

Avoiding Antioxidant Supplements During Radiation Treatment

Although antioxidants have possible health benefits as part of a balanced diet, taking antioxidant supplements during radiation may actually reduce how well your treatment works. You should avoid taking antioxidant supplements during and right after your course of radiation treatment. Tell your radiation care team if you currently take vitamins, minerals or herbal supplements.

Antioxidants

Your body makes some antioxidants. Others are found in your diet or provided through supplements. An antioxidant is a substance that slows a process in the body called oxidation. This can prevent or lessen damage to your body's cells caused by free radicals. Free radicals are unstable particles that can damage cells, which may result in illness and aging.

Antioxidants provide many health benefits and may reduce your risk of developing some diseases, including some types of cancer. There currently is not enough scientific proof to recommend taking antioxidant supplements during radiation treatment. Taking them during radiation may actually decrease the benefit that you receive from the treatments. This is because antioxidants have the potential to protect tumor cells from the localized damage that radiation therapy intentionally causes.

Supplements With Antioxidant Properties

The following list includes some common supplements with antioxidant effects. Tell your care team if you currently take supplements that are not included in this list.

Acai Berry Extract	Glutathione	Saw Palmetto Extract
Alpha-lipoic Acid	Grape Seed Extract	Selenium
Cod Liver Oil	L-Carnitine	St. John's Wart
Coenzyme Q10 (also called CoQ10)	Lutein	Turkey Tail Mushroom
Cranberry Extract	Lycopene	Vitamin A (also called beta-carotene)
Flavonoids	Melatonin	Vitamin C (also called ascorbic acid)
Ginger Extract	Milk Thistle	Vitamin E
Gingko Biloba	Polyphenols	<i>*Any other supplements not listed</i>
Ginseng	Pomegranate Extract	

Multivitamins During Radiation Treatment

Multivitamins usually contain at least a few antioxidants. Research has raised some question regarding the benefit of multivitamins compared to maintaining a nutritious diet. If you currently take a multivitamin and would like to continue taking it during radiation treatment, talk with your radiation doctor. It may be helpful to show the multivitamin bottle or a picture of the supplement facts label.

Antioxidants in Your Diet

There is no research that supports avoiding foods that are rich in antioxidants during radiation treatment. Therefore, it is OK to consume antioxidant-rich whole foods and drinks while receiving radiation.

Eating foods containing antioxidants, such as vitamin A, vitamin C, vitamin E, flavonoids, lycopene, and selenium can be part of a nutritious diet. See the list below for examples.

Avoid eating more than the recommended single serving size in one meal or snack for these foods and drinks.

When possible, check the nutrition facts labels on packaged foods to determine the serving size of the food item. For antioxidant-rich fruits and vegetables, you may eat 1 piece of whole fruit, 1 cup of chopped raw fruits or vegetables, or ½ cup cooked vegetables or fruits at one time.

Common Dietary Sources of Antioxidants

This is a list of some foods and drinks containing antioxidants:

Acai Berries	Brussel Sprouts	Ginger	Pomegranate Juice	Tuna Fish
Almonds	Cantaloupe	Green Tea	Red Bell Pepper	Turmeric
Apricots	Carrots	Guava	Spinach	Vegetable Oils
Blackberries	Citrus Fruits	Kiwi	Strawberries	Watermelon
Blueberries	Citrus Juices	Leafy Greens	Sunflower Seeds	Wheat Germ
Brazil Nuts	Cocoa Powder	Mango	Sweet Potato	Whole Grains
Broccoli	Cranberry Juice	Papaya	Tomatoes	Winter Squash

Meal Replacement Drinks, Protein Shakes and Smoothies

It is OK to have meal replacement drinks, protein shakes or over-the-counter nutritional supplement drinks, such as Boost® or Ensure® during your radiation treatment. Although these beverages contain vitamins, some of which are antioxidants, the amount is less than that of vitamins in a concentrated tablet or capsule form.

If you use nutritional supplement drinks, follow these guidelines:

- Have only one drink at a time.
- If you have more than one drink a day, have them throughout the day.
 - For example, drink one in the morning and one in the afternoon.
- **Do not** take a multivitamin during your course of radiation treatment.

If making your own smoothie, or purchasing one from a smoothie bar or restaurant, do not add ingredients or powdered mix-ins that contain large doses of antioxidants.

Stopping Antioxidants

If possible, stop taking antioxidant supplements one week before you begin radiation treatment.

Wait one month after completing radiation treatment before restarting antioxidant supplements.

Summary

You may be able to get the most benefit from your radiation treatments by avoiding antioxidant supplements. If you have questions, talk with your radiation care team or your dietitian.