YOUR NEWSLETTER OF GOOD HEALTH AND VITALITY

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Dear Friends,

I have just returned from the meeting of the American College for Advancement in Medicine (ACAM), in Washington, DC. The main topic was innovations in cancer therapies. One of the most important presentations was that of Dr. Kedar Prasad, because he answered a question that has created much controversy in recent years: should a cancer patient on chemotherapy or radiation take high doses of dietary antioxidants?

The answer was clearly "yes," because dietary antioxidants, such as vitamin E, vitamin C, and natural beta-carotene, not only decrease the side effects of the other treatments, but they also have direct toxic effects on cancer cells without harming normal cells. Dr. Prasad reported on the effects of antioxidant nutrients in cell cultures, in animals, and in humans.

In cell cultures, he found that vitamin E reduced the growth of tumor cells, caused damage to their chromosomes, and led directly to their death, all without adversely affecting normal cells . Natural vitamin E was superior to the synthetic forms. The typical daily doses that he suggests are 8000 mg of vitamin C, 800 IU of vitamin E (as d-alpha tocopheryl succinate, the most active against cancer cells), and 60 mg of natural beta-carotene (also measured as 100,000 IU).

Dr. Stanislaw Burzynski presented his experience using "anti-neoplastons," which are small peptide molecules (short chains of specific amino acids) that are intended to change the expression of cancer cell genes. Dr. Hugh Riordan presented case histories and a theoretical basis for using intravenous vitamin C in high doses (up to 100 gms per day!). While case histories do not prove the value of a therapy, the combination of test tube studies and anecdotes can be impressive, and strongly suggest that further studies should be done to verify the treatment. I have used high dose vitamin C for viral infections, chronic fatigue, and for cancer patients, many of whom (but not all) do quite well. Fortunately, this therapy and Dr. Burzynski's treatment do not have side effects.

For years cancer specialists have been telling their patients to stop their high doses of antioxidants when they are being treated with radiation or chemotherapy, and it is becoming quite clear that this is dangerous advice. Some of the theory behind this recommendation is that the nutrients might protect the cancer cells from the toxic effects of the radiation or chemotherapy. In very low doses they might, but in the recommended high doses they protect normal cells, while enhancing the toxic effect on cancer cells (thus lowering the dose needed for treatment and reducing potential harm). These supplements may also prevent cancer recurrence and the development of new tumors. The scientifically-unjustified antagonism to supplements has likely harmed many patients.

Alpha Lipoic Acid Therapy

Alpha lipoic acid (ALA) is a sulfur-containing antioxidant that works in both lipid and water tissue components to protect against free-radical damage. It is recognized for its role in treating neuropathy, but it has many other functions, and was one of the many nutrients discussed at the recent ACAM meeting, particularly for its role in cancer prevention and treatment.

Dr. Prasad noted that ALA is one of the antioxidants that is manufactured to some extent within the body. Many other antioxidants are nutritional components that must be consumed in the diet or taken as supplements, such as vitamins C and E, and carotenoids. For high doses of ALA (and coenzyme Q10) you must take supplements, as internal production is limited.

When a patient is being treated with chemotherapy or radiation, low doses of antioxidants may enhance tumor growth, but high doses inhibit growth. However, those made in the body may act differently than those essential nutrients derived exclusively from foods.

According to other information (including the reports from Dr. Riordan), for cancer patients not receiving chemotherapy or radiation, or those who have finished their course of therapy it is very beneficial to take high doses of ALA along with vitamin C and many other antioxidants.

ALA Protects Heart and Brain

Studies on ALA show it is an excellent protection against age-associated degeneration of the heart and brain. It is particularly valuable when combined with N-acetyl cysteine, another sulfur-containing antioxidant, and with acetyl-L-carnitine. These nutrient supplements are especially protective against oxidative damage to the sub-cellular engines called mitochondria, as well as proteins and nucleic acids, and thus can reverse memory loss in aging animals.

Heart muscle is dependent for energy on fat metabolism in the mitochondria, a function that declines with age due to oxidative stress. Studies on aging animals show that ALA restores the effectiveness of L-carnitine in the heart. It increases cellular energy production, supports detoxification of waste products, and enhances cellular repair, thus reversing aging effects.

ALA Against Aging

The aging process involves degeneration of enzymes, hormonal changes, altered protein production, defective chromosome (DNA) reproduction, accumulation of toxins, decline of both energy and antioxidant production,and oxidative damage to proteins and lipids (from both internal metabolism and environmental exposures). All of these processes are interrelated.

In order to slow down and reverse accelerated aging we need to limit the damage at points in the process where we have some control. We can influence hormonal balance, toxic exposures, energy production, and oxidative protection. These in turn affect the other processes. I am not suggesting that we can stop aging altogether, but that we are witnessing accelerated aging that can be controlled through our actions.

ALA is not only an antioxidant, but it is also a detoxifying chelating agent, able to remove toxic metals from the body, such as lead, mercury, and cadmium. Heavy metals increase oxidative stress on the body and directly damage cellular function by poisoning enzyme function, interfering with membrane activity, and altering the metabolism of nutrients, such as magnesium, calcium, zinc, iron and B vitamins. (Mercury is released into the environment from coal-fired power plants and accumulates in fish.)

ALA works even better at removing heavy metals when it is combined with other chelating agents, such as dimercaptosuccinic acid (DMSA) (taken orally) and ethylene diamine tetraacetic acid (EDTA) (administered intravenously). DMSA with ALA is particularly good at removing mercury, which accumulates from environmental exposure, especially from fish. The Environmental Working Group website lists the most contaminated fish (www.ewg.org). Shark, swordfish, and tuna lead the list.

ALA regenerates other antioxidants, such as vitamins E and C, and glutathione, and it also helps with repair of proteins, including enzymes, and lipids that have been damaged by oxidation. As a result, tissue aging through free radical damage can be reduced. All tissues are affected, but it is most obvious in skin, which is exposed to all of the metabolic toxins, environmental exposures, and ultraviolet light, and is most visible.

The free radical/oxidative damage to the skin is most apparent in smokers and in those who have spent a good portion of their lives outdoors unprotected from excessive sun exposure. The collagen and connective tissue are damaged through "cross-linking" of molecules and loss of elasticity, leading to intense wrinkling and sagging.

We have all seen the wrinkled necks of cowboys, and the sagging, aged skin of smokers. ALA provides protection against these signs of aging, whether applied topically or taken internally. Overall, it is preferable to take it as a supplement, because it can then protect not only the skin, but also all of the other tissues that might be similarly damaged but are not so visible.

Typical doses of supplemental alpha-lipoic acid vary for different situations. For diabetic neuropathy, it is common to recommend 1000 mg daily. For sugar regulation in diabetics (along with chromium supplements) it may be enough to take 200 to 300 mg. For basic prevention and protection of the skin and other tissues, I recommend 100 to 200 mg daily, but for treatment of cancer I think the higher dose range is advisable.

When I am treating patients with metal toxicity, I suggest either intravenous EDTA chelation, or oral DMSA (100 to 200 mg daily, a low dose that is safe and effective over time). I combine these with ALA in most cases to enhance the detoxification benefits. One of the leading researchers in oxidative damage, Bruce Ames, recently wrote that high doses of B vitamins and antioxidants, including ALA, could provide a "metabolic tune up" and disease prevention.

Ask Dr. J

Q. Recent reports suggest the Atkins diet is helpful for weight loss. Do you recommend it?

PR, Lexington, MA, by Email

A. These studies were misrepresented in the press, suggesting that a high-protein/high-fat diet was better than a low-fat diet for weight loss. The "low-fat" diets derived 25 to 33 percent of calories from fat, not a healthier 15 to 20 percent.

The small difference in weight loss between the two groups (13 pounds versus 4 pounds in people who weighed 288 pounds at the start in one study) was gone at six-months or one year. The diet was difficult to stay on, with many dropouts. Triglycerides (but not cholesterol) went down more on the low-carb diet, but this is partly because the "low-fat" diet was not really low, and because simple carbohydrates can raise triglycerides. It is important to distinguish between the effects of simple carbohydrates (sugars and white flour) and healthy complex carbohydrates (whole grains, beans, vegetables, and fruits).

The long-term consequences of high-carb diets are easy to observe in cultures that traditionally consume more carbohydrates from grains, beans, and vegetables, such as Japan, where diabetes, heart disease, and obesity are much lower than in the US (although these are increasing as they add more meat and fast foods to their diets).

I am also concerned about the risks of kidney disease from excess protein in the diet, and increased cancer associated with eating meat. Numerous studies still show the advantage of a high-complex-carbohydrate, mostly-vegetarian diet for health, longevity, and less obesity, cancer, diabetes, and heart disease mortality.

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Alpha Lipoic Acid (ALA)

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Ask Dr. J: Is Atkins Diet OK

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In the Health News

- Excessive summer sun exposure increases the risk of skin aging and cancer, although some sun is valuable to produce vitamin D and help reduce depression. The carotenoids lutein, lycopene, and zeaxanthin from food and supplements, are excellent antioxidants that maintain skin health and protect against sunburn and photo-oxidative damage (Sies H, Stahl W, Non-nutritive bioactive constituents of plants.... Int J Vitam Nutr Res 2003 Mar;73(2):95-100). For the inevitable summer exposure (I get a lot in the garden), taking these carotenoids (along with your alpha-lipoic acid) will help.
- I previously reported on high doses of coenzyme Q10 for Parkinson's disease. A new review indicates that mitochondrial damage and oxidative processes are involved, and suggests that coQ10, ginkgo biloba, and acetyl L-carnitine, can protect the brain (Beal MF, Bioenergetic approaches for neuroprotection in Parkinson's disease. Ann Neurol 2003 March 24;53 Suppl 3:S39-47; discussion S47-8). Niacinamide and N-acetyl cysteine may also help.

Diet and Disease

- High fiber intake was shown years ago to reduce the risk of many diseases, including colon cancer, but this conclusion has recently been challenged by studies indicating otherwise (Mai V, et al., Dietary fibre and risk of colorectal cancer... Int J Epidemiol 2003 Apr;32(2):234-9). However, the range of fiber intake in this study was too low to show benefits (the highest intake was only 18 gms). Real high fiber diets provide 30 to 50 gms or more. Now, a study of 500,000 people in Europe shows that, indeed, fiber, particularly from whole grains, vegetables, and fruits, does reduce cancer risk, but you have to eat the higher amounts to make a difference, along with less meat and fat. (Bingham SA, et al., Dietary fibre in food and protection against colorectal cancer... Lancet 2003 May 3;361(9368):1496-501)

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Tempeh Reuben Sandwich

It always helps to have some quick food ideas. You can use organic whole rye bread or toasted organic sprouted whole grain bread (in the frozen section of the health food store, from Alvarado St. Bakery or Ezekiel—they also make delicious sesame burger buns). Tempeh burgers are available in several flavors (lemon, barbecue, or tamari). As a variation, or if you don't like tempeh, you can try organic veggie burgers (I like Amy's California burgers). Avoid products with non-organic soy, or texturized vegetable (soy) protein, also called "TVP," as this is highly processed. Heat the burger, top with organic sauerkraut, sliced tomato, cucumber, and/or grilled eggplant, and put mustard and tofu mayonnaise on the bread. Serve with a soup or salad for a complete meal.

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- I see patients at WholeHealth in Arlington, MA. Call 781-641-1901 for an appointment. I also do phone and Email consults.
- Please visit my website: www.drjanson.com Email me at info@drjanson.com
- Look for *Dr. Janson's New Vitamin Revolution*, and my other books at bookstores, health food stores, or from QCI Nutritionals at 888-922-4848. You can visit their website at www.qcinutritionals.com for quality supplements at reasonable prices.

*** Notice ***

In addition to Arlington, I now see patients in Amherst, New Hampshire, at the **Center for Preventive Medicine**. I work with Nurse Practitioner Gail Vanark, ARNP. The practice includes chelation, other intravenous therapy, and complementary and alternative medicine.

The office is located on Rte. 101A, at 1 Overlook Dr., Suite 11, Amherst NH 03031.

Call **603-673-7910** to schedule appointments.