
Cancer and Supplements



If I Have Cancer, Should I Take Supplements?

That's the million dollar question. Or perhaps "billion" is more appropriate. Vitamin, mineral and other supplements are a multi-billion dollar business in the United States. Among those taking supplements, people with cancer, cancer survivors and those seeking to lower their risk of cancer are the biggest purchasers. According to one survey published in 2008 in the *Journal of Clinical Oncology*, 64% to 81% of cancer survivors reported using a vitamin or mineral supplement. This is higher than the 50% of US adults who take supplements.

This short article by no means attempts to answer the question of supplements with a simple "yes" or "no." It is by far too complex and controversial an issue. But what we hope to do is provide you with a framework for decision-making that you can use with your healthcare team.

What Are Supplements?

Supplements are known by many names: vitamins, minerals, antioxidants, nutraceuticals, herbs, and the like. Product labeling and marketing are regulated by the US Government. But efficacy and safety issues are not always extensively studied, unlike the testing done for pharmaceutical drugs. And the quality of the product is also not guaranteed. What this means for the consumer is that you must do your homework before embarking on a possibly costly, ineffective and/or harmful course of treatment. The emotional factor can be large. Persons undergoing treatment for cancer or trying to prevent a recurrence are vulnerable to unwarranted health claims. If need be, get someone with a more objective perspective to assist you in research and making decisions. A healthcare professional, such as a Registered Dietitian, can be of invaluable help in this situation.

A Special Word on Antioxidants

Some of the most popular supplements in cancer treatment are antioxidants. These substances are produced naturally in the body or obtained from food and/or supplements. Some popular antioxidants are vitamins A, C and E, selenium, beta-carotene, glutathione, N-acetylcysteine, L-carnitine, coenzyme Q10, green tea and ellagic acid, to name just a few. They are important in neutralizing oxidants, which also are produced naturally in the body or are obtained from outside. Examples of the latter would be medications or pollutants in the air. An overabundance of oxidants in the body can cause inflammation and damage to cells, thereby promoting cancer and other diseases. When the body is overwhelmed with oxidants, it may need antioxidant supplements to counteract the toxins.

The controversy arises when the "toxin" is part of the treatment, as with chemotherapy or radiation therapy. These agents are used to destroy cancer cells. Would large doses of an antioxidant reduce the effectiveness of the treatment? Or do they protect healthy cells and reduce

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negative side effects? Many studies have been done over the years to answer this question. But the controversy has not gone away. Several reviews of the literature have come to opposite conclusions. On the conservative side, some reviewers conclude that until more research is conducted, antioxidant supplements should be avoided. Frequently cited are two studies done in the 1980s and 1990s with smokers and ex-smokers. Investigators looked at beta-carotene and vitamin A as preventive of lung cancer. The opposite turned out to be true. Those taking beta-carotene supplements had poorer outcomes.

On the other hand, supporters feel that antioxidants can be used safely and effectively when the practitioner uses them appropriately. This means taking into account hormonal therapies, chemotherapy drugs, radiation therapy, and other medications before advising use of supplements, setting the dosage and targeting effects.

10 Questions to Ask Before Using Supplements

Keep in mind that when it comes to supplement use and cancer, there may not be clear-cut answers. But you can increase your confidence in your decision by answering these 10 questions. And remember, you don't have to do it alone. Work with your healthcare team to obtain answers or referrals to other professionals who can assist you.

1. Who is recommending the supplements? Work with a healthcare practitioner that has training, certification and licensure to practice.
2. Does the practitioner have experience with cancer patients? If they have dealt with your particular cancer, so much the better.
3. Where are you in the treatment process? You may be trying to reduce your risk of cancer or perhaps preventing a recurrence. On the other hand, you may be in the midst of treatment: preparing for/recuperating from surgery, receiving chemotherapy or undergoing radiation therapy. Each level requires a different approach.
4. What are the results you are looking for? Try to be as specific as possible, including reducing side effects of conventional therapies. And set a time limit to see if the treatment is effective. There may be tests that can track progress if actual physical results are not noticeable.
5. Have any studies been done using this supplement on your specific cancer? Strong studies would be on people similar to you in age, type and stage of cancer, and ethnic background. Weaker studies would be done on animals or in test tubes in the lab. Testimonials are not reliable. No two people are alike. What works for you may not be right for someone else.
6. Is your oncologist on board? Discuss with your oncologist any supplements you are taking or plan to take. Even if he or she doesn't recommend supplements, make sure they know what you are taking and how much.

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7. Is your practitioner willing to work with your oncologist? This is especially crucial if the oncologist is not fully in agreement with supplement use. Your practitioner should be able to communicate with your medical team, answer questions, provide supporting evidence, and maintain a good relationship with all parties.
8. What are the interactions with chemotherapy or radiation therapy? Pharmaceutical drugs are detoxified through the liver. Supplements are also cleared through the liver. It is important to know beforehand if the supplement can delay or speed clearing the drug, which potentially can decrease its effectiveness or lead to toxicity. Supplements can also interact in other pathways in the body that can change the drug's effect.
9. What are the possible side effects of the supplement? What is its safety profile? Get a clear picture of what signs and symptoms you should look for. Also get an emergency contact number to report any problems you may be having.
10. Does the supplement interact with any other medication you are taking or any other medical condition you have? Remember that even though many supplements are "natural," they can be powerful.

Do Your Homework

Be aware that all websites and media outlets are not reliable. In order to properly determine the risks and benefits of dietary supplements, you should refer to organizations and publications that cite evidence based on scientific research.

Below is a list of reputable online sources for information on supplements and a good place to start your research:

Office of Dietary Supplements (ODS): <http://ods.od.nih.gov>

ODS, a division of the National Institutes of Health, provides fact sheets on individual vitamins, minerals, and other dietary supplements. ODS also offers guidelines on evaluating information obtained from internet sources.

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National Center of Complementary and Alternative Medicine (NCCAM):

<http://nccam.nih.gov/health>

Also part of the National Institutes of Health, NCCAM is the Federal Government's lead agency for scientific research on the diverse medical and healthcare systems, practices and products that are not considered part of conventional medicine. This agency also provides fact sheets on individual vitamins, minerals, and other dietary supplements.

National Cancer Institute (NCI): www.cancer.gov

NCI is the Federal Government's principal agency for cancer research and training and is a part of the National Institutes of Health. NCI also provides fact sheets on individual vitamins, minerals, and other dietary supplements.

Medline Plus, National Library of Medicine:

www.nlm.nih.gov/medlineplus/druginfo/herb_All.html

Medline Plus, the library for the National Institutes of Health, provides information on branded and generic products. It also incorporates valuable comments from the Natural Medicine Comprehensive Database (see below).

American Institute for Cancer Research (AICR): www.aicr.org

AICR is dedicated to the study of nutrition and cancer.

Natural Standard Professional Database: www.naturalstandard.com

Natural Medicine Comprehensive Database: www.naturaldatabase.com

These two websites are by subscription only but provide detailed monographs on individual supplements, including safety and efficacy profiles, drug/nutrient interactions, mechanism of action, and dosages. They also provide brand-name product information. Check with your healthcare provider to see if they have access to these databases.

Consumer Lab: www.ConsumerLab.com

Also by subscription only, Consumer Lab tests individual products for content when requested by the manufacturer. It helps healthcare providers and consumers to identify the best quality health- and nutrition-related products. Note that Consumer Lab does not evaluate the effectiveness or safety of a product.

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