. Twenty-five overweight non-insulin dependent diabetic outpatients were enrolled in a double-blind, placebo-controlled study, and randomized to receive either 5-HTP (750 mg/d) or placebo for two consecutive weeks, during which no dietary restriction was prescribed. Twenty patients (nine from the 5-HTP group and 11 from the placebo group) completed the study. Brain tryptophan availability in diabetic patients was significantly reduced when compared to a group of healthy controls. Patients receiving 5-HTP significantly decreased their daily energy intake, by reducing carbohydrate and fat intake, and reduced their body weight. These data confirm the role of the serotonergic system in reducing energy intake, by predominantly inhibiting carbohydrate intake, and suggest that 5-HTP may be safely utilized to improve the compliance to dietary prescriptions in non-insulin dependent diabetes mellitus.

Commentary: This study of obese, non-insulin diabetic patients confirms earlier work with obese patients demonstrating that high doses of 5-HTP in the absence of any dietary restriction will reduce food intake and cause weight loss. In some of the earlier work carbohydrate intake was the macronutrient that was most significantly reduced with 5-HTP administration. This study is particularly interesting because it suggests that 5-HTP may help with dietary compliance. Doses in other studies were as high as 900 mg per day. It is possible that lower doses of 5-HTP (50-150 mg/day) may be effective when combined with a low glycemic index diet and exercise program. And weight loss would be greater and more significant if the supplement is taken with these lifestyle changes. There is some concern by some that taking high levels (750-900 mg/day) of 5-HTP long term may cause a neurotransmitter imbalance in some individuals. Some other benefits of this amino acid include improving depression, insomnia, fibromyalgia and chronic headaches.

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2. Meta-analysis of double-blind randomized controlled clinical trials of acetyl-L-carnitine versus placebo in the treatment of mild cognitive impairment and mild Alzheimer's disease.

Montgomery SA, Thal LJ, Amrein R. Int Clin Psychopharmacol. 2003 Mar;18(2):61-71.

Abstract: The efficacy of acetyl-L-carnitine in mild cognitive impairment (MCI)

and mild (early) Alzheimer's disease (AD) was investigated with a meta-analysis of double-blind, placebo-controlled, prospective, parallel group comparison studies of at least 3 months duration. The duration of the studies was 3, 6 or 12 months and the daily dose varied between studies from 1.5-3.0 g/day. The effect size for the Clinical Global Impression of Change (CGI-CH) was calculated separately. Meta-analysis showed a significant advantage for acetyl-L-carnitine compared to placebo for the integrated summary effect. The beneficial effects were seen on both the clinical scales and the psychometric tests. The advantage for acetyl-L-carnitine was seen by the time of the first assessment at 3 months and increased over time. It was well tolerated in all studies.

Commentary: Meta-analyses pool the results of numerous studies and analyze them as one. This is a landmark study that received absolutely no publicity in the news. It is really a shame. Acetyl-L-carnitine (ALC) was shown to significantly improve cognitive function in patients with early Alzheimer's disease and also in those patients with mild cognitive impairment. Unlike many of the drugs used for these disorders, ALC was well tolerated and effective. If ALC is combined with other supplements shown to be effective for Alzheimer's, dementia and other types of cognitive impairments such as Ginkgo biloba, vinpocetine, huperzine, natural vitamin E, and alpha-lipoic acid you have a powerful therapeutic intervention. Also, these natural substances can be used along with conventional medications for these types of disorders as well.

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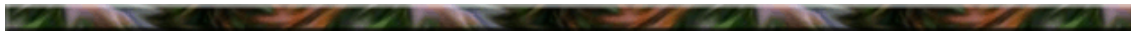
3. Achieving optimal essential fatty acid status in vegetarians: current knowledge and practical implications.

Davis BC, Kris-Etherton PM. Am J Clin Nutr. 2003 Sep;78(3 Suppl):640S-646S.

Abstract: Although vegetarian diets are generally lower in total fat, saturated fat, and cholesterol than are nonvegetarian diets, they provide comparable levels of essential fatty acids. Vegetarian, especially vegan, diets are relatively low in alpha-linolenic acid (ALA) compared with linoleic acid (LA) and provide little, if any, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Clinical studies suggest that tissue levels of omega-3 fatty acids are depressed in vegetarians, particularly in vegans. Omega-3 fatty acids have numerous physiologic benefits, including potent cardioprotective effects. These effects have been demonstrated for ALA as well as EPA and DHA, although the response is generally less for ALA than for EPA and DHA. Conversion of ALA by the body to the more active longer-chain metabolites is inefficient: < 5-10% for EPA and 2-5% for DHA. Thus, total omega-3 requirements may be higher for vegetarians than for nonvegetarians. Vegetarians must rely on conversion of ALA to EPA and DHA. Because of the beneficial effects of n-3 fatty acids, it is recommended that vegetarians make dietary changes to optimize omega-3 fatty acid status.

Commentary: This confirms another study where healthy adults were given ALA and their EPA and DHA levels did not significantly rise. The conversion of ALA to EPA and DHA is quite poor in the human body and also requires nutrients such as pyridoxine and magnesium for their conversion. Virtually all therapeutic intervention studies such as those on rheumatoid arthritis, psoriasis, cancer, cardiovascular disease, lowering of C-Reactive Protein and triglycerides used fish oil supplements (or the subjects consumed fatty fish). Some studies have shown benefits of consuming flax seed (or meal) or flax seed oil as well. Sources of ALA are quite minimal in the produce available to us. Therefore it is imperative that vegetarians pay particular attention to consuming sources of ALA such as flax seeds (or meal), walnuts, or flax seed oil. The shortcoming of this study is the fact that the authors do not discuss the fact that vegetarians consume very little arachidonic acid (generally found in animal products) so perhaps their requirements of EPA and DHA may be lower than omnivores.

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4. St John's wort or sertraline?

Van Gorp G, Meterissian GB, Haiek LN, McCusker J, Bellavance F. Can Fam Physician. 2002;48:905-912.

Abstract: Eighty-seven men and women with major depression and an initial score of >16 on the Hamilton Rating Scale for Depression participated in this double-blind, randomized 12-week study. Patients received either sertraline (50-100 mg/day) or St. John's wort (900-1800 mg/day). Both treatments resulted in improvement in Hamilton Rating Scale for Depression and Beck Depression Inventory without significant differences between the two treatments. Significantly more side effects were reported in the sertraline group than in the St John's wort group. The authors concluded that the more benign effects of St John's wort make it a good first choice for this patient population.

Commentary: The only study to cast doubt upon the effectiveness of St John's wort for the treatment of mild to moderate depression is the infamous study sponsored by the NIH that appeared in JAMA. In conversations with the scientist who designed the study, Dr. Jerry Cott, the NIH completely changed the design of the study. Rather than include only patients with mild to moderate depression (based on DSM III classification), the study was modified to include those with severe depression. If you do a Medline search on St John's wort and depression you will find an overwhelmingly positive body of research demonstrating that St John's wort is as effective as conventional psychotropic medications in the treatment of mild to moderate depression. What makes it superior is the fact that all drugs it was tested against yielded a significantly higher rate of side effects. How many more studies do we need on this to make it an option for psychiatric patients? What's the down side? If it doesn't work you can always use the drugs – right?

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5. Association of n-3 polyunsaturated fatty acids with stability of atherosclerotic plaques: a randomised controlled trial.

Thies F, Garry JM, Yaqoob P, Rerkasem K, Williams J, Shearman CP, Gallagher PJ, Calder PC, Grimble RF. Lancet. 2003 Feb 8;361(9356):477-85.

Abstract: Omega-3 polyunsaturated fatty acids (PUFAs) from oily fish protect against death from cardiovascular disease. A randomised controlled trial of 188 patients awaiting carotid endarterectomy received sunflower oil (n-6), or fish-oil (n-3) capsules or nothing (control group) until surgery. Primary outcome was plaque morphology indicative of stability or instability, and outcome measures were concentrations of EPA, DHA, and linoleic acid in carotid plaques; plaque morphology; and presence of macrophages in plaques. Duration of oil treatment was 7-189 days (median 42) and did not differ between groups. The proportions of EPA and DHA were higher in carotid plaque fractions in patients receiving fish oil compared with those in the control group and those receiving the sunflower oil. Sunflower oil had little effect on the fatty acid composition of lipid fractions. Fewer plaques from patients being treated with fish oil had thin fibrous caps and signs of inflammation and more plaques had thick fibrous caps and no signs of inflammation, compared with plaques in patients in the control and sunflower oil groups. The number of macrophages in plaques from patients receiving fish oil was lower than in the other two groups. Carotid plaque morphology and infiltration by macrophages did not differ between control and sunflower oil groups. Atherosclerotic plaques readily incorporate n-3 PUFAs from fish-oil supplementation, inducing changes that can enhance stability of atherosclerotic plaques. By contrast, increased consumption of n-6 PUFAs does not affect carotid plaque fatty-acid composition or stability over the time course studied here. Stability of plaques could explain reductions in non-fatal and fatal cardiovascular events associated with increased n-3 PUFA intake.

Commentary: This is a remarkable study – so remarkable in fact that every cardiologist across the nation should be quizzed on these results. Patients with serious coronary artery disease (CAD) had significant improvement in the very plaque that was blocking their carotids simply by taking a fish oil supplement. This explains yet another mechanism of action of how fish oil is protective against cardiovascular disease (CVD). Now does aspirin do that? I think not. I eagerly await the news to pick up on this story and for the media to educate Americans in taking a fish oil supplement to reduce their risk of CVD at least along with their baby aspirin.

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6. Herbal and complementary medicine in chronic prostatitis.

Shoskes DA, Manickam K. World J Urol. 2003 Jun;21(2):109-13.

Abstract: Chronic prostatitis is a very common and poorly understood condition with significant impact on quality of life. Given the lack of proven efficacy of conventional therapies such as antibiotics, many patients have turned to phytotherapy and other alternative treatments. This review paper covers the alternative therapies commonly used in prostatitis with an emphasis on those with published data such as quercetin, flower pollen and physical therapy. Complementary therapies have shown the potential to help men with prostatitis, particularly when allopathic therapies have failed. Studies have shown that Cernilton, (flower pollen extract) has anti-inflammatory and antiandrogen properties. It may improve the symptoms of prostatitis by 42% when taken as one tablet three times daily. Quercetin (a flavonoid) has an anti-inflammatory and antioxidant effect. It may improve the symptoms of prostatitis by 67-82% when taken as 500 mg, twice daily.

Commentary: Antibiotics have a lack of proven efficacy in prostatitis yet they are the gold standard of treatment. This is an excellent review article that actually recommends natural products in the treatment of prostatitis. There are some excellent clinical studies on Cernilton and prostatitis showing excellent benefit as a treatment. Quercetin is also excellent in treating this condition and it has added benefits of being protective against cancer, heart disease and therapeutic for allergies. These are important natural products in our treatment arsenal for prostatitis in addition those more commonly known such as saw palmetto, Pygeum africanum and beta-sitosterol. I must also add that transurethral hyperthermia is also extremely effective for prostatitis in those men who do not respond to any other treatment. They can have effective treatment without having their prostate removed when all else fails.

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