



Dr. Shari Lieberman

Protocol Formulations —————
Phyto SkinScience

Dr. Shari Lieberman
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Dedicated to the Scientific Pursuit of Better Health

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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, my newsletter also allows you to view products I have developed and co-developed with leading experts all over the world.

[1. The Use of Antioxidants with First-Line Chemotherapy in Two Cases of Ovarian Cancer.](#)

Abstract: Patients often turn to alternative therapies due to poor overall survival in advanced ovarian cancer. Antioxidants added to chemotherapy are a frequent choice.

[2. Omega-3 Fatty Acids in Inflammation and Autoimmune Disease.](#)

Abstract: Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) from fish oil possess the most potent immunomodulatory activities and are biologically more potent than alpha-linolenic acid (ALA).

[3. Dietary carotenoids and risk of coronary artery disease in women.](#)

Abstract: Numerous studies have shown that higher intakes or higher blood concentrations of carotenes are associated with a lower risk of coronary artery disease (CAD).

4. Dietary intakes and plasma concentrations of carotenoids and tocopherols in relation to glucose metabolism in subjects at high risk of type 2 diabetes: the Botnia Dietary Study.

Abstract: The role of antioxidants in the pathogenesis of type 2 diabetes is uncertain. Investigators evaluated cross-sectional relations of dietary intakes and plasma concentrations of antioxidants with glucose metabolism in a high-risk population. The subjects were 81 male and 101 female first- and second-degree, nondiabetic relatives of patients with type 2 diabetes.

5. Dietary fat attenuates the benefits of an elemental diet in active Crohn's disease: a randomized, controlled trial.

Abstract: Although an elemental diet has been established as the primary treatment for patients with Crohn's disease, the influence of dietary fat on the elemental diet remains unclear.

6. This Month's Nutritional Protocol - Autoimmune Disease



1. The Use of Antioxidants with First-Line Chemotherapy in Two Cases of Ovarian Cancer.

Drisko JA, Chapman J, Hunter VJ. JACN 2003;22(2):118-123

Abstract: Patients often turn to alternative therapies due to poor overall survival in advanced ovarian cancer. Antioxidants added to chemotherapy are a frequent choice. Two patients with advanced epithelial cancer were studied. Patient 1 began oral high-dose antioxidant therapy during her first month of therapy, which consisted of vitamin C, vitamin E, beta-carotene, coenzyme Q10, and a multi-vitamin-mineral complex. In addition, this patient also had bi-weekly 60 gram intravenous vitamin C drips at the end of her therapy and prior to consolidation paclitaxel chemotherapy. Patient 2 had a delay in initiation of chemotherapy secondary to co-morbid conditions and had evidence for progression of disease prior to starting therapy. She added oral antioxidants just prior to beginning chemotherapy (similar to patient 1). Patient 2 received six cycles of paclitaxel/carboplatinum chemotherapy and refused consolidation chemotherapy despite radiographic evidence of persistent disease. Instead she elected to receive bi-weekly 60 gram intravenous vitamin C drip. Patient 1 had normalization of her CA-125 after the first cycle of chemotherapy and at 3.5 years after diagnosis all scans show no evidence of

disease. Patient 2 had normalization of her CA-125 after the first cycle of chemotherapy but was noted to have residual disease in the pelvis. Although she refused further chemotherapy and instead elected to have the intravenous vitamin C therapy there is no evidence for recurrent disease and her CA-125 remains normal 3 years after diagnosis. Antioxidants added adjuvant to first-line chemotherapy may improve the efficacy of chemotherapy and may prove to be safe. A randomized controlled trial is now underway at the University of Kansas Medical Center evaluating the safety and efficacy of antioxidants added to chemotherapy in newly diagnosed ovarian cancer.

Commentary: This is a landmark study of two patients that of course never made the news. It is simply inexcusable that this type of information does not make it's way into the hands of cancer patients especially through their oncologists. Most oncologists continue to espouse the myth that antioxidants interfere with chemotherapy and radiation. Oxidative stress is a side-effect of these therapies rather than the mechanism by which these treatments work. According to Dr. Charles B. Simone, oncologist, antioxidants and other nutrients increase the selective killing of cancer cells when given with chemotherapy and radiation and decrease side-effects associated with these therapies. In his review of 22 of 50 human studies, these dietary supplements actually extend life. Ovarian cancer is one of the most lethal of all gynecological malignancies accounting for more deaths than cervical and uterine combined. Women with advanced stage disease have a dismal 5-year survival rate despite the development of new chemotherapeutic treatments. What was most dramatic was the second patient's refusal for more chemotherapy and to opt for the vitamin C drips and oral dietary supplement therapy. Cancer patients need to be empowered to look at all options available to them rather than being threatened or "scared to death" into a therapy. Too often patients are told they must immediately start therapy – never giving them time to question or explore either alternative or adjuvant therapies available to them when often the conventional therapy being offered to them has bleak survival statistics. This must change. Cancer doesn't magically spread in 2- 6 weeks after diagnosis.

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2. Omega-3 Fatty Acids in Inflammation and Autoimmune Disease.

Simopoulos AP. JACN 2002;21(6):495-505.

Abstract: Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) from fish oil possess the most potent immunomodulatory activities and are biologically more potent than alpha-linolenic acid (ALA). Animal experiments and clinical intervention studies indicate that omega-3 fatty acids have anti-inflammatory properties and may be useful in the management of inflammatory and autoimmune diseases. Coronary heart disease, major depression, aging and cancer are characterized by an increased level of interleukin 1 (IL-1), a proinflammatory cytokine. Rheumatoid arthritis, Crohn's disease, ulcerative colitis and lupus erythematosus are autoimmune diseases characterized by a high level of IL-1 and the proinflammatory leukotriene LTB-4 produced by

omega-6 fatty acids. A number of clinical studies have shown that patients with autoimmune diseases such as those previously mentioned as well as psoriasis, multiple sclerosis, and asthma usually respond to EPA and DHA because they decrease the elevated levels of cytokines. Many of the placebo-controlled trials of fish oil in chronic inflammatory diseases reveal significant benefit including decreased disease activity and a lowered use of anti-inflammatory drugs.

Commentary: For anyone using fish oil in their practice, this paper is a must have review written by Dr. Simopoulos, one of the foremost experts in essential fatty acids. Our ancestors consumed a diet with an essential fatty acid ratio of approximately 1:1 or 1:2 (omega-3 to omega-6 fatty acids). We now consume diets with a ratio of around 1:30! Omega-6 fatty acids are metabolized to pro-inflammatory prostaglandins while the omega-3s are metabolized to anti-inflammatory prostaglandins. There is a tremendous imbalance in our diets leading to increased inflammatory/autoimmune disorders, immunosuppression, cardiovascular disease and cancer. Meat is a rich source of arachidonic acid – yet another source for the production of pro-inflammatory prostaglandins. The use of fish oil supplements is an important therapeutic intervention for a wide variety of illnesses – including cancer, heart disease, autoimmune disease, diabetes and allergies. Fish oil should be taken with antioxidants to protect the oil from oxidative stress (since omega-3s are still unsaturated fats). The vitamin E added to the soft gel is to protect it from oxidative stress in the capsule only. Dr. Simopoulos also makes the point that ALA is not as biologically potent as EPA and DHA from fish oil. Several subsequent studies concluded that flax oil did not raise EPA/DHA levels in healthy subjects. Fish oil has also been given in many studies adjuvant to drug therapy (e.g. rheumatoid arthritis) with a reduction in symptoms as well as a reduction in the amount of prescription drug needed to alleviate pain. It is important to reduce omega-6 and arachidonic acid consumption as well as to increase fish oil consumption as fish and/or fish oil supplements. Personally, I do both.

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3. Dietary carotenoids and risk of coronary artery disease in women.


Osganian SK, Stampfer MJ, Rimm E, Spiegelman D, Manson JE, Willett WC. Am J Clin Nutr. 2003 Jun;77(6):1390-9.

Abstract: Numerous studies have shown that higher intakes or higher blood concentrations of carotenes are associated with a lower risk of coronary artery disease (CAD). Negative results in some trials of beta-carotene supplementation has led researchers to investigate the potential role of other dietary carotenoids in the prevention of CAD. Investigators prospectively examined the relation between dietary intakes of specific carotenoids and risk of CAD in women. In 1984, 73,286 female nurses completed a semiquantitative food-frequency questionnaire that assessed their consumption of carotenoids and various other nutrients. The women were followed for 12 years for the

development of incident CAD (nonfatal myocardial infarction and fatal CAD), and dietary information was updated in 1986, 1990, and 1994. During 12 y of follow-up 998 incident cases of CAD were identified. After adjustment for age, smoking, and other CAD risk factors, we observed modest but significant inverse associations between the highest quintiles of intake of beta-carotene and alpha-carotene and risk of CAD but no significant relation with intakes of lutein/zeaxanthin, lycopene, or beta-cryptoxanthin. For women in the highest compared with the respective lowest quintile of intake, the relative risks for beta-carotene and alpha-carotene were 0.74 (95% CI: 0.59, 0.93) and 0.80 (95% CI: 0.65, 0.99), respectively. The association between the specific carotenoids and CAD risk did not vary significantly by current smoking status. Higher intakes of foods rich in alpha-carotene or beta-carotene are associated with a reduction in risk of CAD.

Commentary: If you listened to the media, you would stop taking beta-carotene. The media and medical/scientific establishment has done the public a tremendous disservice. The conflicting results found in studies examining the CAD and cancer preventive effects of beta-carotene has solely to do with the difference between synthetic and natural beta-carotene. In the CARET study, a very important fact was omitted. Those smokers who consumed high amounts of beta-carotene were protected against lung cancer. Only in those who took synthetic beta-carotene supplements did the risk of lung cancer rise. According to some of the foremost experts in antioxidants, synthetic beta-carotene has virtually no beta-carotene activity. Even in Dr. Drisko et al's case study reviewed above it clearly states as fact in this paper, "When taken alone in high doses, synthetic beta-carotene suppresses uptake of other carotenoids and acts as a prooxidant." The use of synthetic beta-carotene goes beyond the fact that it does not have other carotenoids that are beneficial. It in itself appears to be dangerous in the populations that may benefit from natural beta-carotene with mixed carotenoids either in foods and/or supplements. If you carefully examine the intervention studies using beta-carotene supplements, you will find that more than 95% of them used synthetic beta-carotene. That is why the results are so mixed. However, when high levels of beta-carotene are consumed through food or a natural beta-carotene supplement is used, the studies generally demonstrate positive results as in this study examining CAD prevention with beta or alpha-carotene. It is time for researchers to stop using synthetic beta-carotene in any human intervention trials.

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4. Dietary intakes and plasma concentrations of carotenoids and tocopherols in relation to glucose metabolism in subjects at high risk of type 2 diabetes: the Botnia Dietary Study.

Ylonen K, Alfthan G, Groop L, Saloranta C, Aro A, Virtanen SM. Am J Clin Nutr. 2003 Jun;77(6):1434-41.

Abstract: The role of antioxidants in the pathogenesis of type 2 diabetes is uncertain. Investigators evaluated cross-sectional relations of dietary intakes and plasma concentrations of antioxidants with glucose metabolism in a high-risk population. The subjects were 81 male and 101 female first- and second-degree, nondiabetic relatives of

patients with type 2 diabetes. Antioxidant intake data were based on 3 day food records. Subjects taking supplements containing beta-carotene or alpha-tocopherol were excluded. Plasma antioxidant concentrations were measured by HPLC. The goal was to see whether dietary and plasma alpha- and beta-carotene, lycopene, and alpha- and gamma-tocopherol were related to fasting and 2-h concentrations of glucose and nonesterified fatty acids during an oral-glucose-tolerance test. Investigators also measured beta cell function through incremental 30-min serum insulin concentrations during an oral-glucose-tolerance test and first-phase insulin secretion during an intravenous-glucose-tolerance test. In men, dietary carotenoids were inversely associated with fasting plasma glucose concentrations ($P < 0.05$), plasma beta-carotene concentrations were inversely associated with insulin resistance ($P = 0.003$), and dietary lycopene was directly related to baseline serum concentrations of nonesterified fatty acids ($P = 0.034$). In women, dietary alpha-tocopherol and plasma beta-carotene concentrations were inversely and directly associated, respectively, with fasting plasma glucose concentrations ($P < 0.05$). In both sexes, cholesterol-adjusted alpha-tocopherol concentrations were directly associated with 2-h plasma glucose concentrations ($P < 0.05$). The data suggest an advantageous association of carotenoids, which are markers of fruit and vegetable intake, with glucose metabolism in men at high risk of type 2 diabetes.

Commentary: Once again we see that high dietary intakes of beta-carotene in both men and women are beneficial. In men, dietary carotenoids were inversely associated with fasting plasma glucose and plasma beta-carotene were inversely associated with insulin resistance. In women, dietary alpha-tocopherol and beta-carotene were inversely associated with fasting glucose tolerance. Cholesterol adjusted alpha-tocopherol concentrations were directly associated with 2 hour glucose concentrations. The researchers conclude that carotenoids are beneficial for men (and not women?) and they have no conclusion about high dietary beta-carotene and vitamin E being associated with lower fasting glucose concentrations in women – although these are certainly mentioned in the abstract in the study. What is important to note once again is natural dietary carotenoids and tocopherols were shown to be of benefit. As mentioned above, more than 95% of the human clinical intervention studies use synthetic beta-carotene. The same holds true for synthetic alpha-tocopherol (d,l-alpha tocopherol). It has about 1/8 the activity of natural vitamin E supplements and has no mixed tocopherols. We know that other tocopherols such as gamma-tocopherol have specific health benefits. In studies where natural alpha-tocopherol was used the results are overwhelmingly positive. In studies examining high consumption of foods rich in tocopherols, the results are also overwhelmingly positive. This study does confirm that high fruit and vegetable intake is associated with a lower risk of diabetes.

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5. Dietary fat attenuates the benefits of an elemental diet in active Crohn's disease: a randomized, controlled trial.

Bamba T, Shimoyama T, Sasaki M, Tsujikawa T, Fukuda Y, Koganei K, Hibi T, Iwao Y, Munakata A, Fukuda S, Matsumoto T, Oshitani N, Hiwatashi N, Oriuchi T,

Kitahora T, Utsunomiya T, Saitoh Y, Suzuki Y, Nakajima M. Eur J Gastroenterol Hepatol. 2003 Feb;15(2):151-7.

Abstract: Although an elemental diet has been established as the primary treatment for patients with Crohn's disease, the influence of dietary fat on the elemental diet remains unclear. Investigators designed the first randomized, controlled trial for elemental diets containing different fat percentages in patients with active Crohn's disease. Each patient was randomized to receive one of three dose levels of fat in an elemental diet (Elental) for 4 weeks: 10 patients received low fat (3.06 g/day), 10 patients received medium fat (16.56 g/day) and eight patients received high fat (30.06 g/day). The additional fat was composed of long-chain fatty acids. All patients were evaluated using the International Organization of Inflammatory Bowel Disease rating, plus C-reactive protein level and erythrocyte sedimentation rate, which were measured at weekly intervals. Although the International Organization of Inflammatory Bowel Disease rating, C-reactive protein level and erythrocyte sedimentation rate in the low-fat group decreased, the values in the medium- and high-fat groups fluctuated during the study. The remission rate after 4 weeks in each group was 80%, 40% and 25% for patients in the low-, medium- and high-fat groups, respectively. When the fat consisted of long-chain triglycerides, a high amount of this fat in the elemental diet formula decreased its therapeutic effect against active Crohn's disease.

Commentary: This is an important study confirming that low-fat diets work best for Crohn's disease. In fact, low-fat diets work best for any type of autoimmune disease. Low-fat diets mean less linoleic and arachidonic acid. That means less production of pro-inflammatory prostaglandins. If you combine a low-fat diet with fish oil supplements – then you are truly looking at a therapeutic intervention that will work. I have also had excellent results combining fish oil, antioxidants, full-spectrum vitamin and mineral supplementation along with gluten-free and dairy free diets. This regimen works well for a variety of autoimmune diseases including Crohn's, ulcerative colitis, psoriasis, multiple sclerosis, rheumatoid arthritis and related disorders. Even though Crohn's disease patients may be deficient in iron, it is not advisable to supplement iron orally. It can further promote oxidative stress in the affected areas. Also, this type of therapeutic intervention can be given with the medications commonly used for Crohn's disease. Over the course of time the physician can lower prescription medications as necessary.

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6. NUTRITIONAL PROTOCOL FOR AUTOIMMUNE DISEASE

Many dietary supplements such as antioxidants and fish oil have been shown to be beneficial for patients with autoimmune diseases such as multiple sclerosis, lupus, rheumatoid arthritis, Crohn's disease, ulcerative colitis, psoriasis and related disorders. This recommendation is for nutritional support only. It is not intended to replace any

medical care. *Be responsible – if you are under the care of a physician, please check with your doctor before starting the protocol.* If you are interested in the scientific support for the use of specific supplements, please view my Powerpoint presentations. These are presentations given at numerous national and international medical conferences. I have put a range for each nutrient since you can often find several of them combined in multi-nutrient formulas by various companies and dramatically reduce the number of capsules/tablets you may need.

Vitamin A (Beta Carotene) 50,000-100,000 IU
Vitamin C (Ascorbic Acid (Coated)) 2000-5000 mg
Vitamin D (Cholecalciferol) 400-800 IU
Vitamin E (d-Alpha Tocopheryl Succinate) 400-800 IU
Vitamin K (Phytonadione) 50-100 mcg
Thiamin (Vitamin B1) 25-50 mg
Riboflavin (Vitamin B2) 25-50 mg
Niacin (Vitamin B3 from Niacin & Niacinamide) 25-50 mg
Vitamin B6 (Pyridoxine HCl) 50-100 mg
Folic Acid 400-800 mcg
Vitamin B12 (Cyanocobalamin) 100-250 mcg
Biotin 50-100 mcg
Pantothenic Acid (Vitamin B5 from Calcium Pantothenate) 50-100 mg
Calcium (Carbonate, Citrate) 400-1000 mg
Iodine (Potassium Iodide) 50-150 mcg
Magnesium (Oxide, Citrate, Malate) 200-500 mg
Zinc (Monomethionine) 22.5-30 mg
Selenium (Selenomethionine) 100-250 mcg
Copper (Sebacate) .05-2 mg
Manganese (Amino Acid Chelate) 5-15 mg
Chromium (Polynicotinate (GTF)) 100-200 mcg
Molybdenum (Amino Acid Chelate) 100-300 mcg
Chloride 100-180 mg
Potassium (Chloride, Succinate) 100-300 mg
Boron (Amino Acid Chelate) 1-3 mg
Silicon (Dioxide) 10-25 mg
Vanadium (Vanadyl Sulfate) 100-300 mcg
Choline (Choline Bitartrate) 10-25 mg
CoEnzyme Q10 100-200 mg
Hesperidin Bioflavonoids 50-100 mg
Ginkgo Biloba Extract (24% Ginkgoflavonglycosides) 120-180 mg
Glutamine 500-750 mg
Inositol 10-25 mg
NAC (N-Acetyl Cysteine) 600-1500 mg
PABA (Para-Aminobenzoic Acid) 10-25 mg
Quercetin 1000-1500 mg
Fish Oil Supplements 1500-4000 mg (4-6 Capsules/day)

Dietary Considerations:

1. Low-fat: Reduce total fat intake to 10-20%.
2. Gluten-free: avoid wheat, rye, oats and barley.

3. Avoid dairy: milk, cheese, yogurt, butter, etc.
4. Read labels: for hidden sources of gluten and dairy.

GLUTEN-FREE (OR CAVEMAN) DIET

Hunter-gatherers did not eat bread, bagels and pasta, nor do they today. Although these foods naturally contain gluten, we have genetically engineered certain grains to have far higher levels of this protein to impart better baking characteristics. Why do NYC bagels taste the best? Because in NYC we have the highest gluten flour available. We have increased the gluten content of wheat flour by as much as 90%.

GLUTEN IS IN: WHEAT, RYE, OATS AND BARLEY

These foods must be avoided. Also, avoid hidden sources such as bread crumbs, soups (flour is often added as a thickening agent) and even soy sauce may contain some wheat. Avoid products sweetened with barley malt.

THE BEST FOODS TO CHOOSE ARE: All starchy vegetables including: potatoes, yams, beans, lentils, squash, peas carrots, corn, rice, any other starchy vegetable. Protein, vegetables and salad do not contain any gluten.

Certain grains are permissible and include: quinoa, buckwheat, millet and corn meal. Spelt is what wheat once was and contains trace amounts of gluten – so use sparingly. Teff and Amaranth may also be tolerated.

BREAD SUBSTITUTES: potato bread, rice bread, any gluten-free bread, 100% corn tortillas. Visit www.glutino.com and other websites that cater to gluten-free diets.

PASTA SUBSTITUTES: Ener-G makes a whole line of gluten free bread, pancake and waffle mixes. Also, 100% soba (buckwheat noodles), 100% rice or corn pasta. Make sure that wheat, rye, oats and barley are not mixed in these products.

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