

Home Blended Food for Tube Feeding:

Caregiver Handbook

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Authored by the Registered Dietitians at the Alberta Children's Hospital and adapted for provincial use by Nutrition Services; in collaboration with the Pediatric Eating and Swallowing (PEAS) Quality Improvement Project sponsored by the Maternal Newborn Child and Youth Strategic Clinical Network and Pediatric Home Nutrition Support Programs at Alberta Children's Hospital and Stollery Children's Hospital.

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Introduction

Home blended food for tube feeding is the use of food that has been blended to a consistency that can be given through a gastrostomy feeding tube (G-tube). Using food in place of formula or in combination with formula offers another way to feed your child.

This handbook has information for families who choose to use home blended food to feed their child using a feeding tube. The information enclosed is to complement and guide discussions with your dietitian and healthcare team. Before starting, please check with your healthcare team to ensure your child has an appropriate type of feeding tube for use with home blended food.

You can ask your dietitian to help plan a diet to help meet your child's nutrition needs.

Your dietitian will:

- help determine your child's nutrition needs.
- help you with any of your child's special diet needs, such as food allergies.
- work with you on how often you choose to use home blended food. Some families choose to offer only home blended food. Other families choose to offer formula as well.
- help you review recipes for home blended food.



Getting started

Step 1: CHOOSING the blender

A high power blender is suggested to make home blended food for tube feeding. When choosing a blender, or checking your blender at home, the following information may help guide you:

- Power: 1100–1500 watts or greater.
- There are four blenders that many parents like for home blended food. There may be other brands that work for you.
 - [Blendtec® Blenders](#)
 - [Nutri Ninja® Pro Blender](#)
 - [Salton® Harley Pasternak Power Blender](#)
 - [Vitamix® Blenders](#)

Step 2: PLANNING home blended meals for tube feeding

Encourage family meals

- Offer your child home blended food during family meals. This will allow your child to be a part of the family meal.

Here are some points to help you plan your family meals.

Follow *Canada's food guide*

- Have plenty of vegetables and fruits.
- Choose whole grain foods and protein foods. Choose protein foods that come from plants more often.
 - Whole grain foods include: oats, quinoa, rice, and wheat.
 - Protein foods include: meat, poultry, eggs, dairy, legumes, beans, and tofu.
- Limit highly processed foods.
- Eat a variety of healthy foods each day.

[Canada's food guide](#)



Variety is important

- Providing a variety of plant-and animal-based protein foods at every meal will help your child to receive enough protein to help their body grow and develop.
- Use different coloured fruits and vegetables to help to your child get a variety of vitamins and minerals.
- You can use fresh, frozen, or canned foods to prepare home blended food for tube feeding.

Timing is important

- Provide meals and snacks about the same time each day.
- Give snacks over 10–15 minutes.
- Give meals over 20–30 minutes.
 - Your dietitian may suggest different schedules that may work for your child.
- If you use a syringe, evenly space amounts throughout the meal. This helps digestion and helps you to read your child's hunger and fullness.
 - For example, if the total tube feed volume is 250 mL for a meal, syringe 50 mL every 5 minutes.



Examples of foods that blend well

- Protein: cooked or prepared eggs, fish, tender meat and poultry, tofu, legumes, cottage cheese, yogurt, and nut butter.
- Whole grains: oatmeal, bread, rice, quinoa, wheat, and barley.
- Vegetables and fruit: leafy greens, apples, blueberries, mango, and cooked carrots, squash, sweet potato, and potato.
- Fat: oils, nut butter, full fat dairy products, and avocado.
- Liquids: milk, fortified plant-based beverages such as soy and coconut, nutrition supplement drinks, formula, water leftover from cooking, and water.

Step 3: FOOD SAFETY for everyone

Formula is made to be free of all harmful bacteria. Home blended food is safe for your child when food safety measures are followed. This includes when you buy food, and when you prepare and store blended food.

At the store

- When shopping for meat, poultry, or fish, wrap them in separate plastic bags to prevent bacteria from moving to other foods in your cart.
- Wait to the end of your grocery trip to pick up items that need to be kept cold or hot. This helps to keep these foods at a safe temperature until they can be stored properly at home.
- If the trip from the grocery store to home is long, you can bring an ice pack or cooler to help keep foods cold.

The fridge

- Keep your fridge at 4°C (40°F) or lower. If your fridge does not show the temperature, place a small thermometer inside.
- Home blended food will last longer when kept in the fridge in an airtight container or bottle.
- Do not keep prepared home blended food in the fridge for more than **2 days**.

The freezer

- Keep your freezer at -18°C (0°F) or lower. If your freezer does not show the temperature, you can buy a small thermometer to place inside.
- Thaw frozen foods slowly in the fridge. You can thaw frozen home blended food more quickly by putting it in a sink with cold water. Change the water every 30 minutes to keep it cold. You can also thaw frozen foods in the microwave on the defrost setting.

The pantry

- Keep dry and canned goods in a cool, dry pantry. To be food safe, clean tops of cans before opening. After opening packages or containers, follow the safe storage directions on the label.
- Store the leftovers from canned foods in an airtight plastic or glass container. Do not use the can the food came in.
- When you shop for canned goods, make sure there are no dents, leaks, or bulges.

For more information visit:

[Health Canada – General Food Safety Tips](#)



Step 4: PREPARING home blended food for tube feeding

Clean

- Wash your hands well with hot soapy water.
- Wash surfaces where food will be made with hot soapy water.
- Use clean pots, pans, measuring cups, and spoons.
- Wash fruits and vegetables well. Wash pre-washed foods well, too.
- Clean counters, appliances, and utensils between cooking steps with hot soapy water.
- Chop food into small pieces and place in the blender.

Prepare

- Try to cook or prepare home blended food as needed for each meal and snack.
- Save the water after cooking vegetables or meat to use as liquid when blending
- Chop food into small pieces and place in the blender.
- Ensure all foods are cooked to a safe internal temperature to prevent foodborne illness. Do not give raw or undercooked egg, fish, or meat to your child.

Refer to: [Health Canada – Safe Cooking Temperatures](#)

Blend

- Once the food has cooled slightly, place it in the blender and blend well.
 - Blending hot food may push the blender lid off, increasing potential for causing burns.
- The ideal food consistency (texture):
 - is easily pushed through a syringe or runs easily through the bag and tubing
 - is smooth with no lumps and seeds
 - may flow off the end of a spoon like liquid honey
- See [Tips for blending food for tube feeding](#) section below.



Image used with permission from Nestlé Healthcare Nutrition

Safe storage

- Home blended food should not stay at room temperature longer than 2 hours.
 - If meals are taking longer than 2 hours, consult your healthcare team.
- If you're not using it right away, label the blended food. Write the name, date, and time it was made, and store it in the fridge or freezer as soon as possible.
 - For example: John Smith, made Feb. 22, 2020 at 10:30h.
- Home blended food can be **refrigerated for up to 2 days**.
- Home blended food can be **frozen for up to 2 months**.
 - When you remove the blended food from the freezer, add the date and time of thawing to the label.
 - For example: Thawed Feb. 22, 2020 at 11:12h.



Using home blended food outside of your home

- Your child may need to have meals outside of their home. For example, lunch at school, or on a family road trip.
 - Pack foods that need to be kept cold or hot in a cooler or travel mug to keep the food at a safe temperature.
 - Cold foods can also be stored with an ice pack or a frozen juice box in a cooler.
 - Like at home, follow food safe guidelines. Any home blended food kept at room temperature for longer than 2 hours should be discarded.

Using home blended food

Home blended food is mostly offered by syringe as the blend may be thicker than formula. Before you begin to offer home blended food, make sure you have all supplies ready.

Alberta home nutrition support programs recommend providing home blended food by syringe or large bore gravity feeding sets as these work best for families. Pumps are not routinely provided because their design does not work well with home blended food.

You and your family may choose to purchase a pump and pump feeding sets through private funding. If so, read the pump owner's manual for more information and make sure you have the right supplies.



1. Preparation

- If the home blended meal is to be served warm, make sure it is not too hot. Test a drop of blended food on the inside of your wrist or the back of your hand.
- Thaw frozen blended food in the fridge or microwave. Do not thaw at room temperature. Stir well to ensure food is evenly heated and test a drop of blended food on the inside of your wrist or the back of your hand.

If using a syringe:

- Use a syringe to push blended food into your child's G-tube.
- Repeat until your child has had their full meal or snack, or until your child gives you signs they are finished. Take breaks between each syringe of food to monitor your child for signs of fullness.
- Once the home blended meal is complete, you must follow with a water flush to clear any food left in the tubing. Your dietitian may advise you on the type and amount of additional flushes for your child.
- Ensure tube fed blended meals are provided in less than 2 hours for food safety.



Syringe for tube feeding.
"Syringe" by
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If using a large bore gravity feeding set:

- Your home blended food should be thin and smooth enough to pass through the bag and tubing.
- Before connecting the feeding set to your child, fill the gravity feeding set with home blended food.
- Open the clamp to allow food to fill the tubing. This is referred to as 'priming' which helps to reduce air in the tubing. Close the clamp once the food has filled the tubing.
- Connect the feeding set to the G-tube feeding port then open the clamp.
- Once the home blended meal is complete, you must follow with a water flush to help remove any food left in the bag or tubing. Your dietitian may advise you on the type and amount of additional flushes for your child.
- Do not leave home blended food in a feeding bag for more than 2 hours unless it is kept cool in the fridge.



Large bore gravity feeding set

- Your child's feeding tube should be large enough to reduce the risk of clogging when using home blended food.
- If the tube gets clogged, refer to your *Home Tube Feeding Resource Booklet* from your healthcare or home nutrition support team for help.

2. Watch and listen:

- Watch how your child reacts to the blended meals.
- G-tube feeds should be stopped if your child:
 - complains or is upset
 - looks like they are full
 - has a stomach ache
 - spits up
 - feels nauseous or vomits
- Wait a few minutes before trying the blended food again.

3. Clogged feeding tube

- To lower the risk of a clogged tube:
 - Your blended food should be smooth. If there are chunks of food left after blending, then it must be re-blended or strained.
 - Make sure that the food is the right consistency. See the section below: [Tips for blending food for tube feeding.](#)

Tips for blending food for tube feeding

Food is fully blended when it is smooth and the color is the same all the way through

- High power blenders are suggested for home blended food.
- If you use a regular blender or food processor, you may need to blend the food longer and strain it to get it thin and smooth.

Home blended food should be thin and smooth

- If you can pull up the blended food in a 50 or 60 mL syringe without resistance, then the consistency is likely good.

If the blend is too thick:

- Warming the blended food may help to thin it.
- Add liquid.
 - If your child needs more calories add:
 - milk or fortified soy beverage
 - 100% pure unsweetened fruit juices; limit to ½ cup (125 mL) each day
 - oil or melted butter
 - oral rehydration solution such as Pedialyte™ or Enfalyte™
 - formula
 - If your child does not need more calories add:
 - cooking liquid from vegetables or meat
 - water
 - Talk with your dietitian about which liquids may work best for your child.



If the blend is too thin:

- Add foods that help thicken the blend, such as starchy vegetables and grains.
- Try adding cooked potatoes and yams, infant rice cereal, oatmeal, or cooked pasta to your blend to help thicken it.

Some foods may clog the tube

- Foods that are a risk of clogging the tube include:
 - Fruits with seeds, such as blackberries and raspberries
 - Nuts and seeds, such as sesame seeds and poppy seeds
 - Cooked ground meats
- Use a strainer after blending these foods to make the home blended food smooth.

Soak dried fruit, like prunes, cranberries, and dates, in juice or water

- Remove fruit pits before blending.
- Blend well or strain to remove large pieces.

Steam vegetables before blending them

- Some vegetables do not blend well even after cooking. These include stringy vegetables like kale, celery, and corn.

Soak and cook beans, peas, and lentils in water, then blend well

- For best results, drain the soaking and cooking water to reduce gas and bloating.
- Use a strainer to remove large pieces.
- If using canned beans, peas, and lentils, drain and rinse well before blending.

Use moist-heat methods to cook meat

- For best results, cook meats by braising, steaming, poaching, stewing, or boiling.
- Avoid tough meats, such as jerky, bacon, and casings of sausages. Tough meats do not blend well.
- Always follow [internal cooking temperature guides](#) for meat to ensure food safety.

Pre-grind nuts and grains

- Grind nuts and grains such as oats, quinoa, and almonds separately before adding them to be blended with the meal.
- Try using a food processor or coffee grinder to grind nuts and grains.

Additional information

Travel

You can still provide home blended food to your child when away from home. For some people it may not be easy to bring the needed supplies, food, containers, and blender with you.



Try using store-bought baby foods, canned pureed foods, or formula instead. You can buy these before you leave on vacation or after you arrive.

If this will not work well for your family, try using formula your child previously tolerated. Your child will already be familiar with this formula and how their body responds to it.

Emergency care plan

Emergencies can happen at any time. Children who are tube fed need pre-planning for emergencies.

Important information to include in your plan:

- Names and contact information for caregivers trained in tube feeding.
- Type of formula to use in case of emergency.
- A copy of your child's current tube feeding care plan: delivery method and feeding schedule, including the number and volume of feeds, timing, and rate.
- Where extra water and pureed or strained foods are kept in your home.

Check out an example to help guide you: [Emergency care plan: Template](#)

Home blended food in hospital

Home blended food is a good choice for your child's nutrition needs. Check with your healthcare team to see if it is safe to use blended food during your child's admission and discuss if safe storage options are available.



1. Preparation:

- If determined it is safe, families may bring in pre-made home blended food for use in hospital. Like at home, you need to make sure it is safe, nutritious, and is the proper consistency.

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- Take care to keep blended food at a safe temperature when bringing it to the hospital. The blended food must be stored following food safety precautions in the patient room or in the patient-use unit kitchen, based on site availability and processes.
- In hospital, all home blended food must be used within 24 hours of being made, or used within 24 hours once thawed from frozen.
- Clearly label the blended food with your child's full name, date, time it was made, and when the food will expire. If using frozen blended food, please add the date and time the food was removed from freezer to be thawed.

For example:

- Doe, John. Made Oct 1, 2020 at 10:30h. Expires Oct 2, 2020 at 10:30h.
- Doe, John. Made Oct 1, 2020 at 10:30h. Thawed Nov 10, 2020 at 11:02h. Expires Nov 11 2020 at 11:02h
- To prepare for hospital stays, keep copies of recipes ready to bring with your child. Your dietitian can use the recipes to assess the blended food given in hospital.
- You are encouraged to bring a list of any supplements or other health products you provide to your child. Some products may be safe and some may interact with your child's medicines. Talk to your healthcare team about these products.

2. Providing the home blended food to your child:

- Like at home, you provide the blended food to your child. Your healthcare team is not able to do this for you.
- You may find that you are unable to be present for all of your child's meals and snacks. You can choose a hospital formula as an alternative to home blended food if this is the case.
- Like at home, blended food still needs to be provided in under 2 hours for food safety.
- You can choose to syringe feed or use a large bore gravity feeding set to provide home blended food.

3. Hospital formula for tube feeding

If your child is admitted to hospital, there may be medical reasons why a hospital tube feed formula is preferred. Your child's healthcare team will work with you to make a plan to use hospital tube feed formula. They can also help to change back to the home blended food when your child is medically ready.

The healthcare team is committed to working with you to make sure that your child has safe and healthy food during their hospital stay.

If you have any questions, please ask your child's healthcare team.

Resources

Check out the resources below for more information or support:

[Alberta Health Services: Pediatric Eating and Swallowing](#)

[Alberta Health Services: Health Link 811](#)

- Phone 811. Ask to talk to a dietitian.
- Or visit the [webpage](#)

[Health Canada: Canada's Food Guide](#)

[Health Canada: Safe Cooking Temperatures](#)

Emergency care plan: Template

Caregivers trained in providing home blended food for tube feeding:

Name:

Phone number:

Formula to use in case of emergency:

Delivery method and feeding schedule, including number and volume of feeds, timing, and rate:

Location of bottled water and type of pureed or strained foods stored at home for emergency use:

Other information:
