
Nutrition for Children with Cancer

Nutrition is an important part of the health of all children, but it is especially important for children getting cancer treatment. Learn about your child's nutritional needs and how cancer and its treatment may affect them.

- [Benefits of Good Nutrition for Children During and After Cancer Treatment](#)
- [Ways Your Child with Cancer Can Get Nutrients](#)
- [Special Nutritional Issues For Children with Cancer](#)
- [Eating Problems Caused By Your Child's Treatment](#)

Benefits of Good Nutrition for Children During and After Cancer Treatment

Good nutrition is important when a child has cancer. But cancer and side effects of cancer treatment can affect a child's appetite and energy levels, how they tolerate certain foods, and how their body uses nutrients. This is especially true for children who have to be in the hospital and those who develop infections and fever.

- [Long-term benefits of healthy eating and exercise habits](#)
- [MyPlate](#)
- [How a registered dietitian nutritionist can help](#)

Helping children eat the right kinds of food before, during, and after cancer treatment

could help them:

- Feel better, sleep better, be less irritable, and work better with their health care team
- Better deal with treatment and side effects
- Stay on schedule with their treatment
- Heal and recover faster
- Have less risk of infection
- Have better strength and energy
- Reach and maintain a healthy body weight
- Maintain their body's store of nutrients

Long-term benefits of healthy eating and exercise habits

For children with cancer, a key focus of nutrition and physical activity is to help maintain their normal growth and development. This is important both during and after cancer treatment.

Research also shows that childhood cancer survivors are more likely to develop health conditions, such as heart disease, insulin resistance and second cancers, at younger ages than people who have not had cancer. Learning healthy eating habits when they are younger can help prevent or delay chronic health conditions later in life.

In addition, children who begin and continue regular exercise are less likely to have their cancer come back and have a lower risk of death.

MyPlate

Younger children with cancer are more likely to develop eating problems. These problems can be worse if the child had poor eating habits before diagnosis and if they have side effects with treatment. Helping your child learn to choose healthier foods and drinks can have both short- and long-term benefits.

The [MyPlate](#)¹ food guide provides many resources to help with making food choices for a healthy diet. MyPlate divides foods into 5 major food groups: fruits, vegetables, grains, protein foods and dairy. The website includes plans, quizzes, and life-stage focused tools to help evaluate your child's current eating patterns and suggest ways to include more healthy foods.

Keep in mind that during treatment your child's needs may be different from those in the MyPlate guide. Talk to your doctor, nurse, or dietitian about your child's nutrition needs and how to best meet them.

How a registered dietitian nutritionist can help

Each child with cancer has their own nutritional needs which can be affected by their baseline status, diagnosis, treatment plan, age, activity level, and current medicines. It is recommended that each child be seen by a registered dietitian nutritionist (RDN) or registered dietitian (RD) before they begin treatment. The dietitian can assess your child's needs and help come up with a plan for healthy eating or suggest other ways to meet your child's nutritional needs.

The dietitian can also be helpful anytime you have questions about eating, nutrition, or your child's growth. They can also work with you and your child if an eating plan needs to be updated.

If you are going to meet with a dietitian, be sure to write down any questions before your meeting so you don't forget anything. Ask them to repeat or explain anything that is not clear. For more information or to find a registered dietitian, contact the [Academy of Nutrition and Dietetics](#)².

Hyperlinks

1. www.myplate.gov
2. www.eatright.org

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Last Revised: June 22, 2022

Ways Your Child Can Get Nutrients

Getting enough nutrients is not just about managing weight. It can also help your child have the best possible outcomes. When your child has cancer, they can get the nutrients they need in many ways.

- [By mouth](#)
- [By feeding tube](#)
- [By vein](#)

By mouth

If at all possible, your child should get needed nutrients from eating and drinking foods and fluids that are part of a healthy, well-balanced diet. Try to stick to your normal family

mealtime habits as much as you can. Regular healthy snacks can be helpful, too.

Some children will have trouble eating enough to stay as a healthy weight. These children may be able to get extra nutrients by eating high-calorie, high-protein meals along with snacks, homemade drinks and shakes. But talk to your dietitian or other member of the cancer care team before making diet changes. Liquid nutrition products you can buy at the grocery store or pharmacy are also options if your child has trouble eating. There are many different types on the market, so discuss them with your dietitian or doctor first. Clinics often have samples your child could try before you buy any.

By feeding tube

If it gets too hard for your child to maintain or gain weight by eating and drinking, or if their calorie and nutrient needs have greatly increased, a feeding tube may be needed.

There are four main types of feeding tubes.

- **Nasogastric tubes:** These thin, flexible tubes are threaded through the nose and into the stomach. They are meant to be used for a shorter period of time.
- **Nasoduodenal tubes:** These thin, flexible tubes are threaded through the nose, through the stomach, and into the small intestine. These tubes can be helpful for a child who is having a lot of nausea and vomiting.
- **Gastrostomy tubes (g-tube):** These tubes are put through the skin of the belly (abdomen) into the stomach. These can be helpful for children who need a feeding tube for longer periods of time and are easier to hide under clothes when not in use. These are most helpful for children with longer treatment durations who are having (or expected to have) difficulty eating and drinking enough calories and nutrients.
- **Jejunostomy tubes (j-tube):** These tubes are put through the skin of the belly (abdomen) right into the intestine. They are most helpful for children with uncontrolled nausea and vomiting and are also easier to hide under clothes.

Once a tube is in place, complete liquid nutrition formulas can be given through it. Most of the time, these feedings can give your child all of the calories, protein, vitamins, and minerals needed. Tube feedings can be given at home. Your child's cancer care team will teach you how to do this.

The type of nutrition formula that each child gets depends on many factors, such as the

type of tube being used and the specific needs of the child. There are many options and some formulas are made from whole foods blended to go through the tube. An option for some families is to blend home foods (called home blenderized feeds). Your cancer care team will let you know which formula or approach is best. It is important to have a dietitian oversee tube feeds to ensure that the amount of calories and nutrients will meet your child's needs.

Some but not all children who have feeding tubes can also eat by mouth. Ask your child's cancer care team if your child can still eat and drink while their tube is in place. For example, they may be tube fed at night to allow them to eat during the day. Even if your child isn't eating, it's important to keep their mouth clean with regular rinsing and brushing.

Most young children can get used to tube feedings within a few days, but older kids and teens may need longer. Involve your child in the decision to use a feeding tube as much as possible. If your child is having trouble getting used to the tube it may help for them to talk with a peer who has had a feeding tube. Parents may also benefit from talking with other parents who have dealt with feeding tubes.

Tube feeding does not come without problems. Talk to your dietitian and cancer care team to fully understand the likely benefits and possible issues for your child.

By vein

Some children will not be able to get enough nutrients either by mouth or a feeding tube. Also, the stomach and intestines in some children are not working properly because of their cancer or treatment. In that situation, the child may need to be given nutrient solutions through a vein. This is called **intravenous nutrition** or **parenteral nutrition (PN)**.

PN solutions can usually meet all of a child's nutritional needs for a while. Like tube feedings, PN can be given at home. Using PN for a short time is a safe way to feed your child until the stomach or intestine is better. Once these issues go away, every effort will be made to switch to tube or mouth feedings because PN is not as good for the body as eating or tube feeding.

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Last Revised: June 22, 2022

Special Nutritional Issues For Children with Cancer

- [Weight loss](#)
- [Weight gain](#)
- [Steroids](#)

Weight loss

Staying at a healthy weight can be difficult for some children during and after cancer treatment. Side effects of treatment, taste changes, fatigue, depression or anxiety can all decrease a child's appetite and make eating difficult. And even if a child is eating enough calories, they may not be getting all the nutrients they need to tolerate and recover from treatment.

Ways to help your child get more protein and calories:

- Encourage your child to eat more when they feel well.
- Serve your child small meals and snacks throughout the day, rather than 3 large

meals. Good snacks are peanut butter and crackers, cheese sticks, pudding, fruit roll-ups, and cereal and whole milk.

- Avoid low-fat versions of foods such as low-fat ice cream or low-fat cookies.
- Try to schedule a snack or meal for when you know your child will be hungry. Be sure to include high-calorie, high-protein foods and some high-fat foods
- Have your child eat their biggest meal when they are hungriest. For example, if they are hungriest in the morning, make breakfast the biggest meal.
- Try to get your child to drink most of their fluids between meals instead of with meals. Drinking fluid with meals can make your child feel full too soon.
- Use colorful cups, mugs, and straws to encourage your child to drink water and other fluids throughout the day.
- Offer water and avoid sugary beverages which can reduce appetite.
- Use cookie cutters to cut shapes in sandwiches, gelatin, meats, and cheeses.
- Make faces out of fruits and vegetables. (Many children's cookbooks have examples.)
- Serve food in unusual containers or on cartoon character plates.
- Have picnics. (You can go outdoors or have the picnic in the living room or even the attic.)
- Let your child help plan meals and prepare the food. Help with planning can be as simple as letting the child choose between vegetables.
- Invite your child's friends to share meals.
- Plan ahead for meals missed because of things like doctors' appointments and treatment appointments. Take along water, a sandwich on whole wheat bread, fruit or other healthy snacks.
- Encourage your child to be physically active. Activity may increase their appetite.

Don't force your child to eat but work with them to come up with an eating plan that works for both of you. Don't make eating a power struggle. Talk to the cancer care team if you don't think your child is eating enough.

Weight gain

Some children gain too much weight during or after cancer treatment. Studies show that many children getting treatment for cancer eat enough calories, but don't follow a healthy diet. In fact, the average child with cancer does not eat enough fruits, vegetables, whole grains or dairy foods and eats too many sugary and salty foods. Without the healthy foods, children with cancer may not get all the nutrients they need to tolerate treatment and stay on track with normal growth and development. In addition,

these types of diets tend to lead to weight gain which can have negative health effects later in life.

Your cancer care team can also give you tips on planning meals and snacks that are satisfying, but not high in calories. Ask to meet with the dietitian on your team if weight gain is a concern. Offer your child fresh, nutritious, filling foods, such as fruits and vegetables, homemade soups, non-processed meats, dairy products, whole grain breads, and whole grain pastas. Your child does not have to feel deprived of their favorite foods, but some changes in the recipe might be wise. Consider thin crust pizza with low sodium cheese for the pizza lover, and baked chicken tenderloin strips and potato fries for the chicken nugget and french fry lover. No food is especially bad, but how it is prepared or the portion size can be unhealthy. Another option is to have some favorite foods less often, but on a regular schedule (for example once a week).

If your child has been gaining weight during or after treatment, your focus should be on helping them make healthy food choices and increase their physical activity level. This will help them not only lose the extra weight but will help them learn healthy habits that they can use for the rest of their lives. Cancer treatment may have interfered with their sports activities or school activities and getting them back out there as soon as you can will help.

Here are some suggestions to increase healthy food choices and increase physical activity.

- Offer scheduled healthy snacks between meals and avoid “grazing.”
- Encourage your child to be as active as possible, especially once they have finished treatment.
- Go for walks together with your child walking or on a scooter (or riding toy).
- Check out the local YMCA or community center.
- Go to the park together as a family.
- Try to get active toys for birthdays and important events (basketball, soccer ball, frisbee, riding toy or maybe even a trampoline)
- Outside the hospital, limit the time on video games, phones and other screens.
- In the hospital, try to get out for daily walks around the hospital gardens when your child is feeling well enough.
- Ask your doctor to consult the physical therapy team during admissions, to help with gaining back muscle mass, strength and flexibility.
- Include plant-based foods like vegetables, whole grains, fruits, and beans in your child’s diet.
- Avoid sugar sweetened beverages such as sodas, sports drinks and some juices.

- Cut back on sweet sauces (dressings and bbq sauce).
- Avoid frying foods and purchasing foods that have been fried.
- Limit high-sugar snacks between meals.
- Look at the [MyPlate](#)¹ website for ideas for healthy meals and snacks.

For more ideas about how to help your child include more healthy options in their diet, ask to talk with a dietitian.

Steroids

Some children with cancer take steroids, such as prednisone or dexamethasone, as part of their treatment. The steroids may cause them to gain weight and retain fluid in the face and belly. And children taking steroids usually feel hungry and need to eat often.

You can help your child by making some diet changes to help reduce fluid retention and weight gain. Your doctor, nurses, or dietitian can help you know what to do. They may recommend foods lower in sugar because prednisone can increase the chances of elevated blood glucose levels. They may also suggest foods low in salt (sodium). High-sodium foods, such as most snack chips and pretzels, processed foods, or frozen meals should be avoided. (Those labeled “reduced sodium” are usually OK.) Instead, have your child try foods seasoned with spices instead of salt.

The appetite changes and fluid retention caused by steroids will go away when treatment ends. When steroid treatment ends many children will lose their appetite for a short time. The weight loss that may come with this is expected and will be closely watched. But some children, especially teens, may have a hard time losing the weight gained during treatment. Encouraging them to make healthier food choices while on prednisone (especially lower sugar foods and drinks) and being as active as possible may help.

Hyperlinks

1. www.myplate.gov/

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Last Revised: June 22, 2022

Eating Problems Caused By Your Child's Treatment

Cancer and its treatments often cause changes in a child's eating habits and desire to eat. Not eating can lead to weight loss, and can cause [weakness and fatigue](#)¹. Managing these problems and helping your child eat as well as they can is an important part of helping them through treatment and staying on track with their normal growth and development.

- [Nausea and vomiting](#)
- [Mouth sores and pain](#)
- [Trouble swallowing](#)
- [Dry mouth or thick saliva](#)
- [Changes in taste and smell](#)

Nausea and vomiting

Many treatments for cancer can cause nausea and vomiting. These symptoms can be very uncomfortable and make it hard for your child to eat and drink. But it is important for your child to get enough fluids and foods to prevent dehydration and keep up their strength. There are medicines that can help control your child's nausea and vomiting. The specific medicines your child is given will depend on the treatment they are receiving and how they react to it.

Some children still have nausea and vomiting even if they are given medicine to try and control these symptoms. Let your child's cancer care team know if your child has any nausea and vomiting. The medicines that are being given can be changed.

There are things you can do to [help decrease your child's nausea and vomiting²](#) while helping them eat and drink more. And encourage your child to drink small amounts of liquids often so that they don't get dehydrated.

Mouth sores and pain

Some cancer treatments can cause mouth sores and pain. This can make it hard for your child to eat and drink. If your child has trouble eating and drinking because of mouth or throat soreness, let your cancer care team know as soon as possible.

There are things you can do to make your child more comfortable and [make eating easier³](#). For instance, you can offer soft, bland foods and lukewarm or cool foods which can be soothing. And ask your child's cancer care team to recommend a mouth wash. This helps prevent infections and speeds up healing.

Trouble swallowing

Cancer and its treatment can sometimes cause trouble swallowing. This may be the issue if your child coughs and chokes while eating and drinking. Let your cancer care team know right away if this is an issue for your child.

Your doctor may refer your child to a speech-language pathologist with special training in swallowing. They can teach your child how to swallow easier and decrease coughing and choking while eating and drinking. They can also help you figure out if and when nutrition support is needed.

There are a number of things you can do to [help your child if they are having trouble swallowing⁴](#). It is important to find ways to help them drink enough liquids.

Dry mouth or thick saliva

Radiation therapy to the head and neck areas, some kinds of chemo, and certain other medicines can cause a dry mouth (xerostomia). Some children may also develop thick saliva. Dryness can be mild or severe, and a dry mouth can increase the risk of cavities and mouth infection.

If your child has either of these side effects, there are things you can do⁵ to [help your child's mouth feel better](#)⁶. Have them drink plenty of fluids and eat moist foods as much as possible throughout the day. Also get them to brush their teeth and tongue and rinse their mouth often.

Changes in taste and smell

Cancer and its treatment can change your child's senses of taste and smell. These changes may make foods have less flavor or taste bitter or metallic. Your child may also have a reduced or increased sense of smell or notice that things don't smell the same. These changes can affect your child's appetite.

There are many things you can try to [help if your child doesn't want to eat](#)⁷ because of changes in how foods taste or smell.

Hyperlinks

1. www.cancer.org/cancer/managing-cancer/side-effects/fatigue.html
2. www.cancer.org/cancer/managing-cancer/side-effects/eating-problems/nausea-and-vomiting.html
3. www.cancer.org/cancer/managing-cancer/side-effects/eating-problems/mouth-sores.html
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Last Revised: June 22, 2022

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