



# CANCER NUTRITION CONSORTIUM™

Nutritional Guidance & Support

CANCER COMPENDIUM | Issue No. 6  
RESEARCH, RESOURCES, AND RECIPES TO HELP PEOPLE  
DURING CANCER TREATMENT AND RECOVERY

## A SPECIAL NOTE

The COVID-19 pandemic has created additional challenges for those facing or going through cancer treatment. From appointment and procedure scheduling to needing personal protective equipment to obstacles making everyday shopping routines more difficult. We want you to know you are not alone and we are here for you. If you're looking for advice on a particular treatment-related topic, or have a suggestion about info that would be helpful for us to share with the rest of the Cancer Nutrition Consortium community, please reach out and let us know. Best wishes to each of you and yours during this particularly difficult time.

**GARRETT LAW**  
CNC BOARD OF DIRECTORS

» VITAMINS & CANCER

» WHAT TO EAT DURING  
CANCER TREATMENT

» 2 DELICIOUS RECIPES

# Vitamins & Cancer



**Vitamins are often popular among oncology patients due to an increased interest in health. But what does research show regarding safety of vitamins both during and after cancer treatment? An Oncology Dietitian answers common patient questions.**

## ARE VITAMIN DEFICIENCIES COMMON?

Deficiencies are typically seen in specific patient populations such as older adults, those with restrictive diets, low socioeconomic status and poor access to nutrition, patients with alcoholism, malabsorption, or those with a history of certain surgical procedures such as gastric bypass.

## IS A MULTIVITAMIN SAFE TO USE DURING TREATMENT?

In general, a multivitamin is safe to use during treatment. It is always best to make your care team aware of any vitamins or minerals you are taking, even if they are “natural” or “herbal.” Natural or herbal supplements have the potential to negatively interact with treatment. Many of the vitamins in a multivitamin are at much lower levels than would be sold individually. If taken in high doses, certain vitamins (such as fat-soluble vitamins A, D, E, K) can build up to harmful levels in the body.

## WHAT ABOUT VITAMIN D?

Research has shown that people in certain geographical areas, such as the northern states, could benefit from a vitamin D supplement. Sunlight is the best source of vitamin D and these areas have limited amounts of light, especially in the winter. If you are concerned about a possible deficiency, your healthcare provider can do a blood test. Dose is important as well. Although moderate amounts of vitamin D may be beneficial, research is currently inconclusive on the effects of higher doses.

## ANY VITAMINS I SHOULD AVOID DURING OR AFTER TREATMENT?

The US Preventive Services Task Force (USPSTF) recommends against the use of both beta-carotene or vitamin E supplements for the prevention of cancer. The US National Institutes of Health (NIH) states there is insufficient evidence to recommend the use or against the use of multivitamins for chronic disease prevention. A good reason to choose whole, plant-based foods as the best source for your vitamins and minerals!

## WHAT ABOUT ANTIOXIDANT VITAMIN SUPPLEMENTS?

I’ve heard that antioxidants are good for patients with cancer.

Examples of antioxidants include vitamin A, vitamin C, vitamin E, beta carotene, lycopene, lutein, selenium, and manganese, among others. Although more research is needed, most facilities recommend against taking antioxidant vitamin supplements during both chemotherapy and radiation treatments. This is because the antioxidants can protect the cells “too much” and reduce the effectiveness of treatment. Antioxidants that come from whole foods, (think for example, of vitamin C from an orange) are generally considered safe and unlikely to interfere with treatment. This is because vitamin C in an orange is at a much lower “dose” and the fruit has many other vitamins and components to it such as fiber, compared to a high dose vitamin C supplement.

## ARE THERE CERTAIN BRANDS OF VITAMINS THAT ARE BETTER THAN OTHERS?

While Dietitians do not endorse specific brands, we do recommend looking for third party testing labels to ensure a supplement’s label accurately represents the ingredients. Two examples of companies that provide independent testing are the NSF (National Sanitation Foundation) and USP (US Pharmacopeial Convention).

## WHAT IS THE BOTTOM LINE REGARDING CANCER AND VITAMINS?

Every patient is different - diagnosis, treatment plan, age, medications, surgical history and risk factors, among others, will all affect vitamin and mineral requirements. Vitamin supplement research is ongoing, and it is best to prioritize obtaining your basic nutrient needs from whole food, plant-based sources. The more color in your diet, the more varied your vitamin and mineral intake will be. Benefits of colorful vitamins and minerals include helping to decrease cell damage as well as natural antioxidant, immune enhancing properties. And remember, for vitamin supplements, more isn’t necessarily better. Only in some cases, such as a vitamin deficiency, will patients need to take more than the recommended dosage specifically in pill form or by injection. Always ask your dietitian as well as your healthcare provider for specific recommendations related to your unique health needs.

## References

1. Dietary Supplements. Oncology Nutrition DPG. <https://www.oncologynutrition.org/erfc/healthy-nutrition-now/dietary-supplements>. Published 2019. Accessed December 30, 2019. 2. Fairfield KM. Vitamin supplementation in disease prevention. UpToDate. [https://www.uptodate.com/contents/vitamin-supplementation-in-disease-prevention?search=vitaminsupplementation&source=search\\_result&selectedTitle=1-150&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/vitamin-supplementation-in-disease-prevention?search=vitaminsupplementation&source=search_result&selectedTitle=1-150&usage_type=default&display_rank=1). Published November 2019. Accessed December 30, 2019. 3. American Cancer Society. Lifestyle Changes After Cancer Treatment: Nutrition and Physical Activity for Cancer Survivors After Treatment. 2016.



# What to Eat During Cancer Treatment

When undergoing cancer treatment, many individuals are curious about what they should be eating. The goal is to help patients maintain their nutrition status while keeping in mind any side effects from treatment they may be experiencing that can impact their food choices.

**If you are tolerating a regular diet and are not experiencing side effects from treatment or your diagnosis, start by balancing your meals to maximize your nutrient intake.**

Aim to build plates at mealtimes with 50% of your meal coming from colorful vegetables or fruit, 25% from whole grains and 25% from lean proteins. Whole grains include brown rice, quinoa, oats, barley, millet, and whole grain breads and cereals. Consuming a diet rich in plant-based foods provides you with fiber and immune supporting phytonutrients. Phytonutrients are natural compounds found in plant-based foods that give plants their rich pigment. Each color has different benefits, so aim to include a variety of colorful vegetables and fruit throughout your day. If you are having a hard time tolerating raw vegetables or if they are not appealing, try including cooked vegetables in soups, omelets, or pasta dishes.

**Next, include a lean protein source at each meal and snack.** Protein is necessary for the growth and repair of all cells in your body. Meeting your protein needs-during cancer treatment will help support your immune system, help maintain your lean body mass and promote healing. Animal sources of protein include chicken, turkey, fish, eggs, milk, cheese and yogurt. Plant based foods can also help meet your protein needs including nuts, nut butters, seeds, beans, lentils, hummus, soy foods, and quinoa.

**Adequate hydration is also important, especially during cancer treatment.**

Drinking enough fluid can be challenging for patients who experience side effects from treatment including nausea, vomiting, decreased appetite, taste changes, and/or diarrhea. Some of these side effects can increase the risk of dehydration which in turn can make it hard for the body to flush out chemotherapy or other medications and may put unwanted stress on the kidneys. If drinking water is challenging try increasing your consumption of other liquids including herbal teas, broth, soups, sparkling water, or smoothies. Try infusing your water with sliced fruit, mint, or a splash of juice to give it some flavor without too much added sugar.

There are several side effects from treatment that may impact one's desire or ability to meet their nutritional needs. Many patients find it helpful to consume smaller, more frequent meals. This eating pattern can be easier to tolerate if you are experiencing a decreased appetite, nausea, or if you are feeling full quickly. Instead of consuming three meals per day, try consuming five to six "mini meals". Including healthy fats like nuts, nut butters, avocado, olive oil, and hummus is one way to sneak in more calories in small portions. Adding these foods to your meals and snacks can help maximize your oral intake and help prevent unintentional weight loss. If eating is challenging, smoothies can also be helpful to include for calories, protein, fluid, fiber, and immune supporting phytonutrients.



**START WITH A BALANCED MEAL**

**COLORFUL VEGETABLES**

**WHOLE GRAIN**

**LEAN PROTEINS**

**MEETING WITH AN ONCOLOGY DIETITIAN AT YOUR CANCER CENTER IS THE BEST WAY TO RECEIVE INDIVIDUALIZED RECOMMENDATIONS BASED ON YOUR UNIQUE SITUATION.**

## HEART HEALTHY COOKING DEMONSTRATION SERIES

Recipes from Rich Duclos | Executive Chef CEC Brigham and Women's Hospital

### Baked Beetballs



**SERVINGS: 5**

CALORIES: 120  
FAT: 1g  
SAT FAT: 260mg  
CARB: 23g  
FIBER: 5g  
PROTEIN: 6g  
SODIUM: 260mg

### INGREDIENTS

**2 cups** RAW BEETS PEELED AND GRATED  
**1/2 cup** ROLLED OATS  
**1/2 cup** LOW SODIUM KIDNEY BEANS DRAINED AND RINSED  
**1/2 cup** PANKO BREAD CRUMBS  
**1/4 cup** WHITE ONION MINCED  
**1 tsp** DRIED MARJORAM  
**3 tsp** GRANULATED GARLIC  
**1/2 tsp** KOSHER SALT  
**1/4 tsp** GROUND BLACK PEPPER  
**2 Tbsp** NUTRITIONAL YEAST POWDER  
**1/4 cup** ITALIAN FLAT PASTRY

### DIRECTIONS

Place all ingredients in a food processor and mix until smooth

Spray a 1/2 sheet pan with olive oil

Scoop 1oz portions of mixture and place on sheet pan

Bake in a preheated 350° oven for 10 min

Yield: 20/10z Beetballs

Serving suggestions: Lace serving plate with 1 oz balsamic syrup and garnish with fresh basil

### Butternut Squash Shrimp Soup



**SERVINGS: 2**

CALORIES: 170  
FAT: 4g  
SAT FAT: 1g  
CARB: 22g  
FIBER: 3g  
PROTEIN: 13g  
SODIUM: 498mg

### INGREDIENTS

**1 cup** BUTTERNUT SQUASH PUREE  
**1 cup** LOW SODIUM VEGETABLE BROTH  
**1 tsp** OLIVE OIL  
**1 small** SWEET SHALLOT  
**2 Tbsp** UNSWEETENED APPLESAUCE  
**1 tbs** CHOPPED CILANTRO  
**1** LIME WEDGE  
**1 cup** FRESH SPINACH  
**5 oz** RAW SHRIMP  
**1/2 tsp** COCONUT MILK  
PEPPER, **TO TASTE**  
**1 tsp** CHOPPED PEANUT

### DIRECTIONS

Heat up oil in small pot

Sear shrimp and add shallots. Sauté for 2 minutes.

Add squash, applesauce, and 1 cup of low sodium vegetable broth. Simmer for 2 minutes.

Stir in fresh spinach

Pour soup in bowl

Drizzle with coconut milk

Top with chopped peanuts and chopped cilantro. Squeeze fresh lime juice on top.

# Thank you!

## TO OUR CNC PROGRAM SUPPORTERS



### CNC Carepack Grant Initiative Update 1100+ Carepack donations as of May 2020!



Many people undergoing treatment don't have the resources they need to get adequate nutrition.

The CNC initiated a Carepack Grant program, with additional support from Hormel Foods to provide free nutritional care packs to help them in their time of biggest need.

**Anyone in need of additional nutritional support during their treatment can apply!**  
» [CancerNutrition.org/Send-A-Carepack](https://CancerNutrition.org/Send-A-Carepack)



## Helpful Nutrition

**During Treatment, Recovery, & Beyond**

Hormel Vital Cuisine™ products are designed by experts to meet your nutritional needs during cancer treatment and recovery. High protein, convenient options that taste great.

- » Ready-to-Serve Meals
- » Protein Nutrition Shakes
- » Whey Protein Powder

Hormel Foods is a proud sponsor of the Cancer Nutrition Consortium

Order online or by phone  
[VitalCuisine.com](https://VitalCuisine.com) | (888) 617-3482





**CancerNutrition.org** offers valuable resources, research, recipes, and answered questions from leading cancer experts in one convenient location. We're here to help!

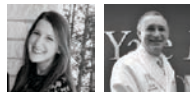


## VALUABLE RESOURCES

Look at frequently asked questions, or ask your own. Read more articles and download our partner, Dana Farber's mobile nutrition app! All sources under the 'Resources' tab on [CancerNutrition.org](https://cancernutrition.org) offer reliable suggestions and resources to help answer your questions about cancer nutrition.



## RECIPES FROM 16 CHEFS



Adi Goldberg & Ron DeSantis are only two of the chefs featured on the Cancer Nutrition Consortium. View all chef recipes & bios at [CancerNutrition.org/chef](https://cancernutrition.org/chef)



## DONATE TO HELP OTHERS

We are providing healthy, tasty nutrition to patients during their cancer treatment, who may not be able to otherwise afford it. Your gifts provide much-needed nutrition to a patient in need. Any size donation is helpful and appreciated. Click the 'Donate' tab on [CancerNutrition.org/make-a-donation](https://cancernutrition.org/make-a-donation)



## 120+ RECIPES

All recipes featured on our website were carefully crafted by chefs, nutritionists, and cancer patients. These unique recipes offer functional nutrition and great taste for those undergoing cancer treatments. View more recipes at [CancerNutrition.org/recipes](https://cancernutrition.org/recipes)

## Our Mission

The Cancer Nutrition Consortium recognizes the importance of food and nutrition to positive medical outcomes of cancer treatment. Our recipes and recommendations incorporate a wide range of insights. Key among them is that they can be adopted at home to make life easier for patients to achieve optimal health during cancer treatment.

## Contact the CNC

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