

# Are you thinking of using Infant Formula?



How you feed your baby is an important decision. Peterborough Public Health supports all women and their families by providing information based on facts, and an opportunity to discuss any questions or concerns you may have through our Family HEALTHline by calling 705-743-1000. This will help you make an “informed decision” that is right for you.

## Know the Facts

Research continues to show that there are health differences between feeding infant formula and breastmilk. We know now, more than ever, how important breastfeeding is to you and your baby’s health. Babies who are not breastfed have a higher risk of:

- Gastrointestinal infections that cause diarrhea
- Ear infections
- Respiratory tract infections like colds and pneumonia
- Sudden infant death syndrome (SIDS)

Research also suggests that breastfeeding protects against obesity and diabetes later in life.

Mothers who do not breastfeed have a higher risk of:

- Breast and ovarian cancer
- Chronic diseases such as cardiovascular disease and type 2 diabetes

Buying infant formula and bottles can also be expensive.

Formula companies often give mothers samples of formula “just in case” they might need it. This free formula may come at a time when you are feeling tired, still getting to know your baby and not yet confident about breastfeeding.

The decision not to breastfeed can be difficult to reverse or change. It is important to continue to remove breastmilk by direct breastfeeding or expressing by hand or pump if you wish to offer your child breastmilk now or in the future.

## Combining Breastfeeding and Infant Formula

If you have been advised to offer infant formula, consider combination feeding:

- Breastfeeding directly AND feeding infant formula as a supplement
- Feeding expressed breastmilk combined with infant formula

Once you make an informed decision to use formula, it is important that you know how to safely prepare and store infant formula.

### Help is available.

If you have any questions or concerns about feeding your baby or growing child you can speak to a Public Health Nurse on the **Family HEALTHline** at **705-743-1000**.

# Infant Formula

## For full-term, healthy babies up to 12 months of age

### Infant Formula Options

Any cow's milk-based infant formula, including generic brands, will meet your baby's nutrient needs. If you choose a low-iron infant formula, talk to your baby's health care provider to make sure your baby is not at risk for iron deficiency.

Ready-to-feed or liquid concentrate infant formulas are sterile and have less risk for bacterial contamination compared to powdered infant formulas, but they cost more.

Talk to your baby's health care provider before offering soy, lactose-free, hypoallergenic or thickened infant formulas.

Infant formulas marketed as organic, follow-up or second stage, made with prebiotics, probiotics or DHA fats, or made with "partially broken down" proteins are not necessary.

The following are not substitutes for infant formula and can be unsafe:

- Cow's or goat's milk (raw or pasteurized)
- Soy, rice or almond beverages
- Homemade evaporated milk formula
- Enfagrow<sup>®</sup>, Baboo<sup>®</sup> milk and PediaSure<sup>®</sup>

Since formula is a manufactured food, there is the possibility of safety issues. Health Canada's [Healthy Canadians](http://healthycanadians.gc.ca/recall-alert-rappel-avis/index-eng.php) (<http://healthycanadians.gc.ca/recall-alert-rappel-avis/index-eng.php>) is a website that provides safety and recall alerts (use search term 'infant formula'). Consider [signing up](#) for their health and safety updates.

### Safe Feeding Equipment

Use glass or BPA-free bottles and nipples that have no cracks, discolouration or loose material that could break off. If you notice signs of wear, throw them out.

To make feeding equipment (e.g., bottles, nipples and tongs) safe, boil them for at least two minutes at a rolling boil.

Follow the manufacturer's instructions when using a commercial sanitizer. See *How to clean and boil feeding equipment* steps on page 5.

### DID YOU KNOW...

#### *Sterilization and infant formulas*

For safety, children at high risk of health complications should be fed commercially produced liquid infant formula and not powdered formula. At-risk children include those born prematurely, at a low birth weight, or with a vulnerable immune system. If you absolutely have to feed your at-risk child powdered formula, bring your water to a rolling boil for two minutes, then pour it out into containers no larger than one litre and cool it to no less than 70°C before adding the powder. This means once you boil the water, do not let it sit for more than 30 minutes before mixing in the powder.

For more information on providing formula to your at-risk infant speak to your baby's health care provider or call the **FamilyHEALTHline** at **705-743-1000** to speak to a Public Health Nurse.

## Water Options for Infant Formula Preparation

Safe water options include:

- Municipally fluoridated tap water - use cold tap water
- Bottled water that states level of fluoride and nitrate on the label
- Well water that has been tested for bacteria and chemicals (fluoride and nitrates)

Well water might have a higher level of natural fluoride. Health Canada recommends testing (offered by private labs for a fee) before mixing with infant formula. Talk to your health care provider about fluoride and nitrate levels if preparing infant formula with bottled or well water.

Carbonated, distilled, mineral or softened water are not recommended.

## Boil the Water

The safest way to prepare powdered formula is to use water that has been boiled and then cooled to no less than 70°C:

- Bring water used to prepare infant formula to a rolling boil for two full minutes. Be aware electric kettles may not keep the water at a rolling boil for a full two minutes. Once boiled, the water can be stored in a tightly closed container (that has been cleaned and boiled for at least two minutes) for:
  - 24 hours at room temperature
  - 48-72 hours in the refrigerator
- If you do not have access to boiling water:
  - You may wish to use ready-to-feed formula.
  - You can prepare bottles using previously boiled water that has been cooled to room temperature if baby will drink the formula **right away**.
- When preparing bottles for later use:
  - Use boiled water that is no less than 70° Celsius to lower the risk of bacterial contamination. This means once you boil the water, do not let it sit for more than 30 minutes before mixing in the powder.

## Preparing and Storing Infant Formula

Read and follow the instructions when preparing infant formula. Too much or too little infant formula can make babies sick.

For powdered infant formula, use the scoop that comes with the formula container. When you measure a scoop, the powdered formula should be flat across the top.

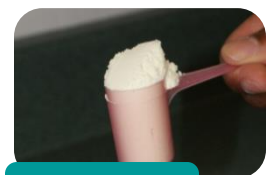
If you choose to warm the formula, warm it for no longer than 15 minutes to room or body temperature by placing the bottle:

- Under warm running water
- In a bowl of warm water
- In an electric bottle warmer on a low setting

Avoid using a microwave to warm bottles as it can cause “hot spots” and burn your baby’s mouth.



Correct



Incorrect

## Storing Infant Formula Containers

To lower the risk of bacterial growth and to retain the nutrients, follow these tips:

- Check the 'best before' date
- Store unopened containers in a cool dry place
- Avoid direct sunlight or freezing

Once opened, liquid concentrate or ready-to-feed may be refrigerated for up to 48 hours. See manufacturer's instructions on how to store opened containers of powdered infant formula.

## Follow Your Baby's Cues

Feeding time is a special time to get to know your baby. For safe, secure and comfortable bottle feeding, sit your baby almost fully upright in your arms. Do not prop the bottle during feeds; hold it parallel to the ground so that the nipple is  $\frac{1}{2}$  to  $\frac{3}{4}$  full of milk. Near the end of the feeding when there is less formula left, tip the bottle up.



**Trust that your baby knows how much to drink** and follow their feeding cues. When your baby starts to show signs of fullness, stop feeding. Avoid pressuring your baby to finish the bottle.

### Signs that your baby may be hungry:

- Restlessness
- Rooting (opening mouth, searching to suck and sucking on contact)
- Sucking on a hand

### Signs your baby may be full:

- Sucking actions slow down
- Losing interest or letting go of the nipple
- Rooting will stop
- Turning head away

Your baby will drink more at some feeds and less at other feeds. They will go through growth spurts and drink more. This is not a sign to introduce solid foods. See [Feeding Your Baby Six Months to One Year](#) for information on when to introduce solid foods. When you follow your baby's hunger and fullness signs, you will feed them the amount that they need.

If you are unsure whether your baby is drinking enough, talk to your baby's health care provider. Making sure they are growing well is one way to know your baby is getting the amount that is right for them.

**Vitamin D** – All babies need Vitamin D. This nutrient is already added to infant formula. Babies drinking only infant formula do not need a Vitamin D supplement. Babies who are receiving both infant formula and breastmilk should receive a vitamin D supplement of 10µg (400 IU) per day. This will help prevent vitamin D deficiency, which can lead to a bone disease called "rickets". When your baby starts getting enough vitamin D from other foods, generally around one year of age, you can stop giving the supplement.

**Tooth decay** – If your baby falls asleep while bottle feeding, they have a higher chance of developing tooth decay, even if your baby has no teeth yet. Tooth decay can cause trouble with eating, sleeping and may even affect their adult teeth.

To lower the chance of tooth decay, wipe your baby's gums or teeth with a damp, soft, clean cloth or infant tooth brush after each feeding or at least twice a day, even if your baby falls asleep.



## How to Clean and Boil Feeding Equipment

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- 1) Clean and disinfect the counter. Wash your hands with soap and hot water. Dry hands thoroughly with a clean towel.



- 2) Wash all equipment (bottles, caps, nipples) with warm soapy water. Clean hard-to-reach areas with a bottle brush. Rinse the equipment well.



- 3) Place equipment into a pot and fill with water. Make sure equipment is fully covered with water.



- 4) Bring water to a boil and let the water boil for at least two minutes.



- 5) Keep equipment in covered pot or place them on a clean cloth or towel on the counter to dry.



## How to Prepare Liquid Concentrate or Ready-to-Feed Infant Formula

When preparing infant formula, follow the preparation instructions carefully. Refer to the previous pages in this factsheet for safe water options, as well as how to clean and boil the feeding equipment.

**When feeding your baby, always follow their feeding cues.** This means to feed them when they are hungry and stop when they are showing you they are no longer hungry.

1. Clean and disinfect the counter. Wash your hands with soap and hot water. Dry hands thoroughly with a clean towel. *For ready-to-feed, go to step 4.*



5. If you don't feed your baby right away, you can store the bottle in the refrigerator for up to 24 hours.



2. Bring water to a rolling boil for two full minutes. Cool to room or body temperature.



6. If you warm the infant formula, check the temperature by dripping a small amount onto the inside of your wrist. It should feel lukewarm or room temperature.



3. For liquid concentrate only, add the correct amount of water in the bottle. Do not add water when preparing ready-to-feed.



7. Feed your baby based on their feeding cues.



4. Pour the desired amount of infant formula in the bottle.



8. Throw away any unused infant formula within two hours.



## How to Prepare Powdered Infant Formula

When preparing infant formula, follow the preparation instructions carefully. Refer to the previous pages in this factsheet for safe water options as well as how to clean and boil the feeding equipment.

- 1) Clean and disinfect the counter. Wash your hands with soap and hot water. Dry hands thoroughly with a clean towel.



- 6) Mix well by shaking or swirling the bottle, or stirring with a sanitized spoon until no lumps are present.



- 2) Bring water to a rolling boil for two full minutes.



- 7) If prepared with water that is no less than 70°C, you can store the bottle(s) in the refrigerator for up to 24 hours.



- 3) If you are preparing bottles for later use (up to 24 hours later), cool water to no less than 70°C (about 30 minutes). You can use a food grade thermometer. If you are preparing a bottle to feed baby right away, you can let the water cool to room temperature.



- 8) If you warm the infant formula, check the temperature by dripping a small amount onto the inside of your wrist. It should feel lukewarm or room temperature.



- 4) Pour the correct amount of boiled water into the bottle first.



- 9) Feed your baby based on their feeding cues.



- 5) Immediately add the correct amount of infant formula powder to the water. If needed, use a knife (cleaned and boiled for at least two minutes) to make a level scoop.



- 10) Throw away any unused formula within two hours.



## Approximate Number of Feeds per day and Amount of Infant Formula to Prepare

This is a guideline only. Always follow you baby's feeding cues.

Age of baby	Approximate number of feeds per day	Approximate amount of infant formula to prepare per day (in ounces)	Approximate amount of infant formula to prepare per day (in mL)
Birth-24 hours	8	1.5-2	40-60
24-48 hours	8	2.5-4	80-120
48-72 hours	8	4-8	120-240
72-96 hours	8	8-16	240-480
4-7 days	8	10-20	300-600
1-4 weeks	8	15-25	450-750
1 month	8	25-35	750-1050
2 months	8	25-35	750-1050
3-5 months	8	25-35	750-1050
6-8 months	4-5	16-37	480-1110
9-11 months*	3-4	16-33	480-990
12 months*	3	16-21	480-630

*\* Part of this amount can be homo (3.25% milk fat) milk if your baby is eating foods from all four food groups daily*

For more information about this factsheet, call the Peterborough Public Health, at **705-743-1000**

### Questions on healthy eating?

Speak to a Registered Dietitian at EatRight Ontario 1-877-510-5102 or [www.eatrightontario.ca](http://www.eatrightontario.ca)

Adapted with permission from Practice Evidence-based Nutrition (2012) and *If Baby Needs More Milk* York Region Community and Health Services Department (2013)