Supplement Use During Radiation Therapy

What are supplements and what are they used for?

Supplement use during radiation therapy for cancer is not uncommon. Most of the time, if you eat a balanced diet, supplements should not be needed. However, 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.

Examples of supplements are:

- Vitamins.
- Minerals.
- Herbs or other botanical substances.
- Amino acids.
- Protein powder.

Are supplements safe?

Supplements can be safe if your healthcare provider tells you that it is okay to take the supplement, and if it is taken as directed. There are some things a person should think about before taking a supplement:

- "Natural" does not always mean safe.
- Most supplements in the United States do not need to be approved 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 how your organs work (such as liver function).
- They are often taken without a person’s healthcare providers or pharmacist being aware.

Antioxidants

Some supplements, especially antioxidants, may change how radiation therapy works. Antioxidants include vitamins A, C, E, beta-carotene, and selenium, among others. Many people take antioxidants during treatment hoping 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. While antioxidants do have their benefit, research has shown that supplements do not lead to cancer protection or keep cancer from coming back (recurrence).

Given this conflicting research, high-dose antioxidant supplements should not be taken during treatment.

Fish Oil Supplements

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 3 grams 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
(blood thinning) medications, and people getting brachytherapy. Also, these supplements could change how some platinum-based chemotherapies work (cisplatin, carboplatin).

Patients taking these supplements should talk with their provider about whether or not to stay on the supplement during treatment.

Other Supplements to Avoid

During radiation therapy, patients should not take 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.

Key Takeaways for Patients Getting Radiation Therapy

- Any supplement, 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, you may not need to take supplements you have been prescribed in the past. Again, check with your provider.
- Some supplements, especially antioxidants, may change how your treatment works.
- Do not take antioxidants throughout treatment, since there is limited research supporting their use.
- The number of antioxidants found in foods are safe, unless you are juicing a lot 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:

- National Center for Complementary and Integrative Health (https://nccih.nih.gov/).
- Consumer Lab: Has reports of some dietary supplements that have been tested for ingredients and contaminants (http://www.consumerlab.com/).