

Thickened Drinks and Liquids: Pediatrics

Why are thickened drinks and liquids needed?

Some babies and children have difficulty swallowing. This is called *dysphagia*. They may need to have their drinks and liquids thickened, so they can swallow safely.

This handout is for children who need thickened drinks and liquids. These can also be called *thick fluids*.

Thickening liquids for your child makes swallowing safer because:

- Thickened liquids move slower than liquids that are thin, such as water.
- Thickened liquids allow your child extra time to control the liquid in their mouth and throat.
- This reduces the risk of liquids going the wrong way into the lungs, which is called *aspiration*. Aspiration is harmful to your child's health. It may lead to repeated lung infections and/or long-term lung damage.

The Eating, Feeding, and Swallowing (EFS) team will assess if your child can swallow safely. They will tell you:

- If your child needs thickened liquids
- The level of thickness needed for safe swallowing
- Type of commercial thickener to meet your child's needs
- How to prepare thickened liquids for your child.

Thickened drinks and liquids should only be started if your healthcare or EFS team recommends it.

What to thicken?

All thin liquids (Level 0) need to be thickened unless instructed differently by your team.

There are several levels of thickness for liquids: thin liquids, plus four levels of increasing thickness.

Thin Liquids: Level 0

- Liquid flows easily like water. Thin liquids can be taken through a nipple, straw, or cup.

Examples of thin liquids:

- water, breastmilk, formula, some types of milk
- fruit or vegetable juices, fruit drinks
- some oral nutrition supplements
- pop, slushy drinks, or sports drinks
- broth, some gravies, sauces, or soups
- some liquid medicines

Note: Foods that melt at body temperature can also be called liquids. Examples are:

- ice
- jellied desserts
- Popsicles®
- ice cream
- sherbet

These foods may not thicken well and require a recipe to prepare it to the level of thickness needed. Talk to your EFS team before offering these foods.

Types of thickened liquids

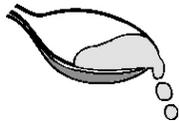
There are 4 levels of thickened drinks and liquids. Some drinks or foods may naturally be the right thickness for your infant or child to swallow safely.

Slightly Thick: Level 1

- Liquid is thicker than water but thin enough to flow through a straw or bottle nipple.
- Can be sipped from a cup.
- Breastmilk or infant formula may be thickened to Level 1 for infants.

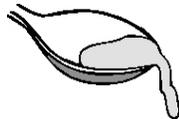
Mildly Thick: Level 2

- Liquid runs freely off the spoon but leaves a thin coating on the spoon.
- Liquid pours like most types of fruit nectar.
- Can be sipped from a cup but effort is needed to drink this through a standard flow bottle nipple or a straw.



Moderately Thick: Level 3

- Liquid slowly drips off the end of the spoon.
- Liquids pour slowly, like liquid honey.
- Can be eaten with a spoon or sipped from a cup.
- Cannot be eaten with a fork because it slowly drips through.
- Effort is needed to drink this through a straw.



Extremely Thick: Level 4

- Liquid sits on the spoon and does not flow off.
- Liquids are as thick as pudding and can be eaten with a spoon.
- Smooth with no lumps, not sticky; no chewing needed.



Always check and make sure that the food or drink is the right thickness level for your child to swallow safely.

Thickened drinks and liquids can be tested using the International Dysphagia Diet Standardisation Initiative (IDDSI) Flow Test. More information is available at <https://www.iddsi.org>

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Commercial thickeners

- Commercial thickeners are products that can be added to food and drinks to thicken them.
- You can buy or order commercial thickeners from a pharmacy or online. Examples of commercial thickeners:
 - Gelmix[®]
 - Purathick[®]
 - Resource[®] ThickenUp[®]
 - Resource[®] ThickenUp[®] Clear
 - Resource[®] ThickenUp[®] Junior
 - Simply Thick[®] EasyMix[™]
- Follow the recommendations provided by your EFS team before changing the type of thickener you use. **Thickeners are not interchangeable.**
- Each thickener specifies the age of the individual it can be used for. Some thickeners can be used for infants (42 weeks gestational age or corrected age for preterm infants). Other thickeners may only be suitable for children 1 to 2 years, or over 3 years of age.
- Only some thickeners can be used to thicken breastmilk for infant feeding. Discuss this with your EFS team.
- If feeding by bottle, your child may need a different bottle nipple to allow the thickened breastmilk or formula to get through. Do not cut the bottle nipple to make the hole larger. Your EFS team will help you decide the right flow rate and nipple to use for feeding.
- Commercial thickeners may cause gas, loose stools, or constipation in some children.

Let your healthcare team know if your child:

- refuses to drink thickened liquids
- becomes irritable
- coughs or chokes when drinking
- has any other side effects.

Tips for thickening liquids

- Always follow the directions on the commercial thickener container to get the best results.
- The following can affect the amount of commercial thickener needed to thicken your drinks and liquids:
 - volume of liquid
 - temperature (hot or cold)
 - acidity (juice or milk)
 - type of drink or liquid
- Some commercial thickeners take longer to thicken. **Always follow the directions on the commercial thickener container or package to thicken your liquids to the right level.**
- Stir your liquid and thickener well to avoid lumps and to make sure it is the right consistency.
- When making large amounts of thickened liquids, you can use a blender or food processor to blend the liquid and thickener together. Check the consistency before using.
- Some thickened liquids may be made and stored in the fridge for up to 24 hours. This depends on the thickener used. Stir well and check if the thickened liquid is still the right consistency before using.
- Check the directions on the thickener container or package before freezing thickened liquids. If you freeze thickened liquids, you may need to thicken the liquid again to the right consistency after it has thawed. This will depend on the commercial thickener used.

Medications

- If your child takes any liquid medicines, talk to your pharmacist, physician, or EFS team about how to give them safely.
- Check with your healthcare team if your child is on laxatives like Restoralax[®], or Lax-A-Day[®] (PEG 3350) as these can interact with some thickeners.

Mixed consistency foods

Do not eat foods that have a mixed consistency. A food with mixed consistency has both thin liquids and solid foods together in one bite.

Examples of foods with a mixed consistency:

- canned fruit in liquid
- cold cereal with milk
- crackers in soup
- juicy fresh fruits and vegetables such as grapes, oranges, tomatoes, and watermelon (when chewed, these release water, which is a thin liquid)
- fruit in jellied desserts
- ice cream and other frozen desserts with candy, dried fruit, nuts, or other hard pieces
- soups with pieces of solid food such as grains, meat, pasta, or vegetables
- baked, diced, mashed, stewed, whole tomatoes, or whole cherry tomatoes
- more than 1 ounce (30 mL) of gravy or sauce pooling around the food

Tips to avoid mixed consistencies:

- Eat smooth, hot cereal instead of cold cereal with milk.
- Blend or strain soups until smooth. Some soups may need to be thickened to the right consistency. Follow the suggestions from your EFS team.
- Do not add crackers or bread to your soup.
- Gravy or sauces may need to be thickened.

Where to find more information:

- www.peas.ahs.ca
- www.iddsi.org

For 24/7 nurse advice and general health information, call Health Link at 811.

If you have questions, talk with your doctor or appropriate healthcare provider.