

Nutrition Matters

during oncology treatment

*Nutrition
is a vital
part of your
treatment.*



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NUTRITION DURING ONCOLOGY TREATMENT

TALK WITH YOUR DOCTOR ABOUT NUTRITION CONCERNS

Before you start chemotherapy and/or radiation, ask your doctor about a referral to meet with a dietitian. Our staff is trained to walk you through this journey. Please ask for support and education, or reach out to Michael and Elizabeth, Olympic Medical Center dietitians, at (360) 417-7125.



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The information contained herein is provided as a courtesy for our cancer patients.

COMMON CONCERNS

When it comes to symptoms and side effects of cancer treatment, patients are often anxious about what to expect.

Nutrition is a vital part of your treatment. As your body is treated for cancer, it needs the adequate building blocks to heal and repair important and damaged tissues. Nutrition is a fundamental part of this process.

COMMON SIDE EFFECTS

- Appetite Loss
- Nausea & Vomiting
- Sore Mouth
- Dry Mouth
- Trouble Swallowing, Sore Throat
- Vomiting
- Constipation
- Diarrhea
- Weight Loss & Gain
- Changes in Sense of Taste & Sense of Smell
- Depression & Anxiety
- Fatigue

We are here to support you through these changes. Your doctors, nurses and dietitians are ready to help see you through this process. Please let us know if any of these side effects or symptoms are preventing you from getting the nutrition you need to heal.

*Nutrition is a
vital part of your
treatment.*

ADJUSTING TASTES



A common complaint during chemotherapy and radiation treatment is changes in palette – a difficult side effect that can result in a metallic taste, loss of taste to foods or changes in flavor to foods that once provided an abundance of flavor. Try these simple tricks when managing flavor changes around meal times.

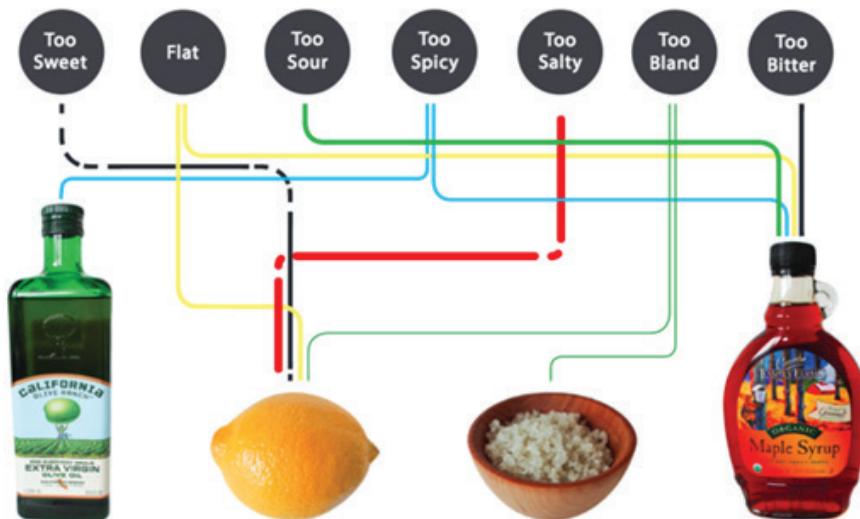
Things have a metallic taste. Add a little sweetener, like maple syrup or agave nectar, and a squeeze of lemon. You could also try adding fat by using a nut cream or butter.

Things taste too sweet. Start by adding six drops of lemon or lime juice. Keep adding it in small increments until the sweet taste becomes muted.

Things taste too salty. Add 1/4 teaspoon of lemon juice. It erases the taste of salt.

Things taste too bitter. Add a little sweetener, like maple syrup or agave nectar.

Everything tastes like cardboard. Add some sea salt until the flavor of the dish moves toward the front of the mouth. A spritz of fresh lemon juice also helps.



Used with permission from *The Cancer-Fighting Kitchen*
by Rebecca Katz.

MANAGING SYMPTOMS & SIDE EFFECTS

APPETITE LOSS

The extent of loss of appetite can vary, from one day to sometimes months of persistent loss of appetite. Even when it is difficult to eat, maintaining adequate nutrition is vital during your treatment and is essential to keeping up your strength.

When experiencing a loss of appetite, larger meals may be overwhelming so you should consider eating smaller, more frequent meals. Nutrition supplements such as Ensure or Boost are also alternatives to consuming a full meal. If you are not eating, please reach out to a member of the cancer center team so we may help ensure you are getting the nutrition you need during your treatment.

NAUSEA & VOMITING

If you experience nausea and vomiting during your treatment, it is helpful to eat fairly bland foods until it resolves. Examples of bland foods are toast, bananas, noodles and applesauce. To avoid developing aversions to your favorite foods, avoid eating them when you are nauseous. Also avoid foods with strong odors or overwhelming tastes.

You may be able to predict when you may experience nausea – many patients notice it comes on a schedule (i.e. three days after chemo). You may choose to make note of this pattern, to nutritionally optimize your good days knowing you may not feel like eating much on the “bad” days.

If you are unable to minimize nausea by addressing what you eat, your doctor may prescribe anti-nausea medications.

SORE MOUTH

Foods that are spicy, acidic, dry/hard, or very hot/cold are foods that may be better to avoid if you have a sore mouth. Everyone is different about what causes a sore mouth, so make note of what foods you think you should avoid to minimize this side effect of treatment.

TROUBLE SWALLOWING

Sometimes called dysphagia, difficulty swallowing can result from radiation treatment in particular. We recommend that you eat softer foods and drink more calorie-heavy liquids such as milk, juice, or smoothies, as these common nutritional changes allow patients to meet their nutrition needs while minimizing the pain from swallowing. A speech therapist may help determine which textures are most appropriate for your swallowing ability, if needed.

SORE THROAT

Sore throat is also common with radiation to the head/neck and chest. You may require altered textures for food and fluids. Sometimes the temperature of the food can help soothe your throat, as well. You will want to make note about what feels better to eat.



DRY MOUTH

Dry mouth often occurs due to inadequate fluid intake. Make sure you drink enough fluids. Water is best; but if you are losing weight then milk, juice, and other fluids are good choices to get some extra nutrition. Sucking on hard candy can help with dry mouth symptoms as well.

CONSTIPATION

Medications, lack of movement, and changes in diet can contribute to constipation. Increasing fiber can help with this side effect, but make sure you are drinking enough fluids, as this helps prevent and relieve constipation. A brief walk can help too!

DIARRHEA

A major concern of diarrhea symptoms is the resulting dehydration. Consuming fluids are key! If you are experiencing diarrhea, an immediate thing to try is limiting or eliminating dairy foods. Let your doctor know how frequently you are having diarrhea and if you notice any other significant changes in your stool (blood, very black, mucous). Sometimes this is due to treatment, medications, food, or something else. Letting someone know early on can help identify what may be causing it.

WEIGHT LOSS & GAIN

Losing or gaining weight is often seen in patients undergoing cancer treatment. Depending on if you are losing or

gaining, you will have different nutritional requirements. Ask your doctor for a referral to a dietitian if you feel you cannot manage your weight on your own.

CHANGES IN SMELL & TASTE

One of the most common side effects of cancer treatment is the changes in taste and smell. If you are experiencing a metallic taste, try to eat high-calorie foods that have strong flavors and heavy spices. This will help with appetite and provided needed calories!

DEPRESSION & ANXIETY

Emotions can often have a great impact on our relationship with food. Make sure you are eating for health benefits, even when accessing food feels overwhelming. Talk with a dietitian about tips for managing stress and appetite.

FATIGUE

When you are tired, preparing meals may be challenging. Plan ahead when you feel good, make a batch of meals you enjoy and freeze them. Many meals you can cook from frozen, some you can defrost ahead in the fridge. When friends and family offer support, request their help in this area. Let them know what food you like, crave and need, and allow them to help you with shopping and meal preparation.

NUTRITIONAL GUIDELINES

CALORIE AND PROTEIN NEEDS

Calorie and protein needs vary from patient to patient and are impacted by age, weight, disease state, and activity level.

General guidelines for estimating your nutritional needs are shown below. You should always talk to a registered dietitian before making significant nutritional changes. These guidelines are not meant to cure or treat any conditions, but rather provide a benchmark for nutritional monitoring.

EXAMPLE

A person of 150 pound with a Body Mass Index (BMI) of 27 would need approximately 1,363 to 1,704 calories and 54-68 grams of protein per day.

BMI = weight in kg / height in m²

Calculate kilograms (kg) by taking your weight in pounds and dividing by 2.2

Calculate meters (m) by taking your height in inches and multiplying by .0254

BMI	Calories	Protein
<18.5	30-35 calories/kg	1.2-2 grams/kg
18.5-25	25-30 calories/kg	1-1.2 grams/kg
25-30	20-25 calories/kg	.8-1 grams/kg
>30	15-20 calories/kg	.8 grams/kg

DELICIOUS SMOOTHIE / MEAL RECIPES



SUPER PROTEIN POWER SMOOTHIE

- 1 cup whole milk, nut milk or Boost/Ensure
- 1/2 cup yogurt
- 1 scoop protein powder
- 2 tbsp peanut butter or almond butter
- 1 tbsp olive oil or coconut oil
- 1 banana
- 1/2 cup frozen berries

Add all ingredients to blender and blend.

Nutrition Facts: 750 calories,
51 gm protein, 8 gm fiber

MANGO PAPAYA SMOOTHIE

- 2 cups yogurt
- 1 mango (peeled and pitted)
- 1 papaya (peeled and pitted)
- 2 tbsp lime juice
- 3 tbsp honey
- 1/4 tsp almond extract
- 1 cup ice

Add all ingredients to blender and blend.

Nutrition Facts: 740 calories,
52 gm protein, 8 gm fiber

MOCHA YOGURT FRAPPUCCINO

- 1 cup yogurt
- 1 tbsp instant coffee
- 3 tbsp powdered sugar or maple syrup
- 1/3 cup whole milk
- 1/4 cup ice
- 1 tbsp cocoa powder
- 1/4 tsp cinnamon

Add all ingredients to blender and blend.

Nutrition Facts: 340 calories,
27 gm protein, 0 gm fiber

BUG JUICE BREEZE SMOOTHIE

- 1 cup yogurt
- 1 Breeze or Boost shake
- 1 banana
- 1/2 cup strawberries
- 1/2 cup orange juice

Add all ingredients to blender and blend.

Nutrition Facts: 570 calories,
36 gm protein, 6 gm fiber

CRUNCHY ORANGE SMOOTHIE

1 cup yogurt or ice cream
2 tbsp frozen orange juice concentrate
1/2 cup granola

Add all ingredients to blender and blend.
To thin, add water or use orange juice.

Nutrition Facts: 420 calories,
29 gm protein, 4 gm fiber

PEANUT BUTTER BANANA HEAVEN

1 cup yogurt or ice cream
3 tbsp peanut butter
1 frozen banana
1/4 tsp cinnamon or cocoa powder

Add all ingredients to blender and blend.

Nutrition Facts: 530 calories,
37 gm protein, 6 gm fiber

PEACHES & CREAM DELIGHT

1 cup vanilla greek yogurt
1 cup peaches
1/2 cup whole milk

Add all ingredients to blender and blend.

Nutrition Facts: 350 calories,
33 gm protein, 2 gm fiber

LEMON RASPBERRY SORBET SMOOTHIE

1 cup yogurt or whole milk
1 tsp lemon juice
1 cup raspberries
1/4 cup ice

Add all ingredients to blender and blend.

Nutrition Facts: 205 calories,
26 gm protein, 8 gm fiber



PINA-COLADA SMOOTHIE

- 1 cup vanilla yogurt
- 1/2 cup pineapple
- 2 tbsp dried coconut
- 1/2 cup ice

Add all ingredients to blender and blend.

Nutrition Facts: 215 calories,
24 gm protein, 1 gm fiber

BANANA OATIE

- 1/2 cup cooked oatmeal
- 1 frozen banana
- 1 cup whole milk, nut milk or Ensure/Boost
- 1tbsp honey or maple syrup
- 1 tsp vanilla extract

Add all ingredients to blender and blend.

Nutrition Facts: 619 calories,
22 gm protein, 11 gm fiber

RASPBERRY SMOOTHIE DELIGHT

- 1/2 cup cooked rice
- 1 ripe banana
- 1 cup frozen raspberries
- 1 tbsp ground flax seeds
- 1/2 cup plain yogurt
- 1/2 cup milk, Ensure, etc.

Add all ingredients to blender and blend.

Nutrition Facts: 465 calories,
16 gm protein, 14 gm fiber

BURSTING BLUEBERRY

- 1/2 pkg tofu, extra firm
- 1 banana
- 1 cup frozen blueberries
- 1/2 avocado
- 1 cup milk, nut milk or Boost/Ensure shake

Add all ingredients to blender and blend.

Nutrition Facts: 680 calories,
28 gm protein, 18 gm fiber

PINEAPPLE POWER SHAKE

1 cup orange juice
1/2 cup pineapple juice
1/2 cup cottage cheese or greek yogurt
1/2 cup ice or frozen berries

Add all ingredients to blender and blend.

Nutrition Facts: 255 calories,
14 gm protein, 2 gm fiber

CINNA-PEACH SMOOTHIE

1 cup diced peaches
1/2 cup yogurt
1 tbsp honey, pinch of cinnamon
1 cup ice

Add all ingredients to blender and blend.

Nutrition Facts: 190 calories,
13 gm protein, 0 gm fiber

SUPER SMOOTHIE

1 cup milk or green juice
1/2 cup yogurt
1 scoop protein powder
1 tbsp almond butter and flax seed
1/2 avocado
1 cup spinach
1 banana

Add all ingredients to blender and blend.

Nutrition Facts: 700 calories,
48 gm protein, 15 gm fiber

KATIE SHAKE

1/2 cup cottage cheese
1/2 cup vanilla ice cream
1/2 cup prepared Jell-O (any flavor)

Add all ingredients to blender and blend.

Flavors can be adjusted by the type of ice cream and Jell-O used such as strawberry and orange.

Nutrition Facts: 294 calories,
20 gm protein, less than 1 gm fiber

THICK & CREAMY PUDDING SMOOTHIES



PUMPKIN PIE PUDDING

1 cup cooked/canned pumpkin
2 tbsp almond, coconut or avocado oil
1/2 tsp cinnamon
1 tsp lemon juice
1/2 cup yogurt

Add all ingredients to blender and blend.

Nutrition Facts: 340 calories,
13 gm protein, 1 gm fiber

SWEET POTATO PUDDING

1 medium baked sweet potato
1 1/2 cup apricot nectar
1/2 package tofu, firm
3 tbsp maple syrup or honey

Add all ingredients to blender and blend.

Nutrition Facts: 670 calories,
20 gm protein, 9 gm fiber

TAPIOCA PUDDING

1/3 cup small pearl tapioca
3/4 cup water
1 can (14 oz.) coconut milk
1/3 cup maple syrup
1 tsp vanilla

Soak small pearl tapioca in sauce pan for 30 minutes, do not drain water. Bring tapioca to boil. Add Coconut Milk and vanilla. Stir contents and remove from heat. Let stand 10 minutes and add maple syrup. Enjoy!

Nutrition Facts: 1405 calories,
8 gm protein, 8 gm fiber

*Talk with a dietitian
about tips for
managing stress
and appetite.*

SMOOTHIE RECIPE MODIFICATIONS

For all smoothie recipes, you can add 100-200 calories by adding 1-2 Tbsp of a healthy oil such as canola or olive oil or use a high fat Greek yogurt.

To reduce calories, use low-fat or nonfat milk.

High Protein Brands	Serving	Calories	Protein	Fat	Fiber
GreekGods	8oz/1c	220cal	9g	14g	0g
Chobani	8oz/1c	120cal	22g	0g	0g
Zoi	8oz/1c	230cal	10g	18g	0g
Oikos	8oz/1c	190cal	20g	9g	0g
Noosa	8oz/1c	280cal	11g	11g	1g
Maple Hill	5.3oz	130cal	12g	6g	0g

Low Fat Brands	Serving	Calories	Protein	Fat	Fiber
Activa Light	5.3oz	80cal	13g	0g	0g
Greek Gods NFat	6oz	100cal	9g	0g	0g
Yoplait Greek	5.3oz	140cal	11g	0g	0g
Dannon Greek	5.3oz	80cal	12g	0g	0g
Wallaby Greek	6oz	130cal	17g	3g	0g
Page 2%	7oz	150cal	20g	4g	0g
Brown Cow Greek	5.3oz	80cal	15g	0g	0g

NOTES



*Assistance is available to help you
on your cancer journey.*

