

The Nutrition Reporter™

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Nutritional Supplements and Cancer: What Every Person Needs to Know

Early in 2013, James D. Watson, PhD, who codiscovered the structure of DNA 60 years ago, argued that antioxidant supplements have few if any benefits for cancer patients. In fact, he contended that supplements probably cause more cancers than they prevent.

Nothing could be further from the truth.

Despite his brilliance, Watson, now age 85, has made other pseudo-scientific observations that can be described only as stupid. In 2007, he said that Africans were less intelligent than whites. He seemed oblivious to the fact that malnutrition and poverty, especially at an early age, affect brain development. And, it later turned out, Watson had a few African genes in his own genetic heritage. He certainly isn't the only scientist to put his foot in his mouth, just the latest.

Some scientists cherry pick the research that supports their particular point of view while ignoring studies that contradict their conclusion. This is a common human foible, whether in science or in politics. We tend to select for the facts that support our point of view. So as a counter-balance to Watson, I'll describe some of the research showing that antioxidants and other types of supplements are of great benefit to cancer patients.

A Few Important Caveats

I'll preface my comments with several important points I've learned from medical doctors over the years.

First, don't expect supplements alone to reverse cancer. To rely only on supplements would be foolhardy.

Second, the ideal approach is integrative – that is, using the best therapies offered by conventional oncology combined with nutritional and other alternative therapies.

Third, low doses of supplements aren't likely to help much, and taking one or two supplements probably aren't going to help much either. I believe

the real benefits come from taking a lot of different supplements in very high doses.

Fourth, recognize that oncologists don't know much about nutritional therapies, and they tend to be wary of them. If you want to take an integrative approach, you'll either have to find a second "natural" physician or naturopathic doctor – or take the time to delve into the research yourself.

Radiation and most chemo drugs destroy cancer cells by generating large number of free radicals. Conventional oncologists believe that antioxidant supplements will neutralize the cancer-killing effect of free radicals. However, the idea is more theoretical than real. The reason is that antioxidants and other nutrients work through multiple mechanisms, such as by influencing gene activity. If you want to play it safe, though, don't take supplements in the weeks you receive chemo or radiation treatments.

Beneficial Supplements

Several doctors have published reviews of multiple studies in which high-dose supplements were used in conjunction with chemo or radiation. For example, Charles Simone, MD, of Lawrenceville, N.J., reviewed 50 human studies and concluded that supplements enhance the benefits of chemo and radiation while decreasing their side effects. Keith Block, MD, of Evanston, Illinois, noted that supplements help reduce tumor size and improve survival. Ralph Moss, PhD, author of the Moss Reports, concluded that supplements make tumors more susceptible to radiation.

Coenzyme Q10. The benefits of high-dose vitamin-like CoQ10 in cancer date to the 1990s. In the most recent report, Niels Hertz, MD, of Denmark, treated 41 patients with a variety of metastatic end-stage cancers. The supplements provided 300 mg of CoQ10, 487 mcg of selenium, 25,000 international units (IU) of vitamin A, and 126,000 IU of beta-carotene. Although some patients

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had a decrease or no change in survival time, three fourths of patients lived an average of 5 months longer than expected. In some cases, patients lived years longer than expected. Five months might not seem like a long time, but it is comparable to the increase in life expectancy afforded by some drugs.

Docosahexaenoic acid. Large amounts of DHA, one of the two principal omega-3 fats, can improve life expectancy in women with breast cancer. French researchers followed 25 women with breast cancer who were treated with chemo and were also asked to take 1.8 grams of DHA daily for five months. Almost half of the women responded positively to DHA supplements. Overall survival was almost 2 years—and almost 3 years among the women who had the highest blood levels of DHA. The results were striking given that two-thirds of the women had metastases to the liver, lungs, or bones.

Lycopene. This antioxidant, found mostly in tomatoes can benefit men with prostate cancer. In a study conducted at the Karmanos Cancer Institute in Detroit, doctors tracked 26 men scheduled for surgery for prostate cancer. Fifteen of the men were given 30 mg of natural tomato-source lycopene daily, and after just three weeks they showed signs of tumor shrinkage. The men also had an average 18 percent reduction in levels of prostate specific antigen (PSA), a sign of reduced tumor activity. Other studies have found similar benefits, and lycopene may be of benefit in other types of cancer.

Curcumin. Approximately 20 human studies are underway using 2 to 8 grams of curcumin (turmeric extract) daily as an adjunct to conventional cancer therapies. Researchers from the MD Anderson Cancer Treatment Center, Houston, have so far reported that curcumin supplements had modest benefits as an adjunct treatment of patients with pancreatic cancer, one of the deadliest forms of the disease. According to many researchers, curcumin's real benefit may be in prevention. It works in part by blocking inflammation—a key cancer culprit—via 97 separate biochemical pathways.

Vitamin E. Italian doctors used high doses of the drug cisplatin to treat 41 patients with lung, brain, endometrial, or other types of cancer. Cisplatin causes nerve damage in 90 percent of the people who take the drug. Before chemotherapy began and continuing for three months afterwards, 17 of the patients were given 600 IU of natural-source vitamin E, and 24 were given placebos. Only one of the patients taking vitamin E developed neuropathy, compared with 10 of those taking placebos. Vitamin E did not interfere with chemotherapy.

Silymarin. A study of children with acute lymphoblastic leukemia found that supplemental silymarin, an extract of the herb milk thistle, reduced the risk of chemo-induced hepatitis. Dosages ranged from 80 to 320 mg daily, based on body weight. Another study found similar benefits from a combination of 600 mg of N-acetylcysteine and 400 IU of vitamin E daily.

Vitamin C. A combination of intravenous (IV) and oral vitamin C can have a potent anti-cancer effect. Very high IV doses of vitamin C are toxic to cancer cells, based on studies conducted by researchers at the U.S. National Institutes of Health. While vitamin C supplements promote healing and have other benefits, only IV vitamin C can boost blood concentrations to the very high levels capable of killing cancer cells. A combination of IV and oral vitamin C can also benefit end-stage cancer patients, improving their appetites and overall quality of life.

Ketogenic Diet. Last but not least, this diet, high in “good” fats, such as fish and coconut oils, appears to have benefits for many cancer patients, though it is not suited to people suffering from extreme muscle wasting. The ketogenic diet originated as a treatment for some types of epilepsy – it shifts brain-cell metabolism from glucose to ketones. Most cells, including cancer cells, require glucose as a fuel. Healthy cells can use ketones (a type of fat) as a fuel; however, cancer cells cannot. By eating a high-fat diet – four parts fat to one part protein and carbs combined – it is possible to slow or shut down the metabolism of cancer cells. Thomas Seyfried, PhD, of Boston University and his colleagues have successfully reversed brain cancers in patients, and Seyfried is convinced that other types of cancer patients would benefit from the diet. However, it is admittedly a difficult diet to follow. For more information, read: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2845135/> –*Jack Challem*

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