Supplement Use During Radiation Therapy

Many people being treated for cancer with radiation take supplements. Most of the time, if you eat a balanced diet, supplements should not be needed. Some people getting treatment for cancer may need supplements because they have lower levels of certain vitamins and electrolytes or are not eating enough. You should always check with your healthcare provider before taking any supplement. It is also important for your healthcare providers to know what you are taking. When asked to list your medications, include all vitamins, supplements, and over the counter medications.

Supplements include, among others:

- Vitamins
- Minerals
- Herbs or other botanical substances
- Amino Acids
- Protein powder

Safety Concerns About Supplements

There are some things a person should think about before taking a supplement:

- "Natural" does not necessarily mean safe.
- Most supplements do not need approval for use by the FDA, like medications do.
- Supplements may not have what the label says they do, some studies have found more than 60% do not!
- They may have harmful contaminants, such as lead, arsenic, cadmium and more.
- Some supplements can block other medications or affect organ function (such as liver function).
- They are often taken without a person’s healthcare providers or pharmacist being aware.

Supplements with Special Concern During Radiation Treatment

Antioxidants

Some supplements, particularly antioxidants, may interfere with radiation treatment. Antioxidants include vitamins A, C, E, beta-carotene, selenium, among others. Many people take antioxidants during treatment with the view that they can protect normal tissues from treatment side effects. Some feel this may improve tumor response to treatment and improve survival. However, some studies show that chemotherapy and radiation will not work as well because the antioxidants will protect the cancer cells, along with healthy cells.

Given this conflicting research, high-dose antioxidant supplementation should be avoided throughout treatment.

Fish Oil Supplements

Fish oil supplements are very popular and often taken by patients getting treatment for cancer. Both fish oil and Omega-3 fatty acid supplements may lower the ability of your platelets to work, which can cause bleeding. Doses higher than 3mg per day may increase bleeding and how long you bleed. Some patients getting treatment for cancer are already at higher risk of bleeding. This includes patients with brain tumors or blood cancers, patients on anticoagulant medications, and people getting brachytherapy. Also, these supplements could interfere with some platinum-based chemotherapy (cisplatin, carboplatin).

Patients taking these supplements should talk to with their provider about whether or not to stay on the supplement during treatment.
Other Supplements to Avoid
During radiation therapy, patients should avoid these supplements in doses greater than what is in a multivitamin:

- Theanine
- Silymarin
- Vitamin C/Emergen-C
- Vitamin E
- Vitamin A/Beta-carotene
- CoQ10
- Quercetin
- Turmeric/Curcumin
- Lycopene
- Juice+
- Green Tea Capsules

Considerations for Patients Getting Radiation Therapy

- Any supplements, such as vitamins, minerals, and herbal cures, should be discussed with your provider. You should not take any new supplements until you talk about it with your provider.
- During radiation therapy, it is not always necessary to take supplements you have been previously prescribed. Again, check with your provider.
- Some supplements, particularly antioxidants, may interfere with treatment.
- Avoid antioxidants throughout treatment, given limited research supporting their use.
- The amount of antioxidants found in foods are safe, unless you are juicing excessive amounts of fruits/vegetables daily (example: 15 pounds of produce juices per day).

Resources for Facts About Supplements
These web sites offer helpful information about medications and supplements, and are available to both patients and healthcare workers:

- NIH Office of Dietary Supplements (https://ods.od.nih.gov/)
- National Center for Complementary and Integrative Health (https://nccih.nih.gov/)
- OncoLink (https://www.oncolink.org)
- Consumer Lab: Has reports of some dietary supplements that have been tested for ingredients and contaminants. (http://www.consumerlab.com/)

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