



## Nutrition Therapy During Cancer Treatment

Nutrition is an important part of your child's cancer treatment. But eating might be hard for your child because of the side effects of medications, chemotherapy and radiation therapy. These side effects may include:

- nausea
- vomiting (throwing up)
- diarrhea (loose poop)
- constipation (difficulty pooping)
- mouth sores
- taste changes
- weight loss
- weight gain

If your child's immune system is not working as well as it should, he's at risk of food borne infections, especially if he's has neutropenia, which means having low levels of a type of white blood cell (ANC less than 500). This makes it hard for the body to fight infections.

### What are guidelines for food safety?

To make sure food is safe for your child to eat:

**Wash your and your child's hands well** before and after preparing, cooking and eating meals.

**Clean all cooking tools very well** before and after each use.

**Use water and a clean brush to scrub fresh fruits and vegetables** before eating or cooking them.

**Heat sliced deli meats** to a steaming temperature before eating.

**Throw away leftovers that have been at room temperature** longer than two hours.

**Check the internal temperature of cooked dishes in several places** with a

food thermometer to make sure they're cooked long enough. We recommend:

- ❖ 160°F degrees for beef, lamb, veal, pork and egg dishes
- ❖ 170°F degrees for stuffing and casserole
- ❖ 180°F degrees for chicken and turkey

**Use a cooler with ice or ice packs to keep food cold** when you're traveling.

**Keep refrigerated foods at 40°F or lower.**

**Thaw frozen food in the refrigerator or by running under cold water.** Do not thaw at room temperature.

**Keep refrigerated leftovers for no more than two days** and reheat them until they're hotter than 165° F.

### What are foods that I should not give my child?

**Don't give your child:**

- ❖ food from street vendors, salad bars or shared bins
- ❖ raw eggs
- ❖ raw fish
- ❖ raw shellfish
- ❖ soft French-style cheeses (such as brie)
- ❖ pates
- ❖ uncooked hot dogs
- ❖ raw seed sprouts (like alfalfa sprouts)
- ❖ unpasteurized milk products and juices

**Do not let your child:**

- ❖ **taste foods that contain raw eggs** (like cookie dough) or **raw meat, fish or poultry** (like chicken, turkey, duck or geese).
- ❖ **drink directly from cans** - Wash the can before opening it and pour into a clean cup.

## What can help my child get better nutrition during treatment?

### General tips

- Give your child five to six small meals or snacks throughout the day.
- Keep healthy snacks available.
- Give a snack before bedtime.
- Give high-calorie drinks, like chocolate milk, whole milk, smoothies, shakes/frappes or full-fat soy milk.
- Notice the time of day when your child's appetite is best. Have him eat more then.

### If your child has nausea or vomits (throw up)

- Give him the prescribed anti-nausea medications 30 to 60 minutes before eating.
- Keep him upright/sitting up for at least two hours after eating.
- Try feeding him dry, salty foods, such as crackers, potato chips or pretzels.
- Avoid giving him foods with strong odors or that are deep-fried.
- Give him cool liquids between meals, like lemonade or juice diluted with water. Have him use a straw.
- Offer him ginger tea or cookies.
- Have him smell cut lemon or orange.

### If your child loses his appetite

- Give him small amounts of food several times a day and have him eat it slowly.
- Limit how much he drinks during meals since fluids can make him feel full.
- Keep snacks readily available.
- Give him sips of drinks throughout the day.
- Schedule times for him to eat instead of going by when he's hungry. Try setting an alarm as a reminder that it's time to eat.

### If your child has diarrhea or constipation (trouble pooping)

- Have him drink extra liquids.
- Give him foods with fiber, such as whole grains, fruits and vegetables.
- Do not give him a lot of sweet drinks, such as juice and soda.

### If your child has mouth sores

- Give him soft, bland foods and liquids.
- Add butter, gravy, sauce or salad dressing to moisten foods.
- Avoid hard, rough, salty or spicy foods.

### If your child has taste changes

- Try new spices and flavors, like roasted red pepper hummus or chicken with garlic.
- Try salty or highly flavored foods, like pizza and curry sauce.
- Avoid extremely sweet foods. Taste changes happen frequently with sweets and they can taste "like cardboard" or "just not right."
- Sour/tart candies may help with metallic taste.

### If your child has high blood pressure

- Avoid salty foods, like canned soups, pickles, processed meats and cheeses.
- Do not add salt to foods.
- If you need to limit the amount of salt your child eats, ask your dietitian for information about the No Added Salt Diet.

## What are some high-calorie foods?

Pick your favorite recipe from this list, or mix and match. Simply mix the ingredients in a blender and enjoy.

### Vanilla Shake

- 1 ½ cups ice cream (3-4 scoops)
- ½ cup whole milk
- 3 tablespoons nonfat milk powder (or 2 tablespoons chocolate, strawberry or coffee syrup)

### Strawberry Shake

- 2 cups whole milk
- 2/3 cup nonfat dry milk powder or 1 package vanilla Carnation Instant Breakfast
- 2 ½ cups strawberry ice cream
- 2 tablespoons heavy cream

### Strawberry Banana Smoothie

- 1 cup whole milk
- ½ cup yogurt
- 1 banana
- ½ cup strawberries

## What are some high-calorie foods?

### Peanut Butter Shake

- 1 cup whole milk
- 3 tablespoons smooth peanut butter
- 3 tablespoons chocolate syrup

### Banana Orange Shake

- ½ cup whole milk
- ½ cup orange juice
- 1 cup vanilla ice cream
- 2 whole bananas

### Fortified Milk

Add 2-4 tablespoons powdered nonfat milk to 8 ounces of whole milk

or

Add 1 tablespoon of cream to 8 ounces of whole milk

### Super Pudding

- 1 cup fortified milk
- 1 cup heavy cream
- 1 package (4 ½ oz) instant pudding
  - ❖ Prepare according to package directions and divide into ½ cup servings.

### Super Grilled Cheese

Dip cheese sandwich into egg and fortified milk mixture before grilling with lots of butter or margarine. This will be like French toast with cheese in the middle.

## When should I call my doctor?

Call your doctor if you have questions about your child's nutrition.

You can also arrange a consultation with a registered, licensed dietitian at the Jimmy Fund Clinic (617-632-3270) or at Boston Children's Hospital (617-355-4677).

For other questions, please call the following phone numbers:

**Monday-Friday 8:00am-5:00pm:** Call the Jimmy Fund Clinic at 617-632-3270.

**Weekdays after 5:00pm, holidays and weekends:** Call the page operator at 617-632-3352 and page the pediatric hematology/oncology or stem cell transplant fellow on call.

*Please note: This Family Education Sheet is for educational purposes only. For specific medical advice, diagnoses and treatment, talk with your doctor and/or dietitian.*

This Family Education Sheet is available in Spanish.