



Feeding your baby.....	366
Milk.....	382
Breastfeeding your baby.....	414
Bottle-feeding your baby.....	496
Water.....	510
Foods.....	518
Food-related problems.....	570

Feeding your baby

An act of love.....	367
Hunger signs.....	367
Feeding schedule.....	368
Is your baby drinking enough milk?.....	370
Growth spurts.....	372
Hiccups.....	372
Burping.....	372
Gas.....	374
Regurgitation.....	374
Excessive crying (colic).....	375
Allergies and intolerances.....	377
Social pressure.....	377
Baby's changing needs.....	378
Feeding a premature baby.....	378
Vitamin D: Not your ordinary vitamin!.....	380



Jean-Claude Mercier

Human milk is unique and perfectly adapted to children's needs. It is the only milk that meets all of their nutritional and immunity requirements. Breastfeeding is more than a matter of ensuring baby is well nourished. It offers mother and child a moment of intimacy that provides baby with a feeling of warmth and security.

An act of love

If delivery goes well, the baby is put on mom's tummy right after birth. This "skin-to-skin" contact is a source of comfort and reassurance that helps your newborn adapt to life in the outside world. It also gives mom an opportunity to get to know her baby. This is an intense and moving moment for the whole new family.

These intimate moments give parents a chance to observe their newborn child. In the hour after birth, most babies will put their hands to their mouth, stick out their tongue and try to suck. Your baby might want to suck without necessarily needing to drink much milk.

Feeding your baby is a time of intimacy and sharing. Frequent contact is important and will play an important role in the lives of you and your baby.

Snuggled in your arms, your baby feels the milk filling her stomach. She loves the sound of your voice and the warmth of your body! Feeding your little one can be so much more than a simple task that needs to be done. Make the most of such moments to interact with your baby.

Hunger signs

Your baby will show you he is hungry in any number of ways. His breathing will change, his eyes will move beneath his eyelids, he will move his arms and legs, stretch, bring his hands to his mouth or face and make sucking motions. These are all signs that your baby is hungry. You will recognize them more easily if you keep your baby close to you.

There's no point waiting for your baby to cry or get angry before starting to feed him. Changing a diaper to wake a sleeping baby is sometimes a good idea, but is best avoided if your little one is very hungry. Do whatever works best for you.

Feeding schedule

Over the first few days, most babies can't distinguish between hunger and their need to suck. They want to be fed every time they wake up. Some babies, especially those with jaundice, may remain drowsy until they regain their birth weight and sometimes may forget to wake up to feed. They need to be stimulated, even during the night, to make sure they drink enough.

Keep in mind that newborn babies are in a period of intense learning. They must "learn" to feed, which is why they may need to feed longer and more often.

As the weeks and months pass, feeding frequency and duration, like sleeping patterns, may vary from one time or one day to the next. No two babies are the same. Some babies have a regular schedule, while others are more unpredictable. As your baby gets older, feedings tend to become shorter and less frequent.

Your baby's schedule depends on a variety of factors:

- Age
- Appetite
- Temperament and mood
- How effective she is at sucking and the speed at which the milk flows
- The time of day

Breast milk is easy to digest since it is perfectly adapted to babies. Breastfed babies usually feed 8 times or more per day, especially during the first few months.

Most commercial infant formulas are made from cow's milk. They take longer to digest because the baby's stomach has to work harder. This is probably why babies fed on commercial infant formula tend to feed 6 or more times a day.

It's hard to tell how many times your baby will feed per day; and it's just as hard to know how much milk she will need each feeding.

Instead, you will have to learn to recognize signs that your baby is hungry or full. Let her drink when she shows signs of hunger, but don't force her when she's full in the hope that she will wait longer between feeds.

In the beginning, you may have difficulty understanding your baby's needs. Is she hungry? Has she drunk enough? Is she crying because she's uncomfortable and wants you to pick her up? If you get the impression that your baby is drinking too much or too little, your midwife or CLSC nurse may be able to help.



Étienne St. Michel



Whether you breastfeed or bottle-feed, it's important to adapt to your baby's appetite.

Is your baby drinking enough milk?

Before you go back home, make sure you can tell if your baby is feeding well and getting all the milk he needs. Talk to your midwife or a nurse at the hospital if in doubt.

When your baby is feeding enough, the appearance and quantity of his stools and urine will change. Here are a few signs to help you determine if your newborn is getting enough milk.

Urine

Urine is darker and more concentrated over the first 2 or 3 days. Your baby may also have orange stains (urate crystals) in her diaper: this is normal for the first 2 days. In the first week, the number of times your baby pees will increase by one every day:

- Day 1 = 1 time
- Day 2 = 2 times
- Day 3 = 3 times, etc.

After the first week, your baby will urinate at least 6 times in 24 hours if she is drinking enough milk. Each miction (urination or pee) generally contains 30 ml to 45 ml of urine. The urine is clear and odourless.

Stools

Over the first 2 or 3 days of your baby's life, stools will be dark and sticky; this is called meconium. Digesting milk will bring about a change in stool appearance. Gradually, they will become less sticky and a dark green colour. If your baby is drinking enough, there will be no meconium at all left in his digestive system after the fifth day. Stools will be yellow or green if he is drinking breast milk, or greenish beige if he is being fed commercial infant formulas.

If your baby is drinking enough, his stools will be liquid or very soft. He may have 3 to 10 bowel movements per day over the course of the first 4 to 6 weeks. If your baby doesn't have at least one bowel movement per day, he might not be drinking enough. After 4 to 6 weeks, some babies fed with breast milk will have fewer but very substantial bowel movements even if they are drinking enough (e.g., one bowel movement every 3 to 7 days).

Weight gain

Even if your newborn is drinking enough, he will nonetheless lose a little weight (5 to 10%) over the first few days. He will start putting it back on again around the fourth day and will regain his birth weight by around the second week (10 to 14 days).

Once your baby has regained his birth weight, he can gain between 0.6 to 1.4 kg per month until the age of 3 months. Regular weight gain is a good sign that your baby is drinking enough. There's no point weighing your baby every day to see if he is drinking enough.

If you are worried that your baby is not drinking enough, contact a CLSC nurse, your midwife or your family doctor.

For more information on urine, stools and the size of your infant, read [The newborn](#), page 272.



The number of times your baby pees and poops every day is a good way to tell if she is drinking enough.

Signs that your baby is drinking enough

- He wakes up on his own when hungry.
- He feeds well and often (8 times or more per day for breastfed babies and 6 times or more per day for formula-fed babies).
- He seems full after drinking.
- He pees and poops in sufficient quantities.
- He is putting on weight.

Signs that your baby is not drinking enough

- He is very drowsy and very difficult to wake for feeding.
- His urine is dark yellow (like an adult's) or there is very little of it.
- There are orange stains in his urine after the first two days.
- His stools still contain meconium after the fifth day.
- He has fewer than one bowel movements per 24 hours between the age of 5 days and 4 weeks.

Growth spurts

During your baby's first months, she will experience rapid growth spurts. Her appetite will suddenly increase and she will want to be fed more often, sometimes every hour. Such growth spurts generally last a few days and may occur at any time during the first few months. Some babies will have more growth spurts than others. Growth spurts occur most frequently around:

- 7 to 10 days
- 3 to 6 weeks
- 3 to 4 months



During growth spurts, your baby will need to drink more and very often in order to meet her needs.

Hiccups

It's normal for your baby to get the hiccups, especially after drinking. Hiccups don't seem to bother babies. They will stop by themselves after a few minutes.

Burping

All babies swallow varying amounts of air as they drink. If your baby is calm during and after feeding, he probably doesn't need to burp.

But if your baby seems to be in a bad mood or squirms while drinking, the first thing to try to calm him down is to burp him. One or two burps are usually enough, but more may be required for babies that drink quickly or from a bottle.

How to burp your baby

Here's how to burp your baby:

- Hold your baby in an upright position against your shoulder or sit him down on your lap.
- Gently rub or tap his back for a few minutes.

After he burps, check to see if he's still hungry.

Don't insist if your baby won't burp: some babies don't. Let him be if he's asleep. He'll wake up if he needs to burp.



Geneviève Colpron



To burp your baby, gently rub or tap his back for a few minutes.

Gas

Gas is perfectly normal and isn't caused by milk!

Newborns' intestines start digesting milk right away after the first feedings. This new sensation may make babies uncomfortable for the first few days. They may squirm or cry and often have lots of gas. They may need to be calmed and comforted in their parents' warm arms.

Even as they get older, most infants will continue to have a lot of gas. Some babies burp less and expel air this way instead. If gas is making your baby uncomfortable, try to soothe her in your arms, shifting her position or moving her legs.

Regurgitation

Most babies regurgitate or "spit up," some more than others. They may regurgitate right after feeding or a little later. Sometimes, you may have the impression your baby has regurgitated almost everything he drank, but even though it may seem a lot, most regurgitations only contain a small amount of milk.

Regurgitation happens because the valve that prevents milk flowing back toward the mouth has not fully developed. Regurgitation tends to diminish at around 6 months, and stop completely around one year. Although it is a nuisance to parents, it is normal for babies.

As long as your baby is in good spirits and gaining weight, there's no reason to be concerned. Most of the time, regurgitation is perfectly harmless.

It is best to see a doctor if your baby

- Seems to be in pain
- Projectile vomits several times a day
- Wets his diapers less than before
- Isn't gaining enough weight

Excessive crying (colic)

During the first few months, a healthy baby may cry very hard and for a long time (see [Excessive crying \(colic\)](#), page 283). Most of the time, excessive crying is completely normal and is unrelated to diet.

If your baby drinks too fast, chokes and starts to cry, she may swallow lots of air. This can make her feel bloated and uncomfortable. Burp your child or take feeding breaks to soothe her.

Allergies and intolerances

Babies cannot be allergic to their mother's milk. In rare situations, they may react to certain proteins ingested by their mothers and passed on to them in her milk (see [Breastfed babies and allergies](#), on page 574).

In rare cases, babies fed with commercial infant formulas may be intolerant to them and require a special formula. A doctor can recommend a formula adapted to your baby's needs.

Social pressure

In Québec, the way babies are fed has changed a great deal over the past two generations. People around you will have made similar or very different choices to your own. They will regularly give you tips, information and advice. Some will be in favour of breastfeeding, others not. Some will say you should introduce other foods very early; others will tell you to wait.

As a mother or father, you may end up feeling pressure to do things a certain way. Just remember that there is no single recipe for how to feed and take care of your baby. As the days go by, you will find what works best for your baby and you.

Baby's changing needs

The first few weeks are a learning experience for the whole family. Feeding your baby will become an important part of your day. And it's not always easy to know if your baby is hungry or getting enough milk.

Over time, you'll fall into a routine as your baby learns to show her needs more clearly. She will become more skilled and efficient at sucking. She will spend less time feeding and sometimes drink less frequently. Feeding your baby will be easier.

After 3 months, your baby will start interacting a lot with others. She will be alert and interested in everything happening around her—even when she's drinking! Feeding will become a time of sharing between you and your baby.

Feeding a premature baby

A premature baby may not be able to feed by himself for the first few weeks. It all depends on how early he was born and how healthy and heavy he is.

At the start, he may need to be fed a special formula intravenously. Then he will be able to be fed milk directly into his stomach through a tube. After that he will gradually start drinking from his mother's breast or a bottle.

Premature babies' digestive systems are immature (not yet developed). Premature babies are also more susceptible to certain infections.

Breast milk is easily digested and contains **antibodies** that help prevent infections. The medical team will encourage you to **express** your milk to give to your baby. Breast milk meets all the special needs of your premature baby. By expressing your milk, you are helping care for your baby. If you weren't planning to breastfeed your child, it's never too late to change your mind.

If your baby is born very prematurely, minerals or calories may be added to the milk you express for a time.

If your child is not breastfed, special milk for premature babies will be used.

Vitamin D: Not your ordinary vitamin!

Vitamin D plays an essential role in calcium absorption and bone health.

It's true that exposure to the sun's rays provides vitamin D. However, direct sunshine isn't recommended for babies. Because of this, you have to find another way to fulfill their vitamin D needs.

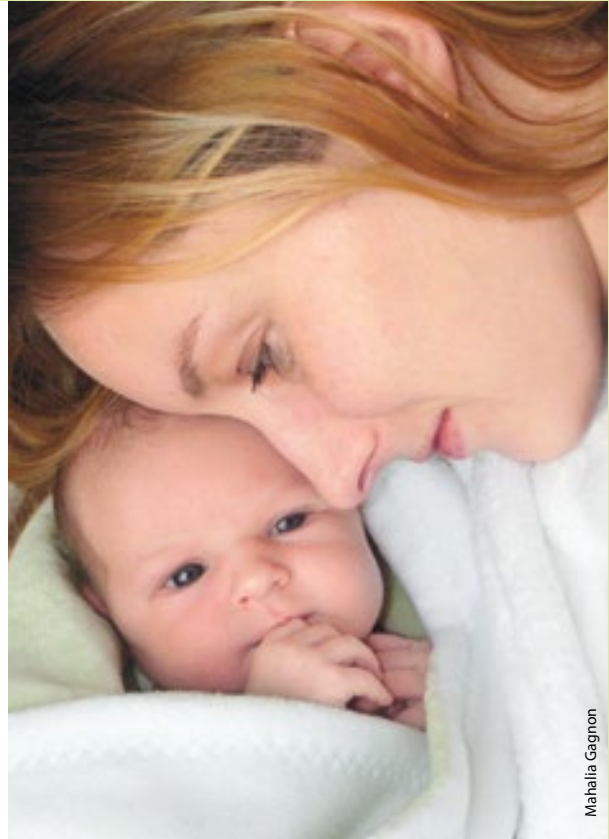
Your healthcare professional will help you determine whether your baby needs a vitamin D supplement. If so, you can find the necessary supplements at your drug store.

Your drug insurance plan should cover vitamin D supplements if you have a prescription from your doctor.



Milk

Which milk is best?.....	383
Mother's milk.....	385
Producing breast milk.....	386
The composition of human milk.....	387
Handling expressed milk.....	394
Commercial infant formula (commercial milk).....	398
Handling commercial infant formula.....	402
Other types of milk.....	409



Mahalia Gagnon

In the first year of life, milk plays a crucial role in your baby's diet. In fact, it's the only food you will give your baby in the first months. In this chapter, you'll find everything you need to know about which milk to give your newborn or older baby.

Which milk is best?

Health professionals the world over recommend that babies be fed breast milk exclusively for the first six months of life. The Canadian Paediatric Society, Dieticians of Canada, and Health Canada all echo this recommendation. Once babies have started eating solid foods, it is recommended that they continue breastfeeding until the age of two years or more.

Today, close to 85% of Québec mothers breastfeed their babies at birth, and close to 50% continue for six months or more. You can decide to breastfeed for a few days, a few months, or over a year. It's up to you.

Some women find that breastfeeding doesn't work for them, despite the benefits. Others find that breastfeeding is not what they'd expected or hoped and decide to give their babies commercial infant formula.

It is recommended that babies who are not fed breast milk be given cow's milk that has been processed and adapted into commercial infant formula.

The baby formula industry processes cow's milk to make its nutritional content closer to that of mother's milk. But commercial infant formulas still can't match mother's milk. They don't contain the same proteins, they don't supply **antibodies**, and they don't provide immune factors, growth hormones or white blood cells (see **The composition of human milk**, page 387). Babies who aren't fed with breast milk have a higher risk of ear infections, gastroenteritis, bronchiolitis, pneumonia and other problems.

For babies who are not fed breast milk, the Canadian Paediatric Society, Dietitians of Canada and Health Canada all recommend using an infant formula enriched with iron up to the age of 9 to 12 months. Cow's milk is completely inappropriate for babies under 9 months.

However you feed your baby, your baby needs you, your attention and your love. You can fulfill his need for warmth, security and affection by holding him in your arms when you feed him and maximizing skin-to-skin contact, particularly in his first few weeks. You can also massage him, take a bath with him and use a baby carrier to help you "stay in touch."

Mother's milk

The thick, yellowish milk that comes in the first few days after birth is called colostrum. Colostrum is very rich in proteins, vitamins and minerals—just what your newborn needs. It supplies large amounts of white blood cells and **antibodies** that protect your baby from infections. It also cleans her intestines of the residues that build up before birth.

Between the second and fifth day after giving birth, milk production increases rapidly. The milk becomes clearer and takes on a blueish – or yellowish-white colour. This is when your milk “comes in.” It is caused by hormonal changes and will happen even if you don't breastfeed your baby or **express** your milk. If breasts are stimulated often during this period, including at night, milk seems to come in more quickly. Frequent stimulation also helps reduce discomfort if breasts are engorged.

Your milk changes over time to adapt to your baby's needs as she grows. Milk also changes over the course of a feeding and according to the time of day.



A supplement of Vitamin D is recommended for breastfed babies until they are getting enough of it from their food (see **Vitamin D: Not your ordinary vitamin!**, page 380).

Producing breast milk

Pregnancy hormones prepare the breasts for breastfeeding. Milk production begins at the end of pregnancy, which is why some women experience some leaking during this time. Whether your baby is born on his due date or earlier, there will be milk for him.

When milk is removed from the breast, it stimulates the breast to produce more. This stimulation can come from the sucking action of your nursing baby or from expressing milk by hand or with a breast pump. Your breasts will produce milk as long as your baby nurses or the milk is expressed.

The breast produces milk continuously all day long. It accumulates in breasts waiting for your baby to nurse or for the milk to be expressed. The speed at which milk is produced depends on how much milk has accumulated in the breast. Breasts have a natural mechanism that adjusts to the baby's needs and prevents the mother from being uncomfortable. It works like this:

- The more the breast is emptied, the more quickly it will produce milk.
- The longer the breast is left full, the more slowly it will produce milk.
- The more often the breasts are emptied, the more milk they will make.
- The less often the breasts are emptied, the less milk they will make.

If the breasts are stimulated more often, milk production self-adjusts in a few days.



The more often the breasts are emptied, the more milk they will produce.

If you gradually stop removing milk from your breasts, they will progressively stop producing it. This will prevent your breasts from becoming engorged and sore. If you stop all at once, your breasts will become engorged and stop making milk after a few days.

Each breast produces milk independently. If only one breast is stimulated, the other breast will stop making milk within a few weeks.

The composition of human milk

Breast milk composition changes throughout the breastfeeding period to adapt to your baby's needs and age.

Breast milk is made up of proteins, sugars, and all the fats your baby needs, including omega 3 fatty acids that support brain and eye development. It provides each baby with the exact amount of vitamins and minerals they need to develop, with the exception of vitamin D (see [Vitamin D: Not your ordinary vitamin!](#), page 380). What's more, it contains enzymes that facilitate digestion.

Breast milk has **antibodies** that help your baby fight infections and develop his **immune system**. It is also rich in good bacteria that are thought to provide him with lifelong protection.

To date, over 200 components have been identified in human milk. Certain factors influence the composition and taste of breast milk.

What influences the composition of milk

The mother's diet

Drinking a lot of fluids doesn't increase the amount of milk you produce. While you're breastfeeding, you'll naturally be thirstier than usual. Listen to your body—you don't need to force yourself to drink a lot. However, if you notice your urine is dark or cloudy, it means you're not drinking enough.

There aren't any foods that increase milk production. Eat regularly and eat enough. You can also have snacks if you're hungry.

Some foods can have a slight effect on the taste of the milk you produce, but your baby will adapt. Some studies suggest that it can help babies develop their taste for food if mothers eat a varied diet while breastfeeding.

Most breastfeeding mothers can eat whatever they like, including foods deemed risky during your pregnancy (i.e., sushi, deli meats, cheese).

If you think your baby is having a reaction to something you're eating, read [Breastfed babies and allergies](#), page 574.



If you are a vegan (i.e., you don't eat any animal products, that is, meat, fish, eggs or milk products) and you are breastfeeding, you should take a Vitamin B₁₂ supplement.

Eat foods rich in protein, iron, calcium and Vitamin D. It might be a good idea to consult a nutritionist.

Fish

Fish belongs on your menu. However, some fish species absorb pollutants that make their way into breast milk and could harm a baby. To take advantage of the benefits of eating fish while minimizing the risk from contaminants such as mercury, read [Fish and seafood](#), page 88.

Coffee, tea, chocolate, herbal tea and other drinks

Caffeine passes into breast milk. If you consume a lot of it, it can make your baby nervous and irritable until the caffeine is eliminated from his system. Caffeine is found in coffee, tea, energy drinks, chocolate, and some soft drinks.

Energy drinks are not recommended while breastfeeding because they contain other substances that might harm your baby.

Other products (coffee, tea, etc.), may be consumed in moderation, up to two cups or so per day.

Decaffeinated drinks such as cereal-based beverages and herbal tea can be good substitutes for caffeinated beverages.

Alcohol

Any alcohol you do drink goes into your breast milk and into your bloodstream. Depending on your weight, it takes your body two to three hours to eliminate the alcohol from one drink from your blood and milk. Once the alcohol is gone from your bloodstream, there is none in the breast milk for the next feeding.

Even though a breastfeeding baby only receives a tiny share of the alcohol his mother drinks, he eliminates it more slowly than an adult and his system is more sensitive to its effects.

Avoid drinking large quantities of alcohol while breastfeeding. Alcohol can interfere with milk production and reduce the amount of milk your baby drinks. It may also have harmful effects on his motor development and sleeping habits.

Breastfeeding mothers can enjoy the occasional alcoholic beverage. The benefits of breastfeeding outweigh the risks of occasional light alcohol consumption (around two drinks a week or less). This level of consumption has not been shown to harm a nursing baby.

If you do have a drink, you can reduce your baby's exposure to alcohol in one of these ways:

- Breastfeed your baby right before having a drink.
- Or wait 2 to 3 hours per serving of alcohol before nursing again. After waiting, simply nurse normally at the next feeding.

If you have more than one serving, feed your baby milk you expressed in advance (frozen or refrigerated) while the alcohol remains in your system. You may need to **express** milk to relieve engorgement of your breasts, but this milk should be discarded because it contains more alcohol.

To find out how long it takes for your body to eliminate alcohol according to your weight, visit beststart.org/resources/alc_reduction/pdf/brstfd_alc_deskref_eng.pdf.



Each serving or glass of an alcoholic beverage takes 2 to 3 hours to be eliminated from your blood and milk.

Size of a standard drink



=



=



=



If you have questions about alcohol consumption while breastfeeding, talk to your health professional or call the Motherisk Helpline at 1-877-327-4636.

Good to know ●●●

In Canada, one serving or 1 drink = 13.5 g (17 ml) of pure alcohol.

Illustrations: Maurice Gervais

Tobacco

Tobacco is harmful to your baby when you're breastfeeding, just as it is during pregnancy.

Tobacco can interfere with milk production. Nicotine from tobacco also passes into breast milk and can cause crying, irritability and insomnia. Try to avoid smoking just before feeding.

Talk to your doctor if you are thinking about using pharmacological aids such as patches or nicotine gum to quit smoking.

Even if you do smoke, breastfeeding provides many benefits for you and your baby, including protecting him from respiratory infections.

Cannabis and other drugs

Drug use and exposure to second-hand drug smoke is not recommended during breastfeeding.

It is not known what effect a nursing mother's use of marijuana and other cannabis derivatives might have on her baby, but it is a source of concern.

Other drugs, such as amphetamines, cocaine, heroin, LSD and PCP pass into breast milk and are dangerous for your baby.

Medications

Most medications pass into breast milk, but in very small amounts. Some medications are a better choice because more is known about their effects on nursing babies.

Many medications may be taken while breastfeeding, including acetaminophen, ibuprofen and most antibiotics.

Decongestants containing pseudoephedrine can reduce milk production. It's best to ask your pharmacist to recommend another product.

Talk to a health professional before taking any medication or natural health product. Some medications may decrease your milk supply or cause other problems.

It's very rare to have to stop breastfeeding because of medical treatment. If a health professional advises you to stop breastfeeding because of a medication, here's what you can do:

- Say that breastfeeding is important to you and your baby.
- Ask if there are any medications that can be taken while breastfeeding instead.

Exposure to contaminants

In Québec, environmental pollution is not generally a problem for breastfeeding mothers and babies.

Breastfeeding mothers who come in contact with or breathe in chemical substances contained in household products may pass these substances on in small amounts to their babies through breast milk. This is only a problem in the case of regular and prolonged exposure, such as occurs at work.

In day-to-day life, exposure to the following products on an occasional basis is nothing to worry about:

- At the hairdresser: hair styling products, dyes and perms
- At the dentist: local anaesthetic, fillings and root canals
- In the home: latex paint and varnish, home cleaning products

If you work in an environment where you are exposed to contaminants like solvents, inks or dyes that may be dangerous to your breastfed baby, you may be eligible for reassignment or preventative withdrawal (see [For a Safe Maternity Experience program](#), page 777). You can also consult your doctor.

Handling expressed milk

Before handling expressed milk, make sure your hands, breast pump and accessories are clean.

Storing breast milk

Breast milk is best when fresh and taken directly from the breast, but it refrigerates and freezes well, too. If you only feed expressed breast milk to your baby, it's preferable to use freshly expressed or refrigerated milk. Prolonged freezing slightly reduces the nutritional value of breast milk. However, it's still better than any other milk.

Breast milk can be kept in glass or hard plastic containers or even in special, thicker baby bottle liners designed for breast milk. Baby bottle liners for commercial formulas are too thin and don't freeze as well. They need to be doubled up because they are too fragile.

Milk that has just been expressed or taken out of the refrigerator can be kept at room temperature for up to 4 hours. If it will be used later than that, keep it in the refrigerator. If you don't plan to use it within 8 days, freeze it as soon as possible. You can put it straight in the freezer after expressing it. Here are a few tips:

- Save milk in different amounts (between 30 and 90 ml) to reduce waste.
- Don't fill containers past $\frac{2}{3}$ full. Liquids take more space after they freeze.
- If you want to store a lot of milk in a single container, put it in the refrigerator until you have the amount you want.

- Mark the date on the container and seal it tightly.
- Store milk in the back of the freezer away from the door to avoid changes in temperature.
- You can put all your frozen breast milk containers inside a larger, tightly closing container.
- Use the oldest milk first.

If the fresh, refrigerated or thawed milk has been warmed up but your baby changes her mind, you don't need to discard it unless it has been in contact with bacteria from your baby's mouth. You can keep it in the refrigerator for 4 hours or more. Use it for the next feeding; otherwise you'll need to throw it out.

Information on thawing milk can be found under [Warming milk](#), page 501.

Breast milk storage time

	Room temperature	Refrigerator	Freezer*
Fresh breast milk	4 hours at 26°C (79°F) 24 hours at 15°C (59°F) (in a cooler with ice pack)	8 days at 4°C (39°F)	6 months (refrigerator freezer, but not in the door) 12 months (chest freezer)
Previously frozen breast milk	1 hour	24 hours	Do not refreeze

* The freezer temperature must be cold enough to keep ice cream hard (-18°C or 0°F).

The storage times in the table above don't always apply for hospitalized babies. For hospitalized babies, follow the recommendations of the hospital staff.



Warning

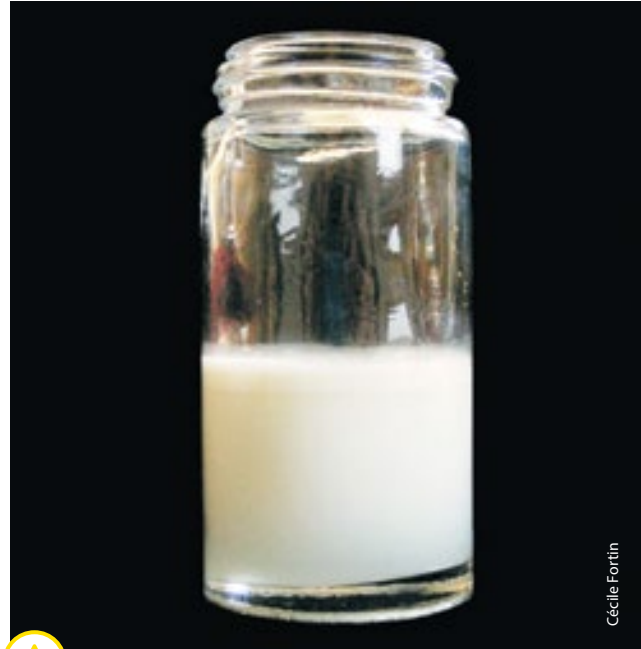
Storage times can't be added together. For example, you can't keep milk for 4 hours at room temperature, then put it in the refrigerator or freeze it.

Appearance of expressed milk

Expressed breast milk doesn't look like cow's milk or commercial infant formula. Since it's not homogenized, it separates after a while and the cream floats to the surface. Warm milk just needs a shake to mix it together again.

Human milk can have a whitish, bluish, yellowish or brownish tinge. The colour and smell of breast milk can vary

- From one mother to the next
- According to the mother's diet
- Depending on the baby's age
- Depending on whether the milk was expressed at the beginning or the end of a feeding



Cécile Fortin



Expressed breast milk separates after a while and the cream floats to the surface. Don't throw it out—it's still good! The amount of cream varies from one time to the next and from one mother to another.

The smell and taste of some mother's milk changes when the milk is refrigerated or frozen. This is caused by lipase, an enzyme that helps babies digest fats. The digestive process can begin while the milk is still in its container. Don't worry—it's still good for your baby.

Some babies don't like the taste of refrigerated or frozen milk and refuse to drink it. Sometimes you can solve the problem by freezing your milk without refrigerating it first.

If that doesn't work, try

- Heating it to just below the boiling point
- Then, cool it off immediately
- And freeze it

This will deactivate the lipase

Commercial infant formula (commercial milk)

The Canadian Paediatric Society, Dietitians of Canada, and Health Canada recommend that babies not fed on breast milk be given iron-enriched commercial infant formula up to the age of 9 to 12 months.

When properly prepared, commercial infant formula is a safe alternative to breast milk. Unlike cow's milk, goat's milk and soya drinks, commercial infant formula is adapted to meet infants' basic needs.

Pay attention to the expiration date: don't buy formula if the date on the can has passed. Return any dented, bulging, or abnormally shaped container to the store.

Which formula to choose?

To prevent **anemia**, it is recommended babies be fed iron-enriched formula right from birth.

Most parents wonder what brand of commercial infant formula is the best. Companies advertise their products extensively to parents, doctors, nurses, and nutritionists. Each sales representative will say that their product is better than the others or that it is closer to mother's milk. Additives and claims listed on product labels are only there to boost sales. They are of no benefit to your baby and can even be misleading.

Most babies have no problem changing brands, but others can be bothered by it, especially during the first few days. If this is the case with your baby, avoid changing brands too often.



To date, there is no proof that one brand is better than another. Commercial infant formulas are comparable in quality.

Ready-to-serve, liquid, or powdered

Commercial infant formula is sold in three forms:

- Ready-to-serve
- Concentrated liquid
- Powdered

The same brand of formula may look different in its ready-to-serve form than it does when prepared from concentrated liquid or powder, but the composition and nutritional value remain the same.

You can use any of these forms or alternate depending on the situation, (e.g., at home, on an outing). However, ready-to-serve and concentrated liquid baby formulas are preferred for premature, immunocompromised, and low-birth-weight babies because they are sterile at the time of purchase.

Characteristics of the different forms of commercial infant formula

Ready-to-Serve

- **Sterile** at time of purchase.
- Easiest to use.
- Is used as is.
- Very expensive.

Concentrated liquid

- Sterile at time of purchase.
- Easier to use and safer than powdered form.
- Must be diluted with water.
- Costs about the same as powder.

Powdered

- Not sterile at time of purchase.
- Greater risk of contamination because it requires more handling.
- Requires greater care during the dilution step than concentrated liquid.
- Costs about the same as concentrated liquid.

Read the label carefully to make sure you buy the desired product. It is easy to confuse concentrated liquid formula with the ready-to-serve variety. If you do, you run the risk of giving your baby undiluted concentrate, thinking it is a ready-to-serve product.

“Transition” formulas

There is a range of commercial infant formulas on the market for babies 6 months and over. There are even products for babies age 12 to 36 months. These products are cheaper than commercial infant formula, but much more expensive than cow’s milk.



“Transition” formula is not suitable for babies under 6 months because it contains too much calcium.

Compared to commercial infant formula, transition products can be a cheaper alternative for babies age 6 to 12 months, but they are not necessary. You can continue using your regular formula until you start feeding your baby cow’s milk around the age of 9 to 12 months. For babies over 9 months who eat a varied diet, transition formula is no better from a nutritional point of view than cow’s milk.

Soy-based infant formula

Commercial infant formula made from soy protein is suitable for babies whose families don’t consume dairy products or for babies with certain health problems.

However, using soy-based infant formula does not reduce excessive crying in infants.

Special infant formulas

In rare cases, babies fed with a commercial infant formula may have trouble tolerating formula. Talk to a doctor if this seems to be the case. The doctor can recommend a special formula for your baby.

Special formulas are intended for babies with specific problems, such as allergies or severe intolerances. Medical insurance plans reimburse the cost of certain products when purchased with a prescription.

If your baby has trouble tolerating commercial infant formula, you can also go back to breastfeeding (see [Restarting milk production](#), page 451).

Handling commercial infant formula

Diluting commercial infant formula requires care and certain precautions. It is important to avoid mistakes so as not to contaminate the milk with bacteria.

Among the different types of commercial formulas, powdered products require the most care because they are not **sterile** and may contain bacteria. Bacteria may get into powdered formula at the factory where it was manufactured, or at home when you use the container and the measuring scoop provided. Some babies have gotten sick after drinking milk made from powdered formula contaminated with bacteria.

To avoid contamination, you can do two things:

- Destroy bacteria
- Prevent bacteria from developing and multiplying

For premature, immunocompromised, and low-birth-weight babies, it is recommended to destroy bacteria when preparing powdered formula. For term babies who are in good health, it is sufficient to prevent bacteria from developing, although you can also destroy bacteria if you wish.

To destroy bacteria, prepare the infant formula using very hot water. The World Health Organization (WHO) has recommended using boiled water cooled to 70°C or higher to prepare powdered formula. To ensure the water is hot enough, use it within less than 30 minutes after boiling. It is preferable to follow the WHO recommendations, even if they differ from the manufacturer's directions.

To prevent bacteria from developing, prepare the infant formula with boiled water that has been cooled to room temperature. Once the formula is prepared, it's best to serve it immediately. Formula that's prepared in advance can also be kept in the refrigerator at 4°C for a maximum of 24 hours.



Never use hot tap water to prepare infant formula because it is more likely to contain lead, contaminants, and bacteria. Until your baby is 4 months old, boil cold water.

First step

For all types of formula

Here's how to prepare infant baby formula. Regardless of the type of formula you use, the first step is always the same.

- Clean the work surface.
- Wash your hands thoroughly.
- Sterilize and assemble all the required equipment and utensils.*
- Clean the formula container with hot water before opening it with a clean can opener.

* For additional information on sterilizing and using baby bottles, see [Cleaning bottles, nipples and breast pumps](#), page 507.

Second step

Depending on the type of formula

Concentrated liquid

For babies under 4 months:

- Fill a saucepan with cold tap water.
- Bring to a rolling boil for one minute.
- Mix equal quantities of boiled water and concentrated liquid formula.
- Stir to mix well.
- Cool the mixture rapidly in cold water before putting it in the refrigerator or feeding it to your baby.
- If any concentrated liquid formula remains in the can, cover the can and put it in the refrigerator.

For babies 4 months and over:

- Follow the same directions, but you can use cold, unboiled tap water.

Powder

Note: Follow the manufacturer's directions to the letter regarding the quantities of powdered formula and water to use.

For babies under 4 months:

- Fill a saucepan with cold tap water.
- Bring to a rolling boil for one minute.*
- Pour the recommended quantity of water into the baby bottle or other container.
- Measure the powdered formula with the measuring scoop provided; scoop size varies from one brand to the next.
- Add the required quantity of powdered formula to the water.
- Stir to mix well.
- If needed, cool the mixture rapidly in cold water before feeding it to your baby or putting it in the refrigerator.
- Wash the measuring scoop and put it away in a sealable bag or clean container to protect it from dust. Do not put it back in the can in order to avoid contamination.

For babies 4 months and over:

- Follow the same directions, but you can use cold, unboiled tap water.

Ready-to-serve

- Pour the formula into the baby bottles.
- Immediately put the nipples and caps back on the bottles.
- If any ready-to-serve formula remains in the can, cover the can and put it in the refrigerator.

* To know what temperature of water to use when preparing powdered formula, see page 403.



Always check the expiration date before giving commercial infant formula to your baby.

If you make a mistake when preparing the mixture (dilution error)

If you mix the wrong quantities of commercial infant formula and water, don't panic. First, observe your baby. Does he seem uncomfortable?

Most babies have no problem if a mistake like this is only made once or twice. If it happens more often, it can cause digestive or kidney problems, dehydration, or insufficient weight gain. If you are worried or your baby seems sick, see a doctor or call Info-Santé (8-1-1).

How long does commercial infant formula keep?

	Room temperature	Refrigerator	Freezer
Milk reconstituted from concentrated liquid or powder	Maximum 2 hours	24 hours Close the can properly	Do not freeze
Open can of liquid formula (concentrated liquid or ready-to-serve)	Maximum 2 hours	48 hours Close the can properly	Do not freeze
Open can of powder	1 month if kept dry	Unnecessary	Do not freeze



Other types of milk

Cow's milk

Cow's milk should never be given to a baby under 9 months old because it contains too much protein and too many minerals for baby's kidneys to handle. Cow's milk does not provide enough lactose or linoleic acid, a fatty acid required for the development of your baby's nervous system and brain. In addition, it does not contain enough vitamin A, B₁, B₆, C, D, and E, copper, manganese, or iron. It deprives your baby of important protein building blocks like taurine, cysteine, and alpha-lactalbumin, and it doesn't provide the immune protection of mother's milk.



Cow's milk is completely unsuitable for infants under 9 months old.

Before 9 months – Cow's milk often causes **anemia** because it contains very little iron, reduces intake of other foods, and can cause bleeding in the intestine. This light bleeding is often invisible to the naked eye.

If you are thinking of giving cow's milk to your baby before age 9 months of age because commercial infant formula is too expensive, contact your CLSC for information about financial assistance you can apply for.

After 9 months – You can start giving your baby cow's milk, but not more than 750 ml (25 oz) a day. Buy pasteurized whole milk (3.25% milk fat).

Introducing cow's milk

Your child can start drinking cow's milk at 9 months, providing she eats a varied diet. Every day she should eat

- Iron-rich foods (e.g., meat, meat alternatives, iron-enriched baby cereals)
- Vegetables and fruit

Otherwise, wait till your baby is 12 months old before introducing cow's milk.

If you give cow's milk to your child, choose whole milk (3.25% milk fat):

- Ordinary homogenized milk, enriched with vitamin D
or
- Unsweetened evaporated milk, enriched with vitamins C and D, diluted in an equal quantity of water

Cow's milk can be introduced gradually. You can begin by replacing some of the breast milk or commercial infant formula with cow's milk. Then you can gradually increase the proportion of cow's milk at each feeding.

Do not serve 2% or skimmed milk

Young children need fat for growth and brain development. It's better to avoid giving them 2% milk before age 2. Do not serve them 1% or skimmed milk.

You can continue serving whole milk (3.25% milk fat) to your child throughout early childhood, up to school age. Never serve sweetened concentrated milk.

Pasteurized goat's milk

For infants, goat's milk has the same disadvantages as cow's milk. It is also low in folic acid and vitamin D, although goat's milk enriched with folic acid and vitamin D is available at grocery stores. Like cow's milk, you can start serving goat's milk to your child between the ages of 9 and 12 months. Choose pasteurized whole goat's milk (3.25% milk fat).

Some people recommend goat's milk for preventing or treating allergies to the proteins in cow's milk. Unfortunately, goat's milk often causes the same reactions. Many children who are allergic to cow's milk are also allergic to goat's milk.

Enriched soy drinks

Enriched soy drinks are not suitable for infants. They are incomplete and much less nutritious than breast milk or even commercial infant formulas. Since babies grow very rapidly, they need a complete, balanced diet. These drinks can hinder your baby's growth.

Soy drinks contain fewer calories and less fat than whole cow's milk (3.25% milk fat). This is why it is recommended that you wait till your child has reached 2 years of age before serving her soy drinks.

Some parents want to serve soy drinks to younger children. You can give your child soy drinks after 1 year of age, as long as she eats a varied diet and is growing normally. Make sure that the soy drink you choose for your 1 to 2 year old has the following terms listed on the label:

- "Enriched," because drinks that are not enriched do not provide enough **nutrients** to meet the needs of a young child
- "Plain" or "Original," because "light" or flavoured drinks are not suitable

Shake the drink container well (around fifteen times) before serving to make sure the nutrients are well mixed, especially the calcium.

Why serve pasteurized milk

It is essential to pasteurize animal milk. In fact, the sale of unpasteurized milk is illegal in Canada. Many diseases can be transmitted through raw or unpasteurized milk, including poliomyelitis, typhoid, encephalitis, tuberculosis, diarrhea, salmonella and brucellosis. The pasteurized milk sold in food stores is just as nutritious as raw milk and poses no risks to your child's health.



Do not give raw (unpasteurized) milk to your child, even if the milk comes from a perfectly healthy herd.

Industrial pasteurization consists of heating the milk very rapidly to very high temperatures, and then cooling it equally rapidly. The process only takes a few seconds. Dangerous microorganisms are destroyed and the nutritional value of the milk remains unchanged.

It is recommended that you not try to pasteurize milk at home. It is too slow, less effective, and causes significant loss of milk's natural **nutrients**: vitamins A, B₁, B₂, B₆, B₁₂, C, D, and folic acid.

Breastfeeding your baby

Breastfeeding: A learned skill.....	416
Getting help.....	416
Your breasts during nursing.....	418
Breastfeeding, step by step.....	421
How often to nurse—and how long?.....	432
Breastfeeding phases.....	437
Is breastfeeding still possible?.....	444
Expressing milk.....	452
Combining breast and bottle.....	462
Weaning.....	466
Breastfeeding problems and solutions.....	468



René Dery

Health professionals the world over recommend that babies be fed breast milk exclusively for the first six months of life. The Canadian Paediatric Society, Dieticians of Canada, and Health Canada all echo this recommendation. Once babies have started eating solid foods, it is recommended that they continue breastfeeding until the age of two years or more.

If you have COVID-19 and you want to breastfeed, you will need to take certain precautions. Wash your hands before feeding your child. Wear a face covering while feeding, preferably a medical mask.

If you have COVID-19 and are already breastfeeding, it is recommended that you continue to do so. The same precautions are required: wash your hands before feeding your baby. Wear a face covering while feeding, preferably a medical mask.



Breastfeeding promotes a closer mother-child bond.

Breastfeeding: A learned skill

Right after delivery, your baby will snuggle up to your breast and nurse for the first time. The act of nursing will soothe your baby and help stabilize his body temperature. Breastfeeding sustains the relationship that started between you and your baby during pregnancy.

The period when you start breastfeeding can be intense. While your milk will come in on its own, you will need to learn how to breastfeed.

The initial weeks of breastfeeding are a time of adaptation and learning. Mastering the technique of latching the baby to your breast can take a while at the beginning. Give yourself plenty of time and have confidence in yourself and your new baby.

As you gain experience, getting your baby to latch onto the breast will become easier. With time, you and your little one will come to enjoy the nursing experience more and more.



Learning to breastfeed is a little like learning to dance. At first, you focus on your steps, not the music. But with time and practice, you forget the technique and the music carries you away.

Getting help

Breastfeeding, like giving birth, is totally natural. And just as it's normal to have assistance during delivery, it's normal to need help with breastfeeding, especially at the beginning.

There are many resources for breastfeeding mothers. Depending on where you live, you may be able to find IBCLC lactation consultants (International Board Certified Lactation Consultants) or clinics or doctors that specialize in breastfeeding. You also might discover that your local CLSC or local breastfeeding mentor group has the best-trained breastfeeding resources in your area.

If you encounter problems, it's important to contact a person trained in breastfeeding. If that person can't help you, she will be able to suggest other resources that can.

Community breastfeeding support groups can provide a great deal of information and advice. They are run and led by women who have nursed one or more children. They keep their knowledge up-to-date and offer support at no charge. Most of these community groups hold information sessions to help parents and parents-to-be prepare for breastfeeding. A number of them also offer specialized services from IBCLC lactation consultants. Check with organizations in your area to find out what's available. Ask your CLSC for contact information.

The **Info-Santé** telephone helpline is staffed by nurses and is available 24 hours a day, 7 days a week, throughout the province. Just call [8-1-1](tel:8-1-1).

Various **CLSC professionals**—like nurses or nutritionists—can also be of help. Nurses offer home visits after your baby arrives. Depending on where you live, these visits are either automatic or based on your needs. Your nurse can start helping you as soon as you return home, or later on. She can weigh your baby, check her overall health and help you with breastfeeding technique.

An **IBCLC lactation consultant** can help you deal with breastfeeding difficulties that you may experience. The IBCLC credential—for International Board Certified Lactation Consultant—certifies that they have the necessary skills. Some healthcare institutions and community breastfeeding support groups offer the services of IBCLC lactation consultants. Many of them are in private practice from either their homes or offices. To learn more or find the IBCLC consultant nearest you, visit the AQC website (Association québécoise des consultant(e)s en lactation diplômé(e)s de l'IBLCE) ibclc.qc.ca/en.

Breastfeeding clinics can be found in many areas. They offer more specialized services—from nurses, IBCLC lactation consultants and sometimes doctors—which may or may not be free. Clinics can be very helpful if you are experiencing problems.

Your doctor will examine your baby on a regular basis. If you're worried about your child's health, the best person to turn to is your doctor, who can also help if your breasts or nipples become infected.

Midwives provide followup for their patients up to six weeks after delivery.

If you have special problems, all of these individuals should be able to direct you to other sources of help.

Your breasts during nursing

Breast and nipple shape

Breast and nipple shape, size and colour vary from one woman to another, and sometimes even from one breast to the other. Most newborns adapt easily to their mothers' breasts. For unknown reasons, however, there are some babies who have more difficulty latching onto flat or inverted nipples.

Breast care

The breasts are often bigger and heavier during the first six weeks of breastfeeding. Whether or not you choose to wear a bra depends on your comfort. Nursing bras are usually more practical than regular bras, but you don't have to wear one. Regardless of what you choose, your bra should be comfortable and large enough to avoid squeezing your breasts. Don't hesitate to sleep barebreasted if you feel comfortable doing so.

If you use nursing pads, choose cotton or disposable ones without a plastic lining and be sure to change them often.

A daily shower or bath is all you need to keep your breasts clean. Creams, ointments and other products are not necessary. Washing your hands with soap and water before nursing is the best way to prevent infections.

When your milk comes in

Having your milk “come in” is a normal phase of milk production. It generally happens between the second and fifth days after delivery. Your breasts become warmer, the appearance of the milk changes and production increases rapidly. Most women also find that their breasts become larger.

Some women experience no discomfort when their milk comes in. But for most women it can be uncomfortable, especially if their breasts become engorged and firm to the touch. To ease the discomfort, which generally lasts from 24 to 48 hours, thorough and frequent feedings (8 times or more during a 24-hour period) are recommended at regular intervals, both day and night.

Your baby will generally want to nurse more often during this phase, which will ease the discomfort in your breasts and help him gain weight.

What if he has difficulty latching on because the breast is too firm, or your breasts become painful? You’ll find advice in the table entitled [Engorgement](#), page 492.

Producing a good supply of milk

Milk production is a matter of supply and demand. The more your breasts are stimulated, the more milk they'll produce.

To get milk production off to a good start during the first few days

- Nurse your child or **express** milk within 6 hours of delivery to stimulate your breasts
- Nurse your child or express milk at least 8 times during a 24-hour period, with no more than 6 hours between
- Express your milk if your baby isn't sucking effectively or latching on properly. During the first few days, expressing manually is often more effective than using a breast pump

Milk production fluctuates during the first 4 to 6 weeks, depending on demand. That's why it's important to stimulate the breasts during the day and at night during this phase.

Some women produce substantial milk without much stimulation, even if breastfeeding was difficult for them at the start. For others, however, milk production can be less reliable, decreasing as soon as stimulation lets up or becomes more infrequent. A person trained in breastfeeding can often help new mothers increase milk production, especially during the first weeks (see **Insufficient milk production**, page 480).

Let-down reflex

Stimulating the breasts also results in the release of **oxytocin** into the bloodstream. Oxytocin is a hormone that causes the breasts to contract and expel milk. This is known as the "let-down reflex."

This reflex might be triggered when you put your baby to your breast, or if you stimulate the nipple and **areola** when expressing milk. Just hearing your baby cry or thinking about him can trigger the let-down reflex, too. It ensures that milk will be available when your baby begins nursing.

It's not unusual to experience the let-down reflex several times while nursing. The results typically last from 30 seconds to 2 minutes. Some women feel a tightening or tingling in the breast; others feel no sensation. During the first few days after delivery, you may experience intense thirst and uterine contractions in conjunction with the let-down reflex.

During the let-down reflex, milk flows more rapidly and babies will swallow more quickly for several minutes. Sometimes the let-down reflex is so strong that your baby will need to let go of the breast to take a breath of air. Women expressing milk can see the pace quicken and even notice spurts during the let-down reflex.

Breastfeeding, step by step

Mothers have been breastfeeding their babies since time immemorial, and each nursing mother and child discover their own style. This section will guide you step by step, explaining what to do so your child nurses properly and effectively. A person trained in breastfeeding can provide help if you need it.

Pick the right time (signs of hunger)

It's hard to get a baby who is upset or crying to nurse. As soon as you see signs that your baby is hungry, offer her your breast (see **Hunger signs**, page 367). That way she'll be more patient and cooperative, especially if it takes a couple of tries to latch on.



Anouk Jolin



A comfortable chair, music, cushions or pillows and a glass of water or milk will help you relax.

Find a comfortable position

Give yourself plenty of time for your first breastfeeding sessions. Take a few minutes to make sure you're comfortably settled. There are various positions, so choose the one that feels best for you: cradle, cross-cradle, football or lying down. Whichever you choose, your baby's whole body is turned toward your breast, with her ear, shoulder and hip forming a straight line.

Cross-cradle position

With a newborn, the cross-cradle position offers two advantages: it allows you to properly support your baby and to clearly see how she latches on (see picture page 424). Many mothers find it useful during the first weeks of breastfeeding.

In this position, the baby rests on the arm opposite the breast she is nursing from. If you are nursing from the right breast, you support your baby with your left arm.

Hold your baby in place against your breast by supporting his bottom with your forearm.

Your fingers, with the exception of the thumb, should support the weight of your baby's head in a way that still allows for some freedom of movement. The palm of your left hand should be placed beneath his shoulder blades, not behind the head (as shown in the photos).

Avoid putting pressure on the head with your fingers or the palm of your hand. Babies don't seem to like this. They draw their heads back and some may have difficulty latching back on. If this happens, readjust your position.

Hold your right breast with your right hand. Your thumb should rest on the outer side of the breast and the other fingers on the inner side, far from the nipple and **areola**, forming a "U" (see picture page 435).

Lying-down position

Breastfeeding while lying down is enjoyable and can promote rest (see picture page 425). Most mothers really like this position once latching on becomes easier. If you tend to doze or sleep while nursing, follow the recommendations on page 295 to make sure your baby stays safe.



Cross-cradle position



Cradle position



Football position



Lying-down position



Bringing baby to your breast

Whether you choose a seated or reclining position, make sure that your baby latches on to more than just the nipple; she should also be taking much of the **areola**, adjacent to the nipple, in her mouth.

If your baby reaches for the breast at this point, her hands may end up in her mouth before your breast does. If this happens, ask the child's father or someone else close to you to gently hold the baby's hands. As soon as she latches on and starts sucking, you'll see her hands relax.

You'll need to coordinate your movements with that of the baby as she opens her mouth. It's the baby who latches onto the breast, but you must bring her close to it at the right moment. You'll be more comfortable if you don't lean toward the child.

During your baby's early weeks, feeling the breast near her mouth stimulates the sucking reflex. If your child sees your breast but doesn't sense it against her face, she will probably not open her mouth very wide. Bringing her close enough so her chin grazes your breast will probably make her open her mouth more willingly.



With your help, your baby will learn how to latch on and will soon be almost able to do it alone.

How to bring your baby to your breast



Once both of you are settled, you're ready to bring your baby to your breast:

1. When her chin touches your breast, gently brush your nipple against her upper lip.
2. Wait till she opens her mouth wide, as if she were going to yawn or take a bite out of a large apple.



3. At this point, quickly bring your baby to the breast, supporting her shoulder blades with the palm of your hand:

- Her head should be tilted backwards just a tiny bit.
- Her lower lip should touch your breast first, with the nipple very near the upper lip.
- Your nipple should point toward her palate, not her tongue.



During the first few days, you may have to start over several times to get your baby to latch on properly. She might sometimes close her mouth partially or completely before getting to the breast. This can be painful for you. Latching on takes a little time in the beginning. But with practice, your baby will learn and everything will become easier.

Jean-Claude Mercier

Latching on

When your baby latches onto your breast, and not only the nipple, he will have a large part of the **areola** in his mouth. This makes it easier to get milk.

If the baby sucks mainly on the nipple, painful cracks may result and he will get less milk. Some babies will then ask to nurse more often, which will irritate the nipples even more. Others will get tired and fall asleep before they're full.

Signs of a good latch:

- The baby's mouth is wide open.
- He latches onto not only the nipple only but also a large part of the areola.
- His lips are curled outward.
- His lower lip covers a larger part of the areola than the top lip does. If needed, gently press your breast to reveal the lips.
- His chin touches your breast and his nose is free.
- You can hear or see him swallow.

Latching on shouldn't be painful for you.

If you feel pain, try bringing the baby to your breast again. You can also try to improve the latch. In some cases, you can gently lower your baby's chin to reposition his lower lip once he's nursing. If that doesn't work or pain persists, contact someone trained in breastfeeding.

How to tell if your baby is sucking effectively

When your baby sucks effectively, you can see motion in the jaw. When she first starts to nurse, the movements are quick and light. As milk starts flowing, the movements become slower and deeper. You can see and hear your baby swallow.



If you experience painful nipples, try to improve the latch. Nursing shouldn't be painful. Latching on properly is the key to pain-free nursing!



If your baby's breathing is noisy during nursing, free up her nose by pressing her bottom against you to bring her chin closer to your breast. Don't worry, she won't suffocate. If she has trouble breathing she will release the breast. In some cases, you might need to press gently on your breast with your finger to free up her nose.

Breaking the suction

It's important to break the suction properly when removing your baby from your breast, to avoid hurting your nipples. To break the suction

1. Put your finger in the corner of your baby's mouth between the gums, if needed
2. The nipple will release easily once the suction is correctly broken



How often to nurse—and how long?

How often you nurse varies a great deal from one baby to another. What's important is that your baby latches on properly, nurses effectively and swallows your milk.

Mother's milk is rapidly digested, and infants' stomachs are small, so it's normal to breastfeed frequently during the first weeks of life. When you're at the learning stage, the process of nursing, stimulating, burping and diaper-changing can take from 45 to 90 minutes. With time, as your baby develops the ability to nurse more effectively, breastfeedings will become shorter and less frequent.

During growth spurts, your baby will nurse more frequently during the day and at night—sometimes as often as every hour. Frequent breastfeeding increases milk production. This is a passing phase, but it's a very intense one for moms. Family support can be very important during these periods.

Giving your baby commercial infant formula or baby cereal results in less stimulation for your breasts and may interfere with milk production.













Does your baby seem satisfied after nursing, only to seek your breast 15 or 20 minutes later? That's completely normal, especially during the first weeks. Don't hesitate to nurse again for a little "dessert".



When you're breastfeeding, don't watch the clock—watch your little one. Trying to nurse on a schedule won't protect against irritated nipples and could deprive your baby of needed nourishment. Better to watch your baby for signs of hunger and satisfaction!

Fact Sheet

For Nursing Mothers

Your Baby's Age	1 DAY	2 DAYS	3 DAYS	4 DAYS	5 DAYS	6 DAYS	7 DAYS	2 WEEKS	3 WEEKS
Your Baby's Average Tummy Size	 Size of a cherry		 Size of a walnut		 Size of an apricot			 Size of an egg	
Number of Feedings On average over 24 hours	8 times or more per day Your baby sucks vigorously and swallows often								
Number of Wet Diapers On average over 24 hours	 At least 1 WET	 At least 2 WET	 At least 3 WET	 At least 4 WET				 At least 6 HEAVY WET WITH PALE YELLOW or CLEAR URINE	
Number of Soiled Diapers Colour of Stools On average over 24 hours	 At least 1 to 2 BLACK OR DARK GREEN		 At least 3 BROWN, GREEN OR YELLOW					 At least 3 large, soft and seedy YELLOW	

Adapted and revised on October 2017 with permission from the Best Start Resource Centre.

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publications.msss.gouv.qc.ca/msss/sujets/allaitement

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Cluster feeding

Feedings are more frequent at certain hours of the day and less frequent at other times. Evenings can be a challenging time because most babies tend to get cranky and nurse a lot. They sleep a bit, cry a bit, nurse a bit and need comforting. Some babies may want to nurse almost non-stop for a few hours. They may then sleep for longer periods. “Cluster feeding” is normal, although it can leave you with the impression you don’t have enough milk because your breasts are soft and have less time to produce new milk.

One breast or two? Or more?

The number of times that your baby will want to change breasts during a feeding will depend on

- The quantity of milk accumulated in the breast
- His appetite and age
- The time of day

Your baby might nurse from one breast or both during a feeding, and you should go along with his preference. Let him nurse from the first breast until he’s full. When he starts to let go or becomes drowsy, try burping him. Then offer the other breast: he’ll take it if he’s still hungry.

You can change breasts more than once during a feeding. Some babies release the breast as the flow of milk slows. Offering the second breast gives the milk glands in the first breast a chance to refill. If your baby isn’t full after nursing at the second breast, he can return to the first one. And if he’s still hungry, change once more to give him the second breast again.

At the next feeding, start with the breast that was offered last or the one your baby nursed from least. If you don’t remember, offer the breast that feels heavier.

Breast compression

Breast compression is a technique you can use if your baby doesn't nurse effectively enough to get the milk he needs. It increases milk flow and keeps your baby nursing more actively. Use this technique if your baby

- Falls asleep quickly when nursing
- Isn't gaining enough weight
- Wants to nurse very often or for long periods
- Seems dissatisfied

It's also a very good way to get your baby drinking colostrum during the first few days of life.

The cross-cradle position is best for this technique. With your hand, make a U shape at the base of the breast, with your thumb on one side and your fingers on the other. Keep your fingers away from the **areola** so as to not interfere with your baby's sucking. Squeeze the breast with your whole hand without moving your fingers. This should not be painful or stretch the areola.



Maintain pressure for 5 to 10 seconds or as long as your baby continues swallowing. Release the pressure as soon as he stops drinking, then start again, continuing until he stops swallowing. Offer the other breast in the same way if your baby seems to want it. You can return to the first breast—and the second one again—if needed. Stop using this technique once your baby starts nursing more effectively.

Pacifiers (soothers)

A crying baby is trying to tell you something. He may need food, sleep, comforting or contact; it's not always easy to know exactly which.

Breastfeeding is more than a way to provide your baby with nourishment. Don't worry; letting your baby nurse for comfort won't create bad habits. In many cultures, breastfeeding is used as much to calm infants as it is to nourish them.

The Canadian Paediatric Society makes the following recommendations about pacifiers:

- "It's best not to start using a pacifier until breastfeeding is going well. Talk to your doctor or lactation specialist if you feel your baby needs to use one at this early stage. One exception is for premature or sick babies in the hospital who can benefit from using one for comfort."
- "Always see if your baby is hungry, tired or bored before giving him the pacifier. Try solving these things first".

Babies also find the warmth of skin-to-skin contact with their fathers soothing. Rocking or carrying your baby in your arms is another great way to provide comfort and reassurance.

Breastfeeding phases

A nursing woman's breasts undergo changes as her milk supply fluctuates in response to her baby's needs. As children get older, their behaviour changes too—they'll state their needs more and more clearly. Everything seems to get easier with time.



Breastfeeding with your baby snuggled in your arms comforts him and helps meet many of his important needs.

The table below provides an overview of breastfeeding phases between birth and the age of 6 months, describing your baby's behaviour and what may happen at feedings.

Right after birth: Mother and child get acquainted

Your baby

- Will instinctually seek your breast within an hour of birth.
- Will then sleep for several hours.
- May find it harder to breastfeed if she has taken more time to recover from delivery.

Feedings

- Offer baby your breast if she seems interested.
- If she doesn't nurse right away, hold her close until she shows interest.
- The interval between the first two feedings can vary.
- If necessary:
 - Let a few drops of milk drip onto her mouth, but don't insist if she refuses—be patient;
 - **Express** milk and give it to her from a spoon or small cup. Avoid bottles for the time being.

The first 14 days: A time of learning for mother and child

Your baby

- May be drowsy, especially if she is jaundiced.
- May sleep so much that you need to waken her up to ensure she gets enough nourishment, i.e., 8 times or more per day (24 hours).
- Tends to fall asleep at your breast as soon as the flow of milk slows, even if she hasn't drunk enough.

Feedings

- It can take a long time to get ready and latching on may be difficult. A feeding session (breastfeeding, stimulation, burping and diaper-changing) may take between 45 and 90 minutes.
- The number and length of feedings is less important than the quality of the latch and effectiveness of the sucking. Babies who suck effectively spend less time at the breast and are less likely to hurt your nipples.
- If your baby falls asleep while you breastfeed, try tickling her, uncovering her, holding her close or talking to her. Make sure she latches on properly. Try using the breast compression technique.

2 to 8 weeks: Mother and child are more comfortable with each other

Your baby

- Awakens on her own for feeding and stays awake for longer periods.

Feedings

- You're getting better at latching on and feeling more at ease as you get to know your little one better.
- Between weeks 6 and 8, your breasts produce as much milk as before but become softer to the touch and smaller in size as they adjust to your baby's needs.

From 2 to 6 months: Mother and child have their own routine

Your baby

- Expresses her needs more readily—for example, when she wants to change breasts.
- Needs more stimulation; it's not always easy to know if she's hungry or wants to do something different.

Feedings

- Feedings are shorter.
- At 3 months, baby tends to look around her while nursing.
- At 4 months, baby's appetite changes: she may ask for the breast more often. She may still wake up at night for feeding—or start doing so again.

Breastfeeding an older baby (6 months and up)

Breastfeeding an older baby and a newborn are two very different things. Once children start eating other foods at around 6 months of age, the rhythm of breastfeeding gradually changes as your baby adapts to the family's mealtime routine. But you and your child can still benefit from the advantages of breastfeeding, which will continue as long as you carry on nursing.

As your child gets older, he will start to show curiosity and initiative, and this can carry over into breastfeeding. His newfound independence may sometimes pose problems—he might ask for your breast at inconvenient times. But trust yourself: in breastfeeding, as in parenting in general, you'll learn to set limits on what you consider to be acceptable or not. Your baby will learn to be a bit more patient and will get used to breastfeeding on your terms.

As children near one year of age, they typically breastfeed only a few times per day, although some may still do so more frequently. At this age, the number of feedings varies from one day to the next, depending on the child's activities and mood.

In Québec, an increasing number of women are continuing to breastfeed beyond age 1—even if only once a day—because it helps prolong the special mother–child relationship they cherish. Breastfeeding for a longer period has ongoing health benefits for the baby. Many find that breastfeeding in the evening is an enjoyable part of the bed-time ritual. Support group volunteers are very comfortable with the idea of breastfeeding a toddler. Feel free to discuss it with them.

Breastfeeding in public

More and more women are breastfeeding in public. It's your right to breastfeed your child, regardless of the location. In Québec, that right is protected by law. Breastfeed with self-confidence and simplicity. To make things easier, try wearing layered garments (for example, a T-shirt and sweater) or a blouse. Some places provide special breastfeeding and baby care areas for parents who don't feel comfortable nursing in public.

Breastfeeding and mother-child separation

One practical side of breastfeeding is that it makes family outings easier. However, your personal or professional activities may also require you to be separated from your child.



Breastfeeding makes it easier for a family to get out and about! Night or day, milk is always handy—whether you're at the movies, outdoors, visiting or traveling.

You can continue breastfeeding even if you're not always with your child. You'll need to consider

- The child's age
- His preferences, and yours
- The length and frequency of separation

Once babies reach 6 months of age, they don't necessarily need to be bottle-fed when you're away; they can learn to satisfy their thirst by drinking from a cup.

Occasional separations

Need to go out for a few hours? If you breastfeed your baby before you leave and once you return, it may not be necessary for anyone to bottle-feed him while you're out.

If you know that you're going out for a while, you can **express** milk that your baby can drink from a cup or bottle, depending on his age and abilities. He may only drink a small amount—that happens sometimes. But don't worry—he'll probably have a "full-course meal" once you return.

And while you're out, you may need to express milk in order to relieve breast discomfort. Take along what you need (for instance, a cooler and ice packs) to keep the milk cool until you return home.

Returning to work or school

Returning to work or school will require you to be away from your baby on a regular basis for longer periods. Yet many women in this situation continue breastfeeding. A number of them talk about the pleasure they get from snuggling up with their nursing babies before they go out or after they return.

Once expressed, breast milk can be refrigerated or frozen, then given to your child in a cup or bottle in keeping with his age and abilities. This way you continue to provide excellent nourishment that will help your infant develop and stay healthy—whether you're by his side or not.

At age 6 months or so, it's not unusual for some babies who are separated from their moms to prefer food until they can breastfeed. They may drink very little while their mothers are away, but make up for this by nursing more heavily the rest of the time.

You may also decide to breastfeed when you're with your child and to provide another type of age-appropriate milk for him when you're not around. Your milk production will adjust if you opt for what is called "mixed feeding".



Céline Leheurteur



This special relationship can be continued as long as you and your child wish.

Is breastfeeding still possible?

If you've had a Caesarean section

Whether you planned to have a C-section or not, there's nothing to prevent you from breastfeeding soon after your baby is born. Most C-sections are done with an epidural, in which anaesthesia (freezing) is injected near the base of the spine. So you should be able to breastfeed soon after, ideally within an hour of delivery, even if you're still feeling the effects of the epidural. If you have a general anaesthetic (you are put to sleep during the operation), you'll be able to breastfeed as soon as you are completely conscious and feeling comfortable. Many hospitals encourage new mothers to nurse for the first time while in the operating room or recovery room.

To keep your baby in your room, you need to have your spouse or someone close to you on hand. The hospital staff can help you start nursing, if necessary. Soon you'll be able to take care of your baby by yourself. Many dads also enjoy holding the new baby skin-to-skin on their chest. It's a good way to get the father-child relationship off to a warm start.

If your baby is premature

Premature babies have special needs and benefit even more from mother's milk. Breast milk is ideally suited for meeting a premature baby's needs, and you alone can provide this made-to-order nourishment!

Depending on how far along the pregnancy was at the time of birth, your baby may be fully able to nurse or only able to breastfeed a little bit, if at all. If he's not yet capable of sucking, the nurses will use a very thin tube to get your milk directly into his stomach.

If your baby's health allows, hold him often and for long periods with his skin against yours. Your little one will get used to you and your smell, which will make it easier to get him to nurse once he's ready. This intimate contact has been shown to be beneficial for both babies and their parents. In fact, it is considered as valuable for newborns as the food they receive.

While waiting until your baby is able to breastfeed on his own, you'll need to use a breast pump to get your milk production started and keep the supply ongoing. Breast pumps are often available in intensive care units, or you can rent one if necessary from a drug store or certain breastfeeding support groups.



You can breastfeed even if your baby is premature.

The milk that you **express** can be refrigerated or even frozen until your baby is ready for it. When it's fed to him, hospital staff may add nutritional supplements, if necessary.

Various factors influence how long it takes before a premature baby is ready to start breastfeeding. Your doctor or nurses will tell you when your child is ready. At first, he may not be able to nurse for very long, so it will probably be a good idea to express milk afterward in order to relieve your breasts and sustain milk production. Little by little, your baby will nurse more effectively and you'll be able to do without the breast pump.

You'll need lots of patience and perseverance during this phase: premature babies need time to learn to breastfeed. Most of them become more skilled at it once they reach their original due dates.

A person trained in breastfeeding can provide invaluable support and encouragement. Préma-Québec, an organization for parents of premature infants, may also be able to help.

Préma-Québec

1-888-651-4909 / 450-651-4909

premaquebec.ca/en/



If you have twins

New mothers of twins are happy to receive help early on with nursing their babies and caring for them between feedings. The most demanding aspect of mothering twins isn't breastfeeding itself, but the challenge of caring for two newborns at the same time. So accept all the help you can get!

It's possible to feed your two babies exclusively on breast milk. The more your breasts are stimulated, the more milk they produce.

If your twins are born prematurely, they'll benefit even more from your milk. You should pump milk while waiting for your twins to be able to nurse. This will ensure that there's enough milk for both of them. With twins, one baby is often ready to nurse before the other one is, so keep expressing milk for the second child.



Alexandra Jacques



Breastfeeding both twins at once can be practical.

Some women prefer to breastfeed each baby separately. Others find it more practical to nurse both twins at the same time. Most women use a combination of these two approaches.

Generally, mothers of twins nurse each baby at one breast for one feeding and change to the other breast for the next feeding. As babies' appetites and sucking capacities will vary, this allows equal stimulation for both breasts. There are other approaches that may be more suitable in certain situations.

Some women use mixed feeding, a combination of breastfeeding and bottle-feeding using expressed breast milk and commercial infant formula. A person trained in breastfeeding can put you in contact with a mother who has breastfed twins.

There are organizations that can help you, regardless of where you live. Association de parents de jumeaux et de triplés de la région de Montréal has produced a brochure titled *Allaiter en double ou en triple* (available in French only).

Association de parents de jumeaux et de triplés de la région de Montréal

514-990-6165

apjtm.com (in French only)

If you've had breast surgery

Milk production varies among women, regardless of whether they have had breast surgery. The impact of such surgery on milk supply also varies from one woman to another. Whatever your situation, learning about breastfeeding and having support can help you get off to a successful start.

Breast reduction (surgery to make the breasts smaller) appears to decrease the breast's capacity to produce milk. That said, some women who have undergone reductive procedures produce enough milk to breastfeed their babies exclusively for several weeks or more. It may be necessary to monitor the baby's weight more often during her first weeks of life to make sure that she's receiving enough milk.

If you aren't producing enough milk to meet all your newborn's nutritional needs, you'll need to supplement feeding with a commercial infant formula.

Breast augmentation appears to have less impact on breastfeeding.

Restarting milk production

If you've stopped breastfeeding, didn't breastfeed your child at birth, or are finding that your baby has trouble tolerating commercial infant formulas, it's possible to resume breastfeeding regardless of your baby's age.

With determination—and support from someone trained in breastfeeding—you'll be able to resume lactation, even if you never nursed your baby.

You've adopted a baby? It's even possible to begin producing milk without having gone through a pregnancy.

If you're breastfeeding—and pregnant

If you're newly pregnant and have been breastfeeding, you can continue to nurse. It's safe for both your **fetus** and your nursing baby.

If your baby is less than 6 months old, you may not produce enough milk to satisfy her nutritional needs, a situation that could affect her growth. In this case, you may have to supplement feeding with a commercial infant formula.

The hormonal changes that occur in pregnancy affect the composition of milk (reversion to colostrum) and can also reduce your milk supply. Some older babies don't like these changes and lose interest in breastfeeding.

Expressing milk

Pumping or manually extracting breast milk lets your baby enjoy your milk when you're not there to feed her, or if she is premature or sick. Expressing milk not only allows you to maintain your milk supply, but also helps relieve the effects of engorged breasts.

Tips to keep your milk flowing

Your baby's nursing stimulates the let-down reflex, which increases milk flow. It's sometimes harder to stimulate this reflex when you're expressing milk by hand or with a breast pump, especially on your first attempts. With a little practice, you'll become good at it.

Depending on what you prefer, you can use any of the following methods to stimulate the let-down reflex

- Self relaxation
- Breast massage
- Warm compresses
- Visualization of your baby nursing
- Thinking about your baby
- Distracting yourself with another activity (for instance, watching television)

Choosing a method for expressing milk

Breast milk can be expressed in a number of ways. Your choice of method will depend on

- The situation
- How frequently you **express** milk
- How you are feeding your baby—that is, breastfeeding or not
- And of course, your own preference

Regardless of the method you choose, it's important to handle your breasts gently and to wash your hands before expressing milk.

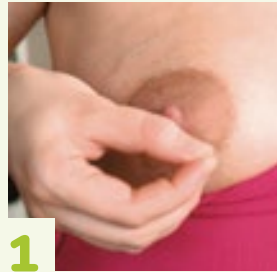


How to do a breast massage

To relax your breasts before expressing milk, try a technique borrowed from massage. The idea is to use the knuckles to gently stimulate the breast.

- Make a fist and keep it closed throughout the massage.
- Place the knuckle of your index finger at the top of your chest and roll your knuckles down toward the nipple.
- To massage the underside of the breast, place the knuckle of your little finger against your ribs and roll your knuckles up toward the nipple.
- Move your fist to the other breast and repeat the rolling motion.
- Work your way around the breast once or twice, then start expressing milk.

Massage shouldn't be painful. You can repeat this massage once or twice while you're expressing milk.



How to express milk by hand

Manual expression is a technique every mother should know. It's the most effective way to **express** colostrum, you can use it any time, anywhere to relieve an engorged breast, and it's free.

This technique is easier than it sounds. Ask hospital staff, your midwife, or a CLSC nurse to teach it to you.

- Wash your hands.
- Use a large, clean container.
- To prompt the let-down reflex, massage your breast gently.
- Lean forward slightly so the milk can flow into the container.
- Make a "C" with your thumb and index finger. The tip of each should line up like a pair of pliers (see **photo no. 1**).
- Place your thumb and index finger on either side of the nipple, 2 to 5 cm (1 to 2 inches) away. With practice, you'll find the best distance (see **photo no. 2**).
- Press your fingers into your breast, pushing horizontally toward the ribs (see **photo no. 3**).
- While maintaining pressure on your fingers, pinch your thumb and index finger together as if they were a pair of pliers. You don't need to press hard. This motion shouldn't leave any mark on your breast or cause any pain.
- Repeat this pinching motion several times, reproducing the same rhythmic movements your baby uses when nursing.
- Be careful not to slide your fingers along your breast. Maintain firm pressure on your breast without stretching the nipple, which is painful and not very effective.
- Work your way around the breast with your fingers until it's emptied.

Your milk will flow drop by drop at first, then begin to spurt. With practice, you'll be able to work more efficiently and quickly.

Choosing a breast pump

It is not always necessary to buy a breast pump. Many women prefer to use one, however, especially if they have to **express** their milk on a regular basis. To find a breast pump that suits your needs, contact a community breastfeeding support group or a person trained in breastfeeding.

A number of models are available on the market:

- Manual breast pumps
- Various types of electric breast pumps, including some that allow you to express milk from both breasts at the same time.

You should also consider the following factors:

Quality – A poor quality breast pump may hurt you or reduce your milk production.

The number of sucking movements per minute – Choose a breast pump that allows for 60 to 70 sucking movements or cycles per minute so that it imitates as closely as possible the rhythm and strength of your baby's sucking.

Suction – A breast pump with insufficient suction reduces the quantity of the milk expressed, whereas suction that is too strong and prolonged irritates the nipples.

Size and shape of the cup – The breast pump's cup, which fits on the nipple and **areola**, must be properly adjusted to your nipples to avoid injuring them. Some companies offer a number of models and sizes.

Characteristics of any good breast pump

- Be leakproof and maintain proper suction
- Fit your nipples properly
- Protect your nipples by avoiding suction that is too strong or prolonged

Characteristic of a good electric breast pump

- Create and release suction at 60 to 70 cycles per minute

Characteristic of a good manual breast pump

- Be comfortable and not tire your hand

Regardless of the type of breast pump you choose, it is important to clean it properly. It also needs to be disinfected before the first use (see [Cleaning bottles, nipples and breast pumps](#), page 507).

Second-hand breast pumps

Most breast pumps, whether manual or electric, are intended to be used by only one mother. They must therefore be considered as a personal item, just like a toothbrush or underwear. Breast milk can transmit diseases like HIV and hepatitis, or less serious infections like thrush. Boiling a second-hand breast pump does not make it safe, even if it does reduce the risk of disease transmission.

Hospital-grade electric breast pumps are, however, designed to be used by multiple mothers. You can rent hospital-grade electric breast pumps from community breastfeeding support groups and some drugstores. These breast pumps are sturdy and high quality. They are intended to be used by many people, so they are designed in such a way that the pump motor never comes into contact with the milk. In fact, it is the motor you rent: each woman must buy a new set of tubes, which includes all parts that come in contact with the milk.

If you buy a second-hand breast pump that is not hospital grade, keep in mind that there may be milk remaining in the motor. Since there is no way to check this or to clean the motor, there is a risk of contamination, even though the risk is low. For this reason, it is recommended that you not buy a second-hand breast pump. If you decide to do so, be sure to buy a new set of tubes.

Expressing milk occasionally or regularly

If you breastfeed, your milk production has adjusted to your baby's demand. So it is normal to **express** only a few drops on your first few attempts. Be patient.

There is no ideal time to express your milk. The ideal moment is the one that suits you the best! Try these suggestions:

- When your baby has fed at only one breast
- In the morning
- When your breasts are engorged
- Between feedings
- While your baby is feeding at your other breast
- When you skip a feeding

If you **express** milk between feedings, you will probably get only a small amount of milk. You will get more if you express the milk from a breast that your baby has not fed from for some time.

Expressing milk without breastfeeding

Some women express milk for a baby who won't breastfeed. Others simply prefer this method. Depending on your situation, you can express your milk for several days, weeks, months, or throughout the entire period you feed your baby breast milk.



It is normal to get only a few drops the first few times you express your milk. The more you stimulate your breasts, the more milk they will produce.

During the first month, many babies who did not breastfeed at birth succeed in doing so if your milk production is high. Don't hesitate to ask for help if you want to try breastfeeding again.

Remember that premature babies are smaller and their intestines are not yet fully developed. In the first few days, or even weeks, they only drink a little if at all and they do not suck as effectively. However, to get your milk production off to a good start, it's better to express your milk as if your baby were full term.

The way you express your milk when not breastfeeding will change as your milk production gets going and adapts to your baby's individual needs.

Feeding your baby with your milk without breastfeeding

Before your milk comes in

Frequency

- If possible, start stimulating your breasts within 6 hours after the birth.
- **Express** your milk 6 to 8 times a day.
- Use the breast pump at least once every 6 hours, even at night.

Duration

- After expressing the colostrum by hand, use the breast pump for 5 to 10 minutes.

Quantity

- You will produce from a few drops to several milliliters. The colostrum (first milk) is thicker.
- Expressing milk by hand seems to produce more milk than the breast pump during the first 24 to 48 hours. As your milk changes, it will become easier to express with the breast pump.
- The quantity of milk usually increases from 48 to 72 hours after the birth.

When your milk comes in

Frequency

- Express your milk as often as necessary for comfort's sake, but at least 8 times a day.
- Use the breast pump at least once every 4 hours, even at night.

Duration

- Express your milk until your breasts are soft and comfortable.

Quantity

- The quantity of milk increases rapidly. Take advantage of this period to get your milk production off to a good start, even if your baby drinks much less than you express. Stock up.
- Mothers who express at least 500 ml of milk per 24 hours after the first week seem to produce more milk afterwards.

1 to 6 weeks

Frequency

- **Express** your milk 6 to 8 times a day.
- Use the breast pump at least once every 6 hours, even at night.

Duration

- Express your milk until the milk has stopped flowing for about 2 minutes.

Quantity

- Try to express a little more milk than your baby drinks. That way you will always stay ahead of her needs, which will increase rapidly.
- It's normal that the quantity of milk you express varies each time.
- Mothers who express at least 750 ml per 24 hours after two weeks seem to produce more milk afterwards.

After 6 weeks

Frequency

- Depending on how much milk you produce, you can adapt to your baby's needs.
- Some women can stop expressing milk at night, and others not.

Duration

- Express your milk until you have the quantity of milk your baby needs.

Quantity

- Adjust the quantity of milk you express according to your baby's needs.
- Ideally, try to express a little more milk than your baby drinks in order to stay ahead.

Combining breast and bottle

To suck from a bottle or from your breasts is not the same. Here are the main differences:

- Your baby has to open her mouth wide to latch on to the breast, which is not the case with a bottle.
- Milk sucked from your breasts flows faster at first and when you have a let-down reflex, while milk from a bottle flows at a constant rate.
- Most bottles will drip into your baby's mouth even when she doesn't suck, which is not the case when she drinks from the breast.

Some babies will switch back and forth between breast and bottle without any trouble, while others find the transition more difficult. After being fed from the bottle several times, some babies don't open their mouths as wide to take the breast or get frustrated when the milk doesn't flow as fast.

Here are some tips to make the breast/bottle combination easier:

- Don't introduce the bottle until breastfeeding and milk production have settled into a pattern (around 4 to 6 weeks).
- Wait until your baby opens her mouth wide before giving her the bottle.
- Opt for a slow-flow bottle nipple.
- Give your baby breast milk in a bottle rather than commercial infant formula. It will help you maintain a good milk supply.

Partial or mixed breastfeeding

Although exclusive breastfeeding is the best way to feed your baby, you may find yourself in a situation where partial breastfeeding is the only way you can continue nursing. This approach may allow you and your baby to enjoy breastfeeding longer. Some babies adapt well to this type of breastfeeding while others don't.

Partial (or mixed) breastfeeding is when your baby drinks both breast milk and commercial infant formula every day.

Women may choose partial breastfeeding for a number of reasons, and for different periods of time. However, whatever your reason for choosing partial breastfeeding, you should be aware of the following:

- The more your baby nurses, the longer your milk production will last.
- If you feed your baby commercial infant formula every day, your milk production will drop because your breasts are less stimulated.
- Some babies gradually lose interest in breastfeeding when milk production drops.
- Some babies may prefer the bottle and lose interest in the breast, even if your milk supply is plentiful.
- Complete **weaning** may occur earlier than anticipated.

If your baby refuses the bottle

Some babies, regardless of their age, simply don't like drinking from a bottle. This is perfectly normal; after all, bottle and breast are quite different. Occasionally, babies who have had no problem drinking from both breast and bottle may suddenly start refusing the bottle after a few months. As they grow, babies learn to **express** their preferences better, and some make their choice perfectly clear!

This can be a difficult situation for parents, especially if the mother feels trapped or obliged to breastfeed. Be patient, and don't force your baby one way or the other. He is not likely to accept something new if he's frustrated.

Here are a few tips to help ease the introduction of the bottle:

- Wait until your baby is in a good mood and not too hungry before making the change.
- Introduce the bottle for a milk "snack." Your baby will probably drink very little to start with.
- Get the father to give the bottle. Discreetly leave the room at feeding time.
- Try with breast milk first, then with commercial infant formula.
- Try giving the bottle differently from the way you present the baby your breast. Change routines.
- Patience! If it doesn't work the first time, try again a few days later.

If you have tried these tips and your baby still refuses to take the bottle, you can try giving him some milk in a little cup. He may be more willing to take it.



Weaning

Weaning age varies from one child to another. Whether it's the mother or child who initiates the process, various factors affect weaning: the child's age and temperament, the mother's feelings and the approach used.

Give yourself time. Be attentive to your child's reaction and stay flexible. If possible, it's better to delay weaning a sick child. She needs her mother's milk and the comfort she gets from breastfeeding.

Weaning babies under 9 months old

Milk production declines gradually as breast stimulation is reduced. Gradual weaning helps you to avoid engorged breasts and reduces the possibility of **mastitis**. The time it takes to stop producing milk altogether varies from one woman to another, however it generally takes about four weeks to wean your baby completely. This gives your child time to adapt. Weaning faster may be hard on both you and your baby.

Start by replacing one daily breastfeeding with an iron-enriched commercial infant formula served in a baby bottle or cup. Between feedings you can empty your breasts by expressing some milk or letting it flow under a hot shower.

Once your breasts no longer feel engorged, replace a second feeding when you're ready. At first, don't skip two breastfeedings in a row. You can gradually replace as many breastfeedings as you want. Many mothers continue the main bedtime and morning feedings.

Some mothers will feel their breasts engorged with milk for a few days after the "last" breastfeeding. Don't hesitate to **express** some milk to ease the discomfort. You can also let your baby breastfeed for a few minutes.

At about the age of 6 months your baby can start drinking from a regular cup. At first, he will probably only drink a small amount of milk. This is perfectly normal. Finish up with a baby bottle if needed. Offer him the cup often, and make sure he's getting enough milk—it will remain his primary food for his first full year of life, providing the calcium and protein he needs to grow.

Weaning babies older than 9 months

As your child gets older, you can decide how quickly you wish to wean her. Gradually encourage her to develop other ways of satisfying her needs for nutrition and contact. Many children lose interest in the breast when they lose the need to suck.

For older babies, breastfeeding is often a moment of comforting contact. If you're trying to wean your child, it's a good idea to introduce other such moments—rocking, massage, back-rubs and so on. You will breastfeed less and less as your baby eventually starts going days at a time without wanting to nurse.

By about 9 months, provided she is eating a balanced diet, your baby can start to drink 3.25% homogenized milk instead of breast milk.

Here are a few suggestions to ease the transition:

- Don't refuse your baby the breast if she wants it, but gradually stop offering it.
- Delay feedings if she's not too impatient so they are spaced further apart and reduced in number.
- Offer her a nutritious snack.
- Distract her with a game or other stimulating activity.
- Reduce the length of feedings.
- Change your daily habits, e.g., don't sit in the chair you usually use to breastfeed her.

Consult a community breastfeeding support group, if needed.

Breastfeeding problems and solutions

Some new moms find breastfeeding easy right from the start. Others find it more challenging, especially in the first few weeks. If you fall into the second category, you will find all kinds of information and solutions in the next few pages.



If you are experiencing one of the following problems, it is advisable to seek professional advice:

- Difficulty getting the baby to latch on
- Pain or lesions on the nipples or breasts
- Baby not gaining enough weight
- Problems with milk production

Discouraged and thinking of weaning your baby?

Some women get discouraged when they can't find a solution to their breastfeeding problems. When breastfeeding doesn't go as planned, many new mothers will think about **weaning** their baby, even if they were originally very determined to breastfeed.

Feeling tired, discouraged, ambivalent or confused? This is probably not a good time to make such an important decision.

If you are experiencing problems, consider these options:

- Consult someone trained in breastfeeding.
- **Express** milk from one or both breasts so you can temporarily or permanently reduce or stop nursing.
- Try a nipple shield. It can sometimes reduce pain and help your baby latch on (see **Nipple shields**, page 474).
- Opt for partial (or mixed) breastfeeding by introducing commercial infant formula.



Jean-Claude Mercier



If you don't think you can continue breastfeeding and are considering weaning your baby, maybe you just need some extra assistance or encouragement. Don't be afraid to seek help.



Jean-Claude Mercier



Having the support and reassuring presence of the baby's father or someone close to you can often make all the difference.

When breastfeeding doesn't go as planned

Giving birth to and caring for your baby is one of the most intense experiences you will ever have.

In the first few weeks, you may often find yourself crying from fatigue and hormonal changes. Breastfeeding, too, is an emotional time.

Breastfeeding is not always easy and for some women, it can be downright difficult. Even with excellent support and specialized assistance, there is a possibility that your breastfeeding experience simply doesn't live up to your expectations. Some women feel regret, sadness, frustration and even anger because they are unable to achieve the goal they had set for themselves. Others feel guilty for wanting to stop breastfeeding. Remember, it's not your fault! Successful breastfeeding depends on a number of factors that you can't always control.

It's good to be able to talk about your feelings with someone you trust and who will lend an ear. Every birth and breastfeeding story is unique.

Your baby sleeps a lot

If your baby sleeps a lot, you probably wonder whether you should wake him to nurse. It's not always easy to know what to do. Follow his rhythm and let him sleep if he

- Wakes on his own to nurse 8 times or more in a 24 hour period
- Is active and sucks and swallows well when nursing
- Pees at least 6 times and passes at least 3 stools a day
- Is calm and seems satisfied after nursing
- Has regained his birth weight and continues to gain weight

Babies each have their own rhythm that changes over time.

Some babies sleep so much they may skip some feedings, especially during the first 2 or 3 weeks. This means they will have a hard time getting all the milk they need. You should stimulate your baby if he sleeps a lot and is not showing the signs described above.

It's easier to wake a baby who is dozing than one who is in a deep sleep. Babies generally alternate between light and deep sleep.

What to do?

If you have to wake your baby to nurse him, start by observing him.

Is he moving in his sleep, making sucking motions or moving his eyes beneath his eyelids? These are signs that he is in a light sleep phase. Now is a good time to try to stimulate him or change his diaper, as he will be easier to wake.

If your baby falls asleep while nursing, check the tips on helping him drink more in the section [Your baby is not drinking enough milk during feedings](#), page 477.

Your baby has trouble latching on

Newborns don't all develop at the same pace. Some take longer to learn how to latch on properly. If your baby has trouble latching on in the beginning, you can continue to breastfeed by expressing your milk. Don't worry, your baby is not rejecting you! If she gets frustrated and pushes on your breast, it's because she's hungry and can't quite manage to latch on.

Babies may have trouble latching on if they

- Were born prematurely and are less efficient at sucking
- Have a sore head following the delivery
- Have difficulty sucking
- Have a tight lingual frenum (membrane under the tongue is short and impedes tongue movement)
- Prefer the bottle (if they have already been bottle-fed)
- Refuse to take the breast after having been forced to nurse

In other cases, it may be that the mother

- Has flat or **inverted nipples**
- Has nipples that are usually erect, but that retract when the baby tries to latch on
- Has very hard or engorged breasts

Most of the time, babies have difficulty latching on due to a combination of factors. However, there may be cases when there is no obvious reason.

What to do?

Here are a few tips:

- If your breasts are engorged, try to relieve them (see [Engorgement](#), page 492).
 - Breastfeed your baby before she gets too hungry. If she seems too hungry, start by giving her a bit of your milk in a spoon or little cup to calm her.
 - Try different positions. Some babies prefer specific nursing positions.
 - If your baby gets frustrated, remove her from your breast for a few minutes to calm her down.
-



Let your baby discover her innate sucking reflex. Strip her down to her diaper, remove your bra and lay her skin-to-skin between your breasts. Relax and wait until she starts seeking out the breast, then gently guide her. Be patient, this can take a few minutes.

If your baby doesn't latch on, there's no point insisting. You can always complete the feeding with expressed breast milk:

- Keep feeding your baby. Don't skip a feeding because your newborn can't latch on properly.
- **Express** milk to keep your milk production up. Babies seem to find it easier to learn to latch on when milk production is plentiful.

This period requires lots of patience, confidence and support. Try to avoid introducing the bottle or using a nipple shield during this time.

Many babies will eventually learn to latch on, especially if they are less than 6 weeks old and milk production is good.

Your baby refuses one breast but takes the other

Some newborns will have no trouble taking one breast, but refuse the other. Don't worry, this is quite common. If this happens, express some milk from the breast the baby refuses, to stimulate production. Keep offering him the breast in question but don't force him. He will eventually take it.

Nipple shields

Nipple shields are a breastfeeding accessory made of moulded silicone that adjusts to the shape of the breast. They come in various sizes and models.

They are sometimes recommended when the baby does not take the breast or when the mother's nipples are painful.

Nipple shields must be used only as a last resort and preferably not in the first few days of breastfeeding. There is almost always an alternate solution. They are best avoided for the following reasons:

- With a nipple shield, the baby doesn't learn to latch on properly.
- The baby quickly gets used to it and can subsequently refuse to take the breast without a nipple shield.
- Their use results in reduced breast stimulation and can cause a drop in milk production.

If a nipple shield seems to be the solution for you

- Choose one that is closest in size to your nipple
- Use it only on one side, if only one breast is causing problems
- Use it for part of the feeding only
- **Express** your milk after each feeding several times a day to keep up your milk production
- Stop using it as soon as you can

Nipple shields are generally for temporary use. You should stop using yours as soon as the problem has been solved. If you are finding it hard to breastfeed without it, contact a person trained in breastfeeding. In some cases, nipple shields may be used throughout the breastfeeding period.

Your baby was breastfeeding but now refuses to

Sometimes a baby who was perfectly happy to take the breast will start to refuse it. In some cases this will happen all of a sudden, while in others, the baby gets increasingly impatient while nursing until she eventually refuses the breast altogether.

What if you know your baby is hungry, but she can't seem to latch on or simply refuses to take the breast? While there may be no obvious reason, there are a number of possible causes:

- Your breasts are engorged, making it difficult for your baby to latch on.
- Your milk flow is slowed by a blocked duct or **mastitis**.
- Your baby has a growing preference for the bottle.
- Your baby is not feeling well or has a stuffy nose.

This situation usually sorts itself out in a few days.

What to do?

Healthy babies who are at least a few weeks old can easily go for several hours without feeding.

Here are a few tips:

- Try for short periods (10 minutes) when she's calm and not too hungry.
- Don't force your baby to take the breast.
- Calm your baby before nursing by offering her a small amount of breast milk in a spoon or small cup.
- Offer your baby the breast just as she's about to wake up.
- Hold your baby in your arms and offer her the breast while you're moving or walking.
- Try taking a bath with your baby and nursing her in the water once she's fully relaxed.

If the situation doesn't resolve itself after a few feedings, contact someone trained in breastfeeding.

Your baby is not drinking enough milk during feedings

Some situations can cause your baby to nurse less effectively. In cases like these, she may not get enough milk from your breasts, even if your milk supply is plentiful. This is most often the case with babies who are

- Born before term (between 35 and 37 weeks)
- Exhausted from the delivery
- Suffering from jaundice
- Losing weight or failing to gain weight

If your breasts lack proper stimulation for too long, your milk production is likely to decrease.



A small cup may be used under certain conditions if your baby isn't drinking enough milk when breastfeeding.

What to do?

- Check that your baby is latching on properly and improve his latch, if possible.
 - Breastfeed more frequently, at least 8 times every 24 hours. Wake your baby to nurse if need be.
 - Offer the breast rather than a pacifier to comfort your baby. Pacifiers don't provide milk and can mask signs of hunger.
 - Compress your breasts at each feeding (see [Breast compression](#), page 435).
 - Stimulate your baby so that he nurses effectively and swallows regularly throughout the feeding (talk to him; massage his back, legs, arms, etc.).
 - Switch breasts once your baby stops swallowing during the feeding.
 - **Express** milk between feedings and offer it to your baby, preferably from a spoon or little cup. Avoid using a bottle.
-

If these tips don't work, or if your milk production drops off, you may have to use a commercial infant formula to fulfill your baby's milk requirements (see [Insufficient milk production](#), page 480). Contact someone trained in breastfeeding if the situation doesn't resolve itself quickly or if you are concerned.

Worried you don't have enough milk?

Many new moms worry they aren't producing enough milk because their baby cries and wants to nurse often or for long periods. This is highly unlikely so long as your baby is latching on correctly and you nurse her on demand.

Newborns cry for all kinds of reasons that often have nothing to do with a lack of milk (see [Temperament](#), page 314). Try not to let yourself be influenced by what other people say. Before concluding that you aren't producing enough milk or that your milk isn't nourishing enough, take the time to consider the situation. It's normal for infants to breastfeed often and for your breasts to be softer after a few weeks of breastfeeding.

What to do?

- Make sure your baby is latching on properly.
 - Stimulate your baby to ensure she continues to suck actively. She may get more milk faster if she sucks more effectively.
 - Breast compression can help (see [Breast compression](#), page 435).
 - You can also offer both breasts more than once during each feeding.
-

Insufficient milk production

Sometimes, milk production is low right from the start of breastfeeding. In other cases, it can drop off suddenly. This may be temporary, and can be due to any of a number of different causes:

- Your breasts are understimulated because:
 - they are not being stimulated often enough (less than 8 times a day);
 - they are not being stimulated correctly by your baby or your pump;
 - you give your baby commercial infant formula in a bottle every day.
- You have undergone breast surgery (breast reduction).
- You suffer from poorly controlled hypothyroidism or another health problem.

- You have an insufficient number of mammary glands, regardless of the size of your breasts (glandular insufficiency).
- You are pregnant again.
- You are taking contraceptives or a decongestant containing pseudoephedrine.

Sometimes insufficient milk supply cannot be explained by any of these reasons. Regardless of the quantity produced, the quality of breast milk is always excellent. Even in small amounts, your breast milk provides your baby with a host of **nutrients** that are not found in commercial infant formula.

If your milk production is insufficient, make sure your baby is drinking enough and continuing to gain weight. Even if you supplement feedings with commercial infant formula, you can still continue to breastfeed.

What to do?

The best way to boost your milk production is to stimulate your breasts often and **express** as much milk as possible. To help your baby nurse more effectively, see **Your baby is not drinking enough milk during feedings**, page 477.

You can also talk to a trained breastfeeding support person. This can help you

- Assess your milk production
- Increase your production as much as possible

She can also discuss with you the possibility of using a little tube or catheter called a lactation aid that is placed on the breast while you nurse. These aids can help you continue to breastfeed. Your midwife or a nurse at your CLSC can supply the tubes and show you how to use and clean them.

If your milk production is still low, don't get discouraged. Talk to your doctor, who can recommend a drug that helps boost milk production.

Milk flow

Your breasts may leak milk between feedings or at night. This is a normal, natural way for your breast to relieve themselves. If it bothers you, you can protect your bed linens with a towel and wear nursing pads during the day.

Very fast milk flow (strong let-down reflex)

After nursing for a few minutes your baby will start swallowing loudly. He may even choke a little or stop nursing and start crying when milk runs onto his face. Your baby is upset because the milk is flowing too quickly. This happens most often around the age of 1 month. As babies grow older, they adapt better.

What to do?

Here are a few suggestions to make nursing more enjoyable. Try the first suggestion, then add the others one at a time to see what works best for you.

- Remove your baby from your breast for a few minutes if the milk starts flowing too fast.
 - Try different breastfeeding positions to see if there is one that suits you and your baby better.
 - If you have a lot of milk, try offering only one breast per feeding; this may be enough to satisfy your baby. **Express** just enough milk from the other breast so you're comfortable.
 - If your breasts are very full before nursing, express about 15 ml (1 tablespoon) of milk to trigger the first let-down reflex and slow the initial milk flow.
-

Painful nipples

During the first week, your nipples may be sensitive, especially at the beginning of a feeding. You and your baby are still in the learning period. After this time, breastfeeding should not be painful.

It is not normal to feel pain after the first 30 seconds of nursing or to be fearful of nursing because of the pain. The most common cause of pain is an incorrect latch. As soon as the cause of the discomfort is corrected, the pain will quickly lessen.

Persistently painful and cracked nipples are one of the main reasons women decide to wean their babies early. The following charts list some of the most common causes of nipple pain, along with advice and recommended treatment.

Causes of painful or cracked nipples

Painful and cracked nipples can have various causes:

- Poor latch
- Eczema or dermatitis
- Vasospasm
- Milk blister
- Thrush

Poor latch

What is it?		What to do?
<ul style="list-style-type: none"> • Most common cause of nipple pain and chapping. • Pressure on the nipple between the baby's tongue and palate when he hasn't taken enough of the areola into his mouth. 		<ul style="list-style-type: none"> • Improve the latch so it looks like the photo on page 429. • Begin nursing with the less sensitive breast. • Vary breastfeeding positions. • Put a few drops of breast milk onto the nipple at the end of a feeding. • Use an analgesic such as acetaminophen (e.g., Atasol® or Tylenol®). <p>You should feel a difference as soon as the baby improves the latch.</p> <p>N.B.: Over-the-counter ointments and creams provide some relief but won't solve the problem.</p>
Possible signs		
You'll feel	You'll see	<h3>Not feeling any better?</h3> <ul style="list-style-type: none"> • If nursing your baby is too painful, it's important to express your milk to prevent engorged breasts and maintain your milk production. • If you're in too much pain, promptly ask for help. • If your cracked nipples don't heal or improve after correcting the latch, see a doctor: you may need antibiotic ointment.
<ul style="list-style-type: none"> • More pain at the start of feeding. 	<ul style="list-style-type: none"> • A deformed, flat or pinched nipple when the baby releases the breast. • Chapping or cracks that may bleed. 	

Eczema or dermatitis

What is it?		What to do?
<ul style="list-style-type: none">• Skin reaction to frequent or excessive moisture.• Allergic reaction to a product or material.		<ul style="list-style-type: none">• Stop applying any creams, lotions, lanolin or other products.• Apply a thin layer of over-the-counter 0.5% hydrocortisone after every feeding for 3 to 5 days. There is no need to remove the product before feeding.
Possible signs		
You'll feel	You'll see	
<ul style="list-style-type: none">• A burning or itching sensation during and between feedings.	<ul style="list-style-type: none">• Pinkish or bright red patches, which tend to be most visible on the areola.• Dry, cracked or peeling skin.	
		Not feeling any better?
		<ul style="list-style-type: none">• See a doctor for diagnosis and to get appropriate treatment.

Vasospasm

What is it?		What to do?
<ul style="list-style-type: none"> • Spasm or contraction of the blood vessels brought on by the nipple coming into contact with cold air when the baby releases the breast. • May come and go one or more times between feedings. • Caused by a poor latch. • Worsened by nicotine and caffeine. 		<p>Vasospasms are harmless, so no treatment is needed if you aren't in any pain.</p> <p>To prevent or reduce pain, try these tips:</p> <ul style="list-style-type: none"> • Check and correct the latch as needed. • Apply dry heat, such as the palm of your hand or a magic bag to the nipple immediately after nursing. • Keep your body warm.
Possible signs		
You'll feel	You'll see	<h3>Not feeling any better?</h3> <ul style="list-style-type: none"> • Vitamin B₆ may provide relief. The dose is 150 mg per day for 4 days, followed by 25 mg per day until the pain disappears. Discontinue use if there is no improvement after a few days. • Prescription medication can also be effective. See a doctor if needed.
<ul style="list-style-type: none"> • A burning sensation in the nipple or throughout the breast. • Pain on contact with a cold wind or when you come out of the shower. • Pain completely disappears a few seconds to a few minutes after nursing. 	<ul style="list-style-type: none"> • Part or all the nipple turns white. • Nipple returns to its normal colour a few seconds to a few minutes after nursing. 	

Milk blister

What is it?		What to do?
A thin layer of skin that blocks milk coming out of the end of the nipple.		<ul style="list-style-type: none">• Take a long, hot bath to soften the skin on the nipple.• Nurse your baby right after your bath: she may be able to open the blister.• Apply an ice cube to the end of the nipple for 1 to 2 minutes to numb it and make the start of feeding less painful.
Possible signs		
You'll feel	You'll see	Not feeling any better?
<ul style="list-style-type: none">• Intense pain in the nipple and sometimes throughout the breast, especially at the start of feeding.• Possibly a lump or hard area in the breast.	<ul style="list-style-type: none">• Small (1–2 mm) white pimple on the tip of the nipple that may protrude slightly.	<ul style="list-style-type: none">• If this doesn't work, contact a person trained in breastfeeding.

Nipple thrush

What is it?		What to do?
<p>Fungal infection that can</p> <ul style="list-style-type: none"> • Appear in a baby's mouth (see Thrush in the mouth, page 626) • Cause diaper rash • Occur in the mother, even when the baby has no visible thrush in his mouth 		<p>An ointment is often all you need to treat an infection that is limited to the nipple and areola:</p> <ul style="list-style-type: none"> • Choose over-the-counter nystatin (e.g., Nilstat[®], Nyaderme[®], Mycostatin[®]) or miconazole (e.g., Micatin[®], Monistat Derm[®]) ointments • Apply a thin layer after each feeding. You don't need to remove it before nursing • Continue treatment for a few days after the pain goes away
Possible signs		
You'll feel	You'll see	<h3>Not feeling any better?</h3> <ul style="list-style-type: none"> • If there's no improvement after 5 days or you experience breast pain, see a doctor for diagnosis and to get appropriate treatment.
<p>Pain in the nipple or inside the breast, which</p> <ul style="list-style-type: none"> • Burns, more intensely at the end of feeding • Strikes out of the blue • Comes gradually or in addition to existing pain 	<ul style="list-style-type: none"> • No changes to the nipple or areola. • Cracked or redder nipple. • Red, smooth and shiny areola. 	

Breast pain


Breast pain is less common than nipple pain. Often the pain is accompanied by a lump or hard area on the breast. Breast pain is not normal. Treat the problem promptly or see a health professional if necessary.

Causes of breast pain

There are several possible causes for the pain:

- Thrush in the breast
- Engorgement
- Blocked milk duct
- **Mastitis**

Thrush in the breast

What is it?		What to do?
Fungal infection that can occur in the breast.		<ul style="list-style-type: none">• Consult a doctor for a diagnosis and to receive the appropriate treatment.
Possible signs		
You'll feel	You'll see	
<ul style="list-style-type: none">• Burning inside the breast.• Pins-and-needles sensation through the breast.• Pain during or between feedings that may wake you at night.• Pain similar to vasospasm, but much more frequent.	<ul style="list-style-type: none">• Normal breast with no redness or lumps.• Thrush sometimes visible on the nipple.• Thrush sometimes visible in the baby's mouth.	<h3>Not feeling any better?</h3> <p>See a doctor if the prescribed treatment does not work. The doctor may prescribe another treatment. A drug administered orally may also be prescribed.</p> <p> In the past, gentian violet was recommended as a treatment for nipple and breast thrush. However, it is now known that exposure to this product may increase the risk of cancer, and its use is no longer recommended. If you have any concerns about this issue, talk to a health professional.</p>

Engorgement

What is it?		What to do?
<ul style="list-style-type: none"> • Surplus of milk in the breast. • Milk production exceeds baby's demand. • May occur when your milk comes in, during periods when baby drinks less than usual or during abrupt weaning. 		<ul style="list-style-type: none"> • Nurse more frequently, particularly when your milk is coming in. • Apply ice for 10 to 15 minutes every 1 to 2 hours between feedings to help reduce swelling and pain. • Express enough milk to soften the areola if your baby has trouble nursing. • Express milk after nursing if your baby hasn't drunk much. Express enough to be comfortable without trying to empty your breasts. • As needed, acetaminophen (e.g., Atasol[®], Tylenol[®]) or ibuprofen (e.g., Advil[®], Motrin[®]) reduces pain and is not dangerous for the baby.
Possible signs		
You'll feel	You'll see	<h3>Not feeling any better?</h3> <p>If your breast is very red or you start to run a fever, you might have mastitis.</p>
<ul style="list-style-type: none"> • Heavy, tight breasts. • Breasts that may be slightly or very painful, according to severity of engorgement. <p>You do not have a fever.</p>	<ul style="list-style-type: none"> • Breasts that are hard to the touch. • Tight skin on breasts. • Skin that may be red and warm. 	

Blocked milk duct

What is it?		What to do?
<ul style="list-style-type: none">• Milk blocked inside a duct.• Caused by a breast that was full for too long or because the breast was pinched by a bra or infant carrier.		<p>If the milk stays blocked for too long, you may get an infection. To prevent infection, follow these steps:</p> <ul style="list-style-type: none">• Nurse your baby more often, especially from the affected breast.• Start with the sore breast and vary the positions so that milk flows easily. If possible, direct the baby's chin or nose so that it points to the hard area when she nurses.• Gently massage the affected area during nursing.• Apply ice for 10 to 15 minutes every 1 to 2 hours between feedings.• Apply wet heat just before nursing. Use a damp facecloth or, better still, massage the affected area while having a warm bath.• Avoid wearing an overly tight bra.
Possible signs		
You'll feel	You'll see	
<ul style="list-style-type: none">• Pain in an area of one breast. <p>You have no fever or aches.</p>	<ul style="list-style-type: none">• Possible redness when you touch your breast after nursing.• Hard or red lump or area.• Milk blister.	
Not feeling any better?		
		<ul style="list-style-type: none">• Acetaminophen (e.g., Atasol®, Tylenol®) or ibuprofen (e.g., Advil®, Motrin®) can soothe the pain as needed.• If your breast is very red or you start to run a fever, you might have mastitis.• If you do not experience any pain, redness or fever, but the lump persists for more than a few days, see a doctor.

Mastitis

What is it?

- Breast infection caused by bacteria.
- You are more at risk if
 - You have cracked nipples
 - Engorgement lasts a long time
 - You are tired
- May turn into an abscess.

Possible signs

You'll feel

- Aches, shivers, fatigue (flu-like symptoms).
- Fever.
- Breast pain, often worse when full.

You'll see

- Hard, red, warm and swollen lump or area.



If you have cracked nipples or a red area on your breast that is rapidly getting bigger, see a doctor as you will need antibiotics.

What to do?

- Continue nursing with the infected breast; the milk is fine.
- Empty the painful breast as much as possible. **Express** milk, if need be.
- Start with the affected breast and vary the positions so that the milk flows freely. If possible, direct the baby's chin or nose toward the lump when he nurses.
- If nursing is very uncomfortable, start on the other side first and change sides as soon as milk is flowing freely from the painful breast.
- Apply ice for 10 to 15 minutes every 1 to 2 hours between feedings.
- Take acetaminophen (e.g., Atasol®, Tylenol®) or ibuprofen (e.g., Advil®, Motrin®) to soothe the pain and reduce fever.
- Cut back on your activities and try to get more rest.

Signs of improvement

It takes 2 to 5 days for **mastitis** to clear up.

- The fever generally disappears within 24 hours.
- The pain and redness decrease in under 48 hours.
- The hardened area shrinks within a few days.
- Sensitivity in the breast may last longer.

Not feeling any better?

See a doctor if

- The situation suddenly gets worse
- Your symptoms have not started to improve after 12 hours
- Your situation stops improving for over 24 hours

In some cases, you will need antibiotics.

Bottle-feeding your baby

Choosing baby bottles and nipples.....	498
How much milk?.....	499
Warming milk.....	501
Bottle-feeding your baby.....	502
Bottle-feeding problems and solutions.....	503
Cleaning bottles, nipples and breast pumps.....	507



Nathalie Vandal

Bottle-feeding is important. Bottles can be used to feed your baby expressed breast milk or commercial infant formula. Regardless of the type of milk you're using, you'll need to prepare and use baby bottles in a similar way. This chapter contains information on:

- Choosing bottles and nipples
- Bottle-feeding your baby
- Food-related problems for bottle-fed babies
- Cleaning bottles, nipples and breast pumps

You'll find everything you need to know about milk types and choices in the [Milk](#) chapter on page 382.

General information on feeding your baby (burping, gas, eating behaviour, feeding schedule, etc.) can be found in the [Feeding your baby](#) chapter on page 366.



If you are breastfeeding your baby, be aware that some babies find it hard to return to the breast after drinking from a bottle a few times. Bottle-feeding is also associated with shorter nursing periods, particularly when using commercial infant formula. Keep an eye on your baby's behaviour.

Choosing baby bottles and nipples

There are a number of types of baby bottles and nipples. Most companies try to sell their products by claiming they “prevent colic” or are “closer to the breast.” Such marketing claims have not been scientifically proven.

Bottles

Various types of bottles are available: glass, plastic or with disposable bags. Broadly speaking, they come in two sizes: 150 ml to 180 ml (5 to 6 ounces) and 240 ml to 270 ml (8 to 9 ounces). Each bottle type has its own advantages and disadvantages. Choose the type that best suits you.

Bottles currently on sale in Canada do not contain polycarbonate, a hard, transparent plastic that can release bisphenol A when it comes into contact with hot or boiling liquids. The Canadian government recently banned the sale and import of polycarbonate bottles to protect the health of newborn babies and nursing infants, even though it acknowledges that the quantities of bisphenol A released by bottles are not sufficient to cause harm. All the same, it’s best to buy new bottles and avoid using second-hand ones.

Nipples

Every baby is unique. Your baby might prefer one kind of nipple, and your neighbour's baby might prefer another. No nipple really resembles the breast; nor can it guarantee that the breast/bottle combination will work for all babies.

Nipples come in different shapes, sizes, materials (latex or silicone) and degrees of firmness. There is no scientific evidence that one type of nipple is better than another for your baby. Some babies find it easier to drink with one particular type of nipple, while others have no trouble adapting to any kind. You will probably have to try a few different types before you find the one that works best for your baby.

Most companies sell nipples with different flow speeds. For newborns, a slow-flow nipple is best, because your baby is still learning. Many newborns tend to choke when milk flows into their mouth too quickly. As your baby gets older, you can choose a faster-flowing nipple.

How much milk?

The amount of milk consumed varies widely from one baby to the next, and from one day to another. Over the first few days, your baby will drink only a small amount because his stomach is still very small. This amount will increase gradually.

Your baby may be very hungry in the evening and less so in the morning. It's best to observe and watch for signs of hunger or fullness and let him decide how much milk he needs. Respect your baby's appetite!

No research has been conducted into how much milk babies need at a given age. The information in the table on the following page is only meant to illustrate how much a baby may drink in a day.



Maroussia Beaulieu



Your baby is unique. Watch him and he'll let you know if he has had enough to drink.

Daily amount of milk: an illustration

Age	Daily amount (24 hours)
Within the 1 st week	Steady increase from 180 ml to 600 ml
1 st week until the end of the 1 st month	450 ml to 800 ml
2 nd and 3 rd months	500 ml to 900 ml
4 th , 5 th and 6 th months	850 ml to 1,000 ml
7 th to 12 th months	750 ml to 850 ml

1 oz = 30 ml 1 cup = 250 ml

Remember that tables don't take into account the individual needs of your baby, who is unique. Observing your baby will likely teach you much more than reading this table. You can also ask a doctor, midwife or CLSC nurse for advice, if you feel the need.

Warming milk

There is no nutritional reason to heat milk, but most babies prefer it lukewarm. Children usually begin drinking refrigerated drinks like milk, water and juice at 10 to 12 months, but if your child doesn't like cold milk, you can continue warming it up. To reheat milk:

- Put the milk container in warm water for a few minutes until lukewarm.
- Shake gently. Disposable bags heat more quickly than plastic or glass bottles.
- To check the temperature, pour a few drops on the back of your hand or the inside of your wrist. The milk should be neither hot nor cold to the touch.

To thaw or reheat frozen breast milk:

- Run cold water over the container, then gradually add hot water until the milk is lukewarm.
- Or put the milk in the refrigerator for 10 to 12 hours, then warm it in hot water.
- Stir, check the temperature and feed it to your baby.



Do not warm milk in a microwave oven.
Microwaves heat unevenly, often at dangerously high temperatures.

Do not warm a bottle of milk in boiling water on the stove. All foods—both liquid and solid—lose some of their nutritional value when overheated. And babies have been accidentally burned with milk that was too hot or was heated in a microwave oven.

Microwave ovens are also unsuitable because there is a risk that bags and glass bottles might explode. Also breast milk loses some of its vitamins and **antibodies** when reheated in the microwave.

Don't leave reheated milk for more than two hours at room temperature. Throw it away if it is left out for this long because bacteria multiply quickly and could cause diarrhea.

Bottle-feeding your baby

Feeding will go more smoothly if you bottle-feed your baby as soon as he shows signs of hunger.

Make yourself comfortable. If need be, slide a pillow under the arm holding your baby. Tilt the bottle slightly to keep the neck full of milk and to make sure your baby doesn't swallow any air. Change positions between feedings, moving your baby from one side to the other. This will help your baby's eyesight develop. It's sometimes a good idea to take a break or two while feeding, especially in the first few months.

Feeding time is a great opportunity to bond with your little one. Don't hesitate to make skin-to-skin contact with your baby. This makes him feel safe and warm. Taking time to relax while feeding your baby in your arms is good for both of you. It's not advisable to let your baby hold the bottle by himself in his bed or baby chair because he may choke while drinking.



Feeding your baby is something you learn how to do gradually. Give yourself time and learn to trust yourself!

Bottle-feeding problems and solutions

Babies can sometimes have trouble feeding. Usually, the problem is temporary. The first thing to do is observe your baby. Try to get a feel for her temperament as well as her feeding and sleeping routine.

Your baby sleeps a lot

If your baby sleeps a lot, you probably wonder whether you should wake her to feed. Knowing what's best isn't always easy. You can follow her routine and let her sleep if she

- Wakes up on her own to feed
- Is an active and effective feeder
- Pees at least 6 times and passes at least 3 stools a day
- Is calm and seems satisfied after feeding
- Has regained her birth weight and continues to put on weight



You may need to wake your baby up to feed her if she sleeps a lot.

In this case, there is nothing to worry about. Babies each have their own routine that develops over time.

Some babies sleep so much they may skip some feedings, especially during the first 2 to 3 weeks. This means they will have a hard time getting all the milk they need. If your baby sleeps a lot and doesn't show the signs described above, you need to stimulate her to drink more.

What to do?

- Keep an eye out for signs that she's sleeping lightly (she's moving, making sucking motions, or moving her eyes beneath her eyelids) when it will be easier to wake her up.
- Stimulate her: talk to her, massage her back, legs, arms, etc.
- Leave her in an undershirt or diaper: babies drink less when they are warm.
- See a professional if you're worried or see no improvement after a few days.

Your baby drinks very slowly

Babies can't always suck effectively at the start. This is more common among babies who were born a few weeks prematurely (between 35 and 37 weeks of pregnancy). Even full-term babies may need a few days or weeks to get the hang of things. This situation usually improves with time. Be patient: your baby is learning. Some babies, however, will continue to drink slowly even as they get older.

What to do?

- Change to a faster nipple.
 - Stimulate your baby as she feeds by rubbing her feet and tickling her back and sides.
 - Run your finger under her chin and across her cheeks to stimulate her.
 - Change her diaper or change her position for a few minutes.
-

Your baby often chokes while drinking

If the nipple you are using flows too quickly and your baby has too much milk in her mouth, she may choke (i.e., she swallows noisily, coughs and spits up a little milk).

What to do?

- Change to a slower nipple.
 - Take short feeding breaks.
 - Avoid laying your baby on her back during feeding since milk will flow into her mouth even when she's not sucking. Try to feed her in a near-sitting position so that the bottle is tilted only slightly downward (just enough for the nipple to fill with milk and not air). Your baby will then be able to drink at her own pace.
-

Your baby regurgitates a lot

As long as your baby is happy and putting on weight, regurgitation (“spitting up”) is generally nothing to worry about (see [Regurgitation](#), page 374).

Some babies drink very fast, and their stomachs expand too quickly. This makes it easier for them to regurgitate, especially if they are very active and start moving around right after feeding.

If milk is coming out of the bottle too quickly, your baby will drink too much just to satisfy her need to suck. If she regurgitates a lot, the nipple on the bottle may be too fast.

What to do?

If your baby is in good spirits and gaining weight, there’s nothing to worry about. You don’t need to do anything.

If regurgitation seems to be bothering her, watch her drink. If necessary, try these strategies:

- Change to a slower nipple.
 - Take short feeding breaks.
 - Try to burp her more.
 - Avoid laying your baby on her back during feeding. Try to feed her in a near-sitting position so that milk will flow into her mouth more slowly.
 - Try to keep activity to a minimum right after feeding.
-

It's best to see a doctor if your baby

- Seems to be in pain
- Projectile vomits several times a day
- Wets fewer diapers
- Isn't putting on enough weight

Your baby refuses the bottle

Your baby normally breastfeeds, and you want to bottle-feed her? If she has trouble bottle-feeding or refuses to altogether, see the tips on [Combining breast and bottle](#), page 462.

Cleaning bottles, nipples and breast pumps

Breast pumps and baby bottles need to be kept very clean when feeding your baby breast milk or commercial infant formula.

Cleaning recommendations for bottles and nipples are slightly different depending on which milk you use. Breast milk contains white blood cells and other components that prevent bacteria from growing for a while. Commercial infant formulas contain no such components and may also have been contaminated during preparation.

Inspect the nipples regularly. They will wear out over time due to the effects of suction, heat, contact with milk and exposure to sunlight. Replace them before they become soft or sticky, and throw them away immediately if they have holes, are torn or change texture.

Disposable bags are too flimsy to be reused. Don't pour hot milk into them either as they could burst.



It is important to thoroughly wash baby bottles, nipples, breast pumps, and other items used for feedings to prevent gastro-enteritis and the development of thrush in your baby's mouth.

Care and cleaning recommendations for baby bottles, nipples and breast pumps

Germs, particularly bacteria, may develop and survive in milk, so be sure to remove all traces of milk from bottles, nipples and breast pumps every time you use them.



Cleaning is the most important step in caring for these items.

Cleaning

When:

- After every feeding, clean everything thoroughly no matter what type of milk you use.

How:

- Immediately after feeding, take everything apart.
- Rinse the bottle, nipple and cap or breast pump in cold water. Be sure to run water through the hole in the nipple to remove surplus milk.
- Use hot, soapy water and a nipple and bottle brush. Scrub the bottle and nipple well, inside and out. Make sure to thoroughly clean all grooves on both the plastic ring and the bottle.
- Rinse in warm tap water.
- Drain and cover with a clean towel.

Once the bottles and nipples are clean, you can disinfect them to reduce the number of remaining bacteria.

Disinfection (sterilization)

When:

- Disinfect everything before using it for the first time, whether it's for breast milk or commercial infant formula.
- If you're using commercial infant formula, disinfect your material after every feeding until your baby is 4 months old. You can disinfect all your bottles and nipples once a day if you have enough of them to use for a full day's feeding.

How:

In boiling water

- Take everything apart, clean all parts thoroughly and put them in a large saucepan.
- Cover in water, taking care there are no bubbles trapped in the bottles.
- Cover the saucepan to prevent too much water evaporating.
- Bring the water to a boil and boil for at least 5 to 10 minutes.
- Let cool and remove the items with clean hands.
- Drain and cover with a clean towel.

In the dishwasher

- To disinfect items in the dishwasher, your dishwasher must have a high-temperature washing and drying cycle.
- Choose this cycle, not the energy-saving cycle.
 - Take everything apart and clean thoroughly.
 - Put bottles and rings on the upper rack. You can also put nipples in the dishwasher provided they are made of silicone. Latex (rubber) nipples must be sterilized in boiling water since they are not dishwasher safe.

With an appliance sold to disinfect baby bottles and nipples

- Follow the manufacturer's guidelines.

Water

When to give your baby water.....	511
Boil water for babies under 4 months.....	511
Choosing the right water.....	512
Municipal tap water.....	513
Private well water.....	514
Bottled water.....	516
Bulk water.....	516
Water coolers.....	516
Water treatment devices.....	517
Water problems.....	517



Julie Ward

When to give your baby water

Babies fed with their mother's milk quench their thirst naturally. They don't need to drink water between feedings.

Babies fed with commercial infant formula generally don't need water between feedings if the formula has been prepared according to the manufacturer's instructions.

Around 6 months of age, when your baby starts to eat foods, offer her a small amount of water at a time in a cup.

Boil water for babies under 4 months

All water given to babies under 4 months old must be boiled no matter where it comes from, whether a municipal system, private well, bulk container, or bottle.

You must also sterilize the containers in which you store boiled water, the same way you do baby bottles (see [Cleaning bottles, nipples and breast pumps](#), page 507).

How to prepare and store boiled water:

- Fill a pot with water.
- Boil at a full rolling boil for at least 1 minute.
- Cool the water before giving it to your baby (do not add ice cubes to boiling water to cool it).
- Transfer the boiled and cooled water into sterilized containers.



If you give your baby water before she is 4 months old, make sure it has boiled thoroughly for 1 minute, no matter where it comes from, whether a municipal system, private well, bulk container, or bottle.

You can also use a kettle, but make sure it doesn't have an automatic shutoff, because the water must boil for 1 full minute.

Boiled water can be kept in sterilized, properly sealed containers in the refrigerator for 3 days or for 24 hours if kept at room temperature out of direct sunlight.

From 4 months on, your baby can drink unboiled water.

Choosing the right water

Some micro-organisms that are harmless to adults can cause diarrhea or other illnesses in young children. That's why the water you give your infant, whether in a cup or mixed in formula or purées, must always be good quality. Plus, it must not contain high levels of mineral salts.

Water recommended for infants	Water not recommended for infants
Municipal tap water	Water from lakes or rivers
Water from a private well that meets quality standards	Water from a natural source whose quality is not tested regularly
Commercial bottled or bulk-packaged water (excluding mineral or mineralized water)	Mineral or mineralized water

If you are unsure of the quality of your water or if there is a public advisory against drinking or cooking with your water, do not give it to your baby. Give your baby water from some other source that has been recommended for babies (see table above).

If a public water advisory has been issued about your water (e.g., boil water advisory), follow the instructions provided.

Municipal tap water

Water from municipal water supplies is subject to quality control. If water quality is not good enough for the water to be consumed, the public is immediately notified and recommendations are issued through various outlets: radio, newspapers, personal advisories, etc.



Do not drink warm tap water and do not use it to prepare your baby's bottles or for cooking as it may contain more lead, contaminants, and bacteria than cold water.



Before using tap water for consumption, let it run until the water gets cold, then let it continue to run for a minute or two. This gets rid of any accumulated lead or copper, as well as certain bacteria that are sometimes found in pipes.

Private well water

You can use water from a private well (surface or artesian well) as long as recent tests show that it meets quality standards. If it is a new well, the water should be tested for chemicals and bacteria by a lab accredited by Ministère de l'Environnement et de la Lutte contre les changements climatiques. If you own a private well, it is recommended that you have your well water tested at least twice a year.

For the names of accredited labs in your area, visit ceaeq.gouv.qc.ca/accreditation/PALA/Ila03.htm (in French only).

Tests can detect undesirable elements in your water (e.g., chemicals or microbial contaminants and bacteria such as *E. coli*).

In general, when concentrations of chemical substances in drinking water exceed allowable levels, you must use another source of drinking water, like bottled water. When a microbial contaminant is found in the water, you usually need to either boil and cool it before consumption or use another source of water.

For more information, visit environnement.gouv.qc.ca/eau/potable/depliant/index-en.htm.

If you have doubts about the quality of well water in your area, you can contact

- A local well digger
- Your municipality

For more information, contact

- The Ministère de l'Environnement et de la Lutte contre les changements climatiques branch responsible for your region
- Your local public health department
- A lab in your area accredited by Ministère de l'Environnement et de la Lutte contre les changements climatiques.

You can also visit quebec.ca/en/environment-and-natural-resources/drinking-water/contaminants-in-drinking-water-wells/.



Do not drink warm tap water and do not use it to prepare your baby's bottles or for cooking as it may contain more lead, contaminants, and bacteria than cold water.

Bottled water

Only two types of bottled water are suitable for your baby.

Spring water comes from an underground spring and contains low mineral levels. It is tested twice for quality—once at the spring and again at the bottling plant. Spring water that is labelled “natural” has not been treated or modified in any way. That said, all spring water (with or without a “natural” label) is good for your baby. Generally speaking, water bottled in Québec is disinfected with ozone or UV rays to ensure its microbiological quality.

Non-mineralized treated water is tap water that has been filtered and purified to resemble spring water. It does not contain any added mineral salts.

Bulk water

If you drink bulk-packaged water, be sure to get it from a recognized or reliable location (e.g., a grocery store). To reduce the risk of contamination, the containers you use to collect bulk water should be washed in hot soapy water and rinsed well. In addition, be sure to follow the distributor’s instructions when filling containers.

Water coolers

If you use a water cooler, be sure to clean it regularly according to the manufacturer’s recommendations. Also, be sure to keep the cooler spout very clean, as it can be easily soiled by children or adults with dirty hands or by pets.

Water treatment devices

Some people use home water treatment devices to improve the quality or taste of their water. Products certified by the National Sanitation Foundation (NSF), among others, meet certain quality standards, when used according to manufacturer instructions. However, they do not necessarily meet Québec standards. Moreover, since use and upkeep practices may vary it is impossible to know how safe these devices are. That's why it is best not to give water treated with these devices to a baby under the age of 6 months.

Here are some of the known risks related to some of these devices:

- Water softeners connected to the tap or water intake increase the amount of **sodium** (salt).
- Charcoal filters (with or without silver) can increase the amount of some bacteria.

These devices are also difficult to clean.

If you use one for your family, in addition to cleaning it properly, you need to remember to change the filter or membrane regularly, according to the manufacturer's instructions.

Water problems

Water can change colour, smell, and taste. Got doubts about the quality of your water?

- If you are connected to a municipal water supply, contact the municipality or waterworks operator.
- If you are connected to a private well, contact your local municipality, a local well specialist, or a laboratory accredited by Ministère de l'Environnement et de la Lutte contre les changements climatiques at [1-800-0561-1616](tel:1-800-0561-1616) or visit ceaeq.gouv.qc.ca/accreditation/PALA/Ila03.htm (in French only).

Last resort, you can contact Ministère de l'Environnement et de la Lutte contre les changements climatiques or your regional public health department.

Foods

When should I introduce foods?	519
How should I introduce foods?	522
Choking risk: Be extra careful until age 4	530
Honey—never for babies under age 1	532
Baby food basics	532
6 to 12 months—Your baby's first foods	540
Start with iron-rich foods	540
Continue with a variety of foods	541
Grain products	542
Meat and alternatives	545
Vegetables and fruit	550
Milk and dairy products	557
Fats	559
Food ideas for your baby	560
From 1 year onward—Sharing meals with the family	562



Martin Chénier

The foods presented in this chapter include everything other than breast milk and infant formula. Introduce them in keeping with your baby's own pace and needs.

Your baby's first taste of food will be a whole new experience. It takes time to get used to eating foods. Gradually, your baby will develop a taste for new foods and textures. By age 1 or so, she will be eating most of the same foods as the rest of the family.



Breast milk or infant formula will be your baby's main food during the first year of life. Foods can complement—but not replace—milk.

When should I introduce foods?

Babies' nutritional needs change as they grow.

Before 6 months, most babies meet all their nutritional needs with their milk.

At about six months of age, it becomes necessary to introduce foods into your baby's diet. These foods provide the extra energy babies need to grow. They also help prevent problems like iron deficiency.

If you introduce foods earlier, they will replace milk instead of complementing it. If you wait until later, your baby may not get all the **nutrients** he needs and could have more difficulty adapting to foods.



Contrary to popular belief, eating cereal at supper does not help infants sleep through the night. How long they sleep at night depends on their biological rhythm and temperament.

How do I know my baby is ready?

It's not always easy to determine the best time to introduce foods to your baby since she can't talk yet. But it is possible. Here's how to tell she's ready:

- Your baby is around 6 months old.
- Your baby can sit in a high chair without support.
- Your baby has good control of her head and can turn away to indicate refusal.

She may also try to bring food to her mouth.

Keep in mind that a baby under 6 months old isn't necessarily ready for foods just because she nurses more often for several days. More frequent feedings could be due to a growth spurt or a temporary need for more milk (see [Growth spurts](#), page 372).

However, some babies may need to start eating foods a little earlier than 6 months.

When you start introducing foods to your baby, the quantity of milk she drinks shouldn't decrease all that much.

Interest in food varies greatly from one baby to the next. Some need several tries before they get used to foods, while others like them so much that they lose interest in milk.



A baby under 6 months old isn't necessarily ready for foods just because she nurses more often for several days.

What about premature babies?

Premature babies are introduced to foods the same way as term babies are—with one key difference. The decision about when to start foods must be based on the corrected age—i.e., the age the baby would be had he been born on the original due date—to ensure his system is mature enough.



Jean-Claude Mercier



Once your baby starts eating foods, continue breastfeeding as often as he wants. If you feed your baby commercial infant formula, give him at least 750 ml (25 oz) of milk a day.

How should I introduce foods?

Order of introduction

The order in which foods are introduced varies from country to country, depending on customs and culture.

The important thing is to start with iron-rich foods, then continue with a nutritious variety of foods (see [Start with iron-rich foods](#), page 540).

Note, however, that cow's milk should not be introduced before 9 to 12 months.



The important thing is to start with iron-rich foods, then continue with a nutritious variety of foods.

A word about food allergies

The foods most likely to cause allergies are eggs (see **Eggs**, page 549), peanuts and other nuts (see **Peanut and nut butters**, page 549), fish and seafood (see **Fish**, page 546) and foods that contain cow's milk protein (see **Milk and dairy products**, page 557).

In the past, it was recommended that parents wait until their babies had reached a certain age before introducing foods more likely to cause allergies. We now know that delaying the introduction of these foods does not prevent allergies, even in children with a greater risk of developing food allergies.

A child is at greater risk of developing a food allergy if

- A member of his immediate family (mother, father, brother, or sister) has an **allergic disorder**

or

- The child suffers from severe eczema (shows signs of eczema most of the time)

Talk to your doctor.

New foods

It is often suggested to introduce one new food at a time to your baby, and to wait 2 or 3 days before adding something new. That way, if your baby shows signs of discomfort or allergies, it will be easier to identify the food that is responsible.

After your baby has tried a new food, watch her. To learn more about the signs of an allergic reaction and the steps to take, see [How do I recognize allergies?](#), page 572.

When introducing new foods, continue to give your baby the foods she already knows on a regular basis.

Don't insist if your baby refuses a new food for a few days. Try introducing it again later. You may have to present a food a number of times (up to 10 and sometimes even more) before your baby accepts it. This is how she learns to like new flavours.

It's best to avoid foods with added salt or sugar until your baby is at least 1 year old. This will help her develop a taste for foods in their natural state.

Quantity and frequency

Your baby has a small stomach, so he needs to eat small portions several times a day.

Your baby's appetite is your best guide to knowing how much food he needs. The quantity will depend on how much milk he drinks and will vary with his growth rate.

When your baby starts eating foods, he will probably continue drinking about the same amount of milk. At around 8 or 9 months, he will gradually start drinking less.



When your baby starts eating foods, the number of breast or bottle feedings can stay the same. The amount of milk he drinks will probably not decrease very much.

At the start, your baby has to adapt; he will probably eat a few small spoonfuls of food once or more during the day. Little by little, the amount of food and the number of meals and snacks will increase.

You could, for example, give him two or three meals a day. Depending on how much he eats, you could add snacks between meals.

By around 1 year of age, your child will be able to adopt a more regular schedule for meals (breakfast, lunch, supper) and snacks (between meals and at night, as needed).

Appetite

A baby's appetite is like an adult's: it can vary from one day to the next. It's normal for babies to sometimes eat less, and it's possible that they may not like certain foods or textures.

By watching your baby for specific signals, you'll learn to know her appetite. If your baby shows interest in the food you give, it's because she is still hungry, and you can continue feeding without hesitation. However, if she closes her mouth, refuses to eat, pushes her spoon away, turns her head, cries, or plays with her food, she is signalling that she has had enough to eat.



It's possible that your child will eat less when she starts eating independently. Don't insist. Mealtime will be more pleasant for the whole family and your child will get to know her appetite. Trust your child to know when she is full.



Pascale Turcotte



Your baby can gradually start eating soft foods mashed with a fork or cut into small pieces.

Texture

When first introducing foods, you can start by giving your baby smooth purées.

Some babies will be ready right away for thicker, lumpier purées blended for only a short time or mashed with a fork. Others will find it more difficult to adapt, in which case you can gradually alter the texture from one meal to the next.

Some babies will rapidly accept food that is finely chopped or cut into small pieces. There is no need to wait until your child has teeth, since he can already chew with his gums and enjoys doing so.

The goal is to progress so that by around 1 year of age, your baby is able to eat foods in a variety of textures. But be careful with foods that present a risk of choking (see **Choking risk: Be extra careful until age 4**, page 530).

Gagging

When your baby starts eating, small amounts of food may lodge in the back of his throat without being swallowed. This can cause your baby to gag, as if he were about to vomit.

Your baby will cough and spit up the food he was given. Don't worry, this is a normal reaction (gag reflex) that protects against choking.

However, if this happens at every meal for several days in a row, see a doctor.



By around 1 year of age, your child should be able to eat foods in a variety of textures.

Independence

Babies love bringing food and objects to their mouths. Let your child start eating with her fingers as soon as possible while at the same time keeping a close eye on her. It's messier and takes more time, but it's a lot more fun! Encourage her, because that's how she learns to eat by herself—it's an important step to becoming more independent!

First meals

While some babies have no trouble adapting to meals, others find it difficult. To make things easier, choose a time when your baby is in a good mood.

The movements involved in eating are very different from those your baby uses for nursing. It takes time to learn. Your baby will need several weeks of practice to develop his abilities and tastes.

Your baby can have his milk before or after foods. If you wish, you can give him some of his milk before and the rest after.

My baby refuses to eat

If your baby refuses to eat, she may not be ready.

If you're not sure, see [How do I know my baby is ready?](#) on page 520.

If you think your baby is ready, but she still refuses to eat, try again at the next meal and keep trying for one or two more days. You can also offer her a different food: maybe she didn't like what you served.

If your baby is over 6 months and still refuses to eat after repeated attempts, consult a health professional.



France Tremblay



Your baby needs time to develop her sense of taste and adapt to change.

Choking risk: Be extra careful until age 4

Certain foods can become stuck in your child's throat or block her airway. Many children choke on food each year.

Foods that are hard, small, round, smooth, or sticky present the greatest risk.



Certain foods present a choking risk for your child up until the age of 4: peanuts, nuts, seeds, hard candy, cough drops, popcorn, chewing gum, whole grapes, raisins, sliced sausage, raw carrots or celery, food on toothpicks or skewers, ice cubes, etc.

Certain foods require careful preparation. To prevent the risk of choking, be sure to

- Remove bones from meat and fish
- Remove cores and pits from fruit
- Cut grapes into quarters
- Grate raw hard vegetables and fruits like carrots, turnips, and apples

Toward age 2, you can start giving your child whole apples (peeled) and whole small fruit, except for grapes, which you should continue cutting into quarters.

Rules to prevent choking

- Make sure your child is always supervised when eating.
- Sit your child in a high chair or at the table.
- Don't let your child walk or run with food in her mouth.
- Avoid feeding your child in the car.
- Keep dangerous foods out of reach.

Ask older children to follow these rules.

A first aid course will teach you what to do if your child is choking (see [Choking](#), page 717).



Pascale Turcotte



To prevent choking, be sure to take certain precautions when preparing food.

Honey—never for babies under age 1

Never give honey to a child before the age of 1, even as an ingredient in recipes or cooking. Both pasteurized and unpasteurized honey can cause a serious form of food poisoning known as infant botulism.

After age 1, healthy children run very little risk of contracting infant botulism because their intestines contain useful bacteria that protect against the disease.



Never add honey to any food for a baby under age 1—not even during cooking!

Baby food basics

This section features all the information you need to prepare homemade baby purées and purchase commercial baby food. It also provides instructions on warming and storing baby food.



Remember that your baby will learn quite quickly to eat foods of varied textures. There's no need to stock up on large quantities of baby food!

Homemade baby food

Homemade baby food provides excellent nutritional value. It is fresher, more varied, better tasting, and less expensive than commercial baby food. What's more, it has the advantage of containing only the ingredients you choose.

Purchasing foods

Select the freshest fruits and vegetables possible. If using frozen products, make sure they don't contain any salt, sugar, or seasoning. Buy lean meat whenever possible.

Canned vegetables, meat, and fish are not good choices if they contain salt. You can use canned fruit, however, if it's packed in fruit juice with no added sugar.

Hygiene

Wash your hands and clean your cooking utensils and work area carefully before you start preparing baby food, as well as each time you change foods.

How to prepare vegetable and fruit purées



1

Sarah Witty



2

Amélie Bourret



3

Sarah Witty

Preparing fruit and vegetable purées

- Wash all fruits and vegetables before cooking.
- If necessary, remove peels, cores, pits, and seeds.
- Cut the fruits and vegetables into pieces.

- If necessary, steam the food item (in a vegetable steamer, for example) or cook in a microwave.
- Check if it is done. You should be able to stick a fork into it easily.



It is not necessary to add salt or sugar.

- Purée the food using a fork, blender or food processor. You can add liquid to obtain the desired texture, e.g., fresh water or cooking water (see [Nitrates in vegetables](#), page 552).

How to prepare meat, poultry, and fish purées

Preparing meat and poultry purées

Take certain precautions when cooking meat or poultry for your child.

- Remove skin from poultry and any visible fat from meat.
- Cut meat or poultry into pieces.
- Cook in plenty of water. Meat is cooked enough when you can easily cut it with a fork.
- Remove bones.
- Put the meat or poultry in a blender.
- Purée, adding enough cooking liquid to obtain the desired texture.

Preparing fish purées

Certain precautions should also be taken when preparing fish purées:

- Cook fish in water on the stove or in the microwave, without adding any salt.
- Carefully remove any bones.
- Break up the fish with a fork or purée it with the cooking liquid.



Don't add salt or other seasoning during or after cooking.

How to freeze homemade purées

If you want to make purées in advance, it's best to freeze them immediately after preparation. To do so:

- Pour the purée into ice cube trays while it is still warm.
- Cover and cool in the refrigerator.
- Put the ice cube trays in the freezer for 8 to 12 hours.
- Transfer the frozen purée cubes to a freezer bag.
- Remove the air from the bag.
- Write the name of the food and the cooking date on the bag and then put it in the freezer.

To find out how long you can keep purées, see [Storing baby food](#), page 539.

Commercial baby food

Whether jarred or frozen, commercial baby food has good nutritional value. It's very practical since it's always ready to eat, but it costs more than homemade baby food. Some commercial baby food contains unnecessary ingredients like starch, sugar, flour, tapioca, or cream that decrease the nutritional value. Read the list of ingredients on the packaging to choose products without unnecessary additions.

Purchasing commercial baby food

Vegetable-meat combinations – These can be handy on occasion, but don't contain very much meat. Frozen products generally contain more meat than jarred ones. If you choose meat-only purées, it will be easier for you to estimate how much meat your child eats and serve the vegetables of your choice.

“Junior” purées – These purées contain small pieces of food designed to facilitate the transition from baby food to regular food that the family eats. However, they are of limited benefit because you can achieve the same results by mashing foods with a fork.

There are also ready-to-eat meals. These products contain salt and should not be given to children under 12 months old. After this age, your child can simply start sharing meals with the family.

Handling commercial baby food

Here are a few steps to take in order to eliminate the risk of food poisoning:

- Throw out or return any jars that have rusted lids or chipped glass, or do not make a popping noise when you open them.
- Store unopened jars according to the best-before date and use the jars with the closest date first.
- Put only as much food as you will use in a small bowl and refrigerate the rest immediately.

Commercial baby food can be frozen for the period indicated in the [Storing baby food](#) table on page 539.



Pascale Turcotte



Make sure family members and babysitters fully understand how to warm baby food.

Warming baby food

Whenever possible, warm only as much baby food as you will need. Before feeding your child, always check the temperature using the inside of your wrist or the back of your hand. To limit the risk of contamination, throw out any leftover baby food.

To warm fresh or refrigerated baby food, use one of the following three methods:

- Put the purée on the stovetop in a small saucepan or double boiler and warm over low heat.
- Put a small amount of food in a glass bowl and let it warm slowly in hot water for a few minutes.
- Put the food on a small plate and heat it in the microwave. Carefully read the section on microwave precautions.



Microwave precautions

Microwaves do not heat food evenly. That's why it is important to take certain precautions:

- Warm the baby food in a small, microwave-safe dish.
- Stir it well once it is warm.
- Wait around 30 seconds. Before serving the purée, check the temperature using the back of your hand or the inside of your wrist.

Storing baby food

Homemade and commercial baby food can be stored according to the storage life indicated in the table below:

Type of food	Refrigerator	Freezer
Vegetables and fruit	2 to 3 days	2 to 3 months
Meat, poultry, fish	1 to 2 days	1 to 2 months
Meat with vegetables	1 to 2 days	1 to 2 months



Do not refreeze thawed food.

6 to 12 months—Your baby's first foods

Start with iron-rich foods

Your baby's first foods should be rich in iron. Why? Because iron plays a number of key roles in her development.

Iron is found in

- Iron-enriched baby cereal
- Meat and poultry
- Fish
- Tofu
- Legumes
- Eggs

Choose foods based on you and your baby's preferences. Give him iron-rich foods at least twice a day.

A vegetarian diet may be suitable for your baby if it is well balanced. However, if too many foods are excluded, your baby's diet may be lacking in certain **nutrients**. It's best to see a nutritionist about this.



Between 6 months and 1 year, give iron-rich foods to your baby at least twice a day. After, serve some at each meal.

Good to know ●●●

Fruits and vegetables are rich in vitamin C, which helps the body absorb iron. Introduce them early into your baby's diet.

Continue with a variety of foods

After your baby has been eating one or more iron-rich foods for several days, it's time to add a growing variety of foods into her diet.

You can introduce new foods in whatever order you please. Remember, however, that your baby should not drink cow's milk before the age of 9 months.

You don't need to introduce all of the foods from the same food group before starting on the next group. For ideas on foods to give your baby, see [Food ideas for your baby](#) on page 560. A tear-off version of this table can be found after page 576.

Ideally, your baby will be eating foods from all the food groups within a few weeks.

Toward the age of 1 year, your child will be eating a wide variety of foods.

In the upcoming pages, you'll find practical information about the four food groups:

- Grain products
- Meat and alternatives
- Vegetables and fruit
- Milk and alternatives

Grain products

This food group includes grains like oats, wheat, barley, rice, buckwheat, rye, millet, and quinoa. It also includes pasta and bread.

Iron-enriched cereals

Iron-enriched baby cereals not only contain iron, but other vitamins and minerals as well. They are among the first foods that should be introduced.

How to choose cereal

Start by giving cereals containing only one type of grain (e.g., barley).

At the beginning, opt for cereals containing no fruit, vegetables, or other additions.

Choose sugar-free cereals. Carefully read the ingredients list on the packaging. Sugar hides behind many names, including dextrose, maltose, sucrose, inverted sugar, glucose polymers, fructose, syrup, and honey.

How to prepare cereal

To prepare cereal, use breast milk or infant formula. Some cereals already contain powdered milk, in which case all you have to do is add water.

It's important not to add sugar to cereal.

Serving cereal or any other food in a baby bottle is not recommended.

How to get started

Start by mixing 3 to 5 ml ($\frac{1}{2}$ to 1 teaspoon) of dry cereal with liquid and give it to your baby. If she readily accepts it, continue until she is satisfied, adapting to her appetite.

Gradually increase the quantity over time. Keep in mind that your child is already nourished with her milk.

Later, you can flavour the baby cereal with fruit or buy different flavours of cereal.



Pascale Turcotte



Iron-enriched baby cereals are among the first foods you should introduce to your baby.

Other grain products

Once your baby is eating iron-rich foods at least twice a day and has a varied diet, you can introduce other grain products.

It's best to opt for whole grain products like whole wheat bread and pasta. They contain more fibre, which ensures your baby has regular bowel movements. To help you choose, read the list of ingredients: the first ingredient must be a whole grain (e.g., whole grain oats or whole wheat flour).

If your baby accepts different textures, offer her foods like toast, pita bread, naan bread or chapati, tortillas, breadsticks, unsalted crackers, unsweetened oat ring cereal, and all types of pasta.

Be careful with rice because your child can choke on it. It's best to start with sticky, short-grain rice and mash it with a fork.

Meat and alternatives

This food group is made up of foods that are rich in proteins: meat, poultry, fish, and alternatives such as legumes, tofu, and eggs. Because they are rich in iron, they are among the first foods you should introduce to your baby.



Meat and alternatives are rich in iron. They are among the first foods you should introduce to your baby.

Meat and poultry

Meat (beef, pork, veal, lamb, etc.) and poultry (chicken, turkey, etc.) provide protein. They also provide vitamins and certain minerals, especially iron and zinc.

How to prepare meat and poultry

All meat and poultry must be well cooked. To begin, serve meat purées, then gradually modify the texture as your baby learns to chew. For example, you can serve finely chopped meat or tender and juicy bite-sized pieces.

How to get started

Start by giving your baby 3 to 5 ml (½ to 1 teaspoon) of meat or poultry. During the meal or at subsequent meals, gradually increase the quantity, taking into account your child's appetite and preferences.

Game meat

You can also serve game meat, though it's preferable to serve game killed with lead-free ammunition. Lead can negatively affect children's development.

Do not give your child organ meats (e.g., liver, heart) from game animals, as they are often contaminated.

Deli meats

It's best to avoid deli meats (e.g., ham, sausage, pâtés, salami, bologna, mock chicken, bacon) because they contain nitrates, and nitrites that can be harmful to your child's health. If you decide to serve deli meats to your family and to your child when he is older, choose those that are the leanest and contain the least amount of salt and spices.

Fish

Fish is a source of protein, iron, vitamin D, and good fat.

In the past, parents were recommended to wait until babies reached a certain age before introducing fish. We now know that this does not prevent allergies.



Are you concerned about allergies? Read [A word about food allergies](#) on page 523.

Don't hesitate to make fish a regular part of your baby's diet.

You can serve your baby many of the types of fish available at the supermarket and in fish markets. See [Fish and seafood](#), page 88.

Canned fish is usually very salty. However, you can occasionally serve unsalted canned fish like salmon or light tuna (but not white tuna).



Don't give raw or smoked fish to your child, since young children are more sensitive to the parasites they sometimes contain.

Legumes and tofu

Legumes and tofu are a nutritious and inexpensive. They are a good source of vegetable protein and iron. Legumes are also rich in fibre.

There are many kinds of legumes, including lentils, chickpeas, kidney beans, black beans, white beans, etc. Serve them in purées, mashed with a fork, or in soups.

Opt for regular tofu (firm, semi firm, or extra firm) rather than soft tofu. Soft tofu contains more water, and therefore has less protein and iron.

Tofu can easily be mashed with a fork or crumbled and mixed with vegetables.

Eggs

Eggs are nutritious, convenient, and inexpensive.

In the past, parents were recommended to wait until their babies had reached a certain age before introducing egg whites. We now know that this does not prevent allergies.

You can give your child whole eggs (the yolk and the white). Serve eggs hardboiled, poached, scrambled, or in an omelette. Make sure the egg is well cooked, and never raw or runny.



Are you concerned about allergies? Read [A word about food allergies](#), page 523.

Peanut and nut butters

Peanut and nut butters are convenient and nutritious.

In the past, parents were recommended to wait until their babies had reached a certain age before introducing these foods. We now know that this does not prevent allergies.

You can serve your child smooth nut butters, spread thinly on warm toast.

Crunchy nut butters, peanuts, and nuts should not be given to children under age 4 because they present a choking hazard. It is not safe to give your child nut butter by the spoonful either.



Sophie Roy

Vegetables and fruit

Vegetables and fruit are vital for good health. Not only do they add a wide variety of flavours to your baby's diet, they also provide minerals and vitamins like vitamin C. They are rich in fibre, too, which helps your baby have regular bowel movements.

After a certain time, you can make fruits and vegetables part of every meal. For example you can serve vegetables at lunch and supper, and give your baby fruit at breakfast and for dessert. Fruits and vegetables also make good snacks.



Once your baby is eating iron-rich foods every day, you can add fruits and vegetables to her diet.

Vegetables

Give your baby a variety of vegetables. More colourful vegetables are generally more nutritious. For this reason, it's good to regularly serve orange vegetables (e.g., carrots, squash, yams) or dark green vegetables (e.g., broccoli, green peas, green beans, peppers).

How to prepare vegetables

You can begin by introducing cooked vegetables served in purée or mashed with a fork.

Your baby will gradually get used to eating cooked vegetables cut into little pieces.



Pascale Turcotte



Give your child a variety of vegetables.

Nitrates in vegetables

In the past, parents were recommended to wait before introducing nitrate-rich vegetables like carrots, beets, turnips, and spinach to their babies' diet. It was also recommended to not use cooking water from these vegetables, especially carrots, to prepare purées.

It's true that nitrates can cause health problems in very young babies. But if you introduce these vegetables toward the age of 6 months—not before—and give your baby a variety of vegetables, there is no cause for concern.

Fruit

Give your child a variety of fruits. You can use fresh or frozen fruit. Commercial canned fruit and compotes are also convenient. Choose brands without added sugar.

How to prepare fruit

You can start with soft fruit in purées or mashed with a fork (e.g., banana, pear). You can also cook fruit to make compote (e.g., apple, peach). Don't add sugar when preparing fruit. If the fruit is very ripe, you can cut it into pieces that your baby can eat with her fingers.

Berries like strawberries, raspberries, blueberries and blackberries can also be mashed with a fork or cut into small pieces.

Later, you can serve your baby firmer fruits like melon, plums, or cherries cut into small pieces. You can also give your child grapes cut into quarters, small pieces of orange, grapefruit, or clementine, and grated or lightly cooked apples.



Pascale Turcotte



Give your child a variety of fruits.

What about fruit juice?

Most children like juice. But it's important to remember that fruit is more nutritious than juice because it contains fibre. In fact, fruit juice is not essential. To quench your child's thirst between feedings, water is the best choice.



Fruit juice is not essential. To quench your child's thirst between feedings, water is the best choice.

Good to know ●●●

Fruit juice has a number of disadvantages:

- It increases the risk of early childhood tooth decay, since it naturally contains sugar.
 - There is a risk of it replacing milk and foods essential to your child's health and development if given in too great a quantity.
 - It can spoil your child's appetite if served within an hour of mealtime.
 - It can cause diarrhea if it is served in too great a quantity.
-

If you give your child fruit juice...

Here are a few helpful tips:

- Wait until your child is at least 1 year old and limit the quantity of juice to a maximum of 125 to 175 ml (4 to 6 oz) per day.
- Never serve juice in a baby bottle.
- Don't let your child drink juice for prolonged periods. This will help protect her teeth.
- Serve juice no more than once or twice a day.

Choose pasteurized, 100% pure fruit juice with no added sugar. There's no need to buy special juice for babies, since it's the same as regular juice only more expensive. Avoid fruit drinks, cocktails and punches, as well as fruit-flavoured powders—they have little nutritional value and are made with sugar.

Avoid unpasteurized juice. Freshly squeezed juice bought directly from the producer is not pasteurized. Certain chilled juices sold in the grocery store are not pasteurized either. They may contain harmful bacteria. Young children are very sensitive to these bacteria.



Avoid giving your child unpasteurized juices.

Does your child like juice too much? See [Sugar](#) on page 615.



Milk and dairy products

This section covers cow's milk, yogurt, and cheese. Breastmilk, commercial infant formula, and other milks are covered in the first chapters of [Feeding your child](#).

Milk, yogurt, and cheese contain protein and minerals, including calcium. They help build and maintain healthy bones and teeth. Cow's milk is also enriched with vitamin D, which helps the body use calcium more efficiently.

You can give your baby yogurt and cheese once he has started eating iron-rich foods at least twice a day.

Choose high-fat milk and dairy products rather than “light” or low fat options. Your child needs these fats to grow and develop properly. Make sure that milk and dairy products are pasteurized (see [Why serve pasteurized milk](#), page 413).



Since cow's milk can reduce your baby's appetite for other foods, including iron-rich foods, don't give her more than 750 ml (25 oz) per day.

Cow's milk: not before 9 months

Between 9 and 12 months, once your baby is eating a varied diet including iron-rich foods, she can gradually start drinking pasteurized 3.25% cow's milk (3.25% milk fat). For more information, see [Other types of milk](#), page 409.

Cheese

Choose pasteurized cheeses.

Start with cheeses that can be eaten with a spoon, like cottage cheese or ricotta.

Next introduce grated or thinly sliced hard cheeses (mild and white).

Yogurt

It's best to choose plain yogurt, to which you can add pureed fruit or pieces of fresh fruit. Commercial fruit yogurt contains added sugar or sugar substitutes.

As with all dairy products, opt for high-fat yogurt. Low-fat and fat-free yogurt are not suitable for the needs of young children.

If you make your own yogurt, use whole milk (3.25% milk fat).

Fats

Fats and oils are essential to your child's development. There is no need to limit them in his diet.

For cooking and food preparation, it's best to use vegetable oils like olive or canola oil, or nonhydrogenated margarine.

Food ideas for your baby

Grain products

Iron-enriched baby cereals

- Oat
- Barley
- Rice
- Soy
- Mixed (multigrain)

Other grain products

- Barley
- Chapati, naan bread, pita bread, tortillas
- Couscous
- Cream of wheat
- Millet
- Oatmeal
- Quinoa
- Pasta
- Short grain sticky rice
- Toasted bread
- Unsalted crackers
- Unsweetened oat ring cereal

Other

- _____
- _____
- _____

Meat and alternatives

Eggs

- Brook trout and other trout
- Cod
- Haddock
- Halibut
- Salmon
- Sole
- Tilapia

Legumes

- Chickpeas
- Edamame (soy beans)
- Lentils
- White, black, or kidney beans

Meat and poultry

- Beef
- Chicken
- Lamb
- Pork
- Turkey
- Veal

Tofu

Smooth nut butters, plain

- Peanut butter
- Almond butter

Other

- _____
- _____
- _____

Note: Generally speaking, the foods in this table are presented in alphabetical order and not in order of introduction.

Find the tear-off version of this table after page 576

Vegetables and fruit

Vegetables

- Asparagus
- Avocado
- Broccoli
- Brussels sprouts
- Carrots
- Cauliflower
- Corn
- Mushrooms
- Onions
- Peas (baby peas)
- Peppers
- Potatoes
- Squash
- Sweet potatoes
- Tomatoes
- Turnip
- Yellow and green beans
- Zucchini

Fruit

- Apricots
- Apples
- Bananas
- Blackberries
- Blueberries
- Cantaloupe
- Cherries
- Clementines
- Grapefruit
- Grapes
- Mangos
- Melons
- Oranges
- Peaches
- Pears
- Plums, prunes
- Raspberries
- Strawberries

Other

- _____
- _____
- _____

Milk and dairy products

Fresh cheese

- Cottage
- Ricotta

Kefir

Mild hard cheese

- Cheddar
- Gouda

Plain yogurt

Can be introduced
between
9 and 12 months

- Pasteurized
cow's milk or
goat's milk
(3.25% milk fat)

Other

- _____
- _____
- _____

From 1 year onward—Sharing meals with the family



By age 1 or so, she will be eating most of the same foods as the rest of the family.

Your child now has a highly varied diet that includes almost all the same foods your family eats. He shares the three main meals of the day with you and probably needs one or two snacks as well.

At this age the growth rate starts to slow down a bit. His appetite may decrease or vary from day to day.

Because your child loves to explore and play, he may also be less interested in food. Although this change worries many parents, there is no need for concern as long as your child is healthy and happy, having fun, and developing normally.

Developing good habits

As much as possible, accustom your child to eating the same meals as the rest of the family. You can start giving him homemade foods and dishes containing a little bit of salt (e.g., spaghetti sauce) or sugar (e.g., muffins).

One good way to provide a balanced diet: at every meal, try to include foods from at least three of the four food groups shown on the preceding pages.



What matters is to adapt food quantities to your child's needs, based on his preferences and appetite.

You can take inspiration from the *Food Guide Snapshot*, which presents balanced meal ideas for the whole family. Go to food-guide.canada.ca/en/food-guide-snapshot/.



Good to know ●●●

Cow's milk is enriched with vitamin D. At around 1 year, children should drink 500 ml (16 oz.) of whole cow's milk (3.25% milk fat) a day to get part of the vitamin D they need (see [Vitamin D: Not your ordinary vitamin!](#), page 380).

But don't serve more than 750 ml (25 oz.) of milk a day or you risk spoiling your child's appetite for other foods.



Amélie Bourret



The pleasure of eating together!

Ingredients to limit

Some ingredients can be bad for your baby and other family members if consumed in excess. Limit consumption of the following:

- Salt
- All forms of sugar (sucrose, glucose, fructose, etc.)
- Sugar substitutes (e.g., aspartame, sucralose)
- Fats and oils containing harmful fats (shortening, hydrogenated oils, coconut oil, palm oil, palm kernel oil, etc.)

It's best to prepare homemade meals using simple, minimally processed ingredients. For example, choose plain rice instead of prepared rice containing added ingredients.

Making family meals easier

- At mealtime, avoid distractions such as electronic devices and toys.
- Serve small portions to keep your child from getting discouraged.
- Don't force your child to eat everything on the plate.
- Wait until your child has finished the main course before serving dessert to other family members. This will help maintain interest in the meal.
- Serve nutritious desserts like fruit salad and stewed fruit, yogurt, homemade cookies and muffins, and milk desserts.

CLSC services

CSLCs may offer various nutrition and diet-related services for children under 2 years of age. To find out about the services available in your area, contact your local CLSC.



Food-related problems

Food allergies	571
Lactose intolerance	579
Anemia	580
Poor appetite	583
Chubby babies	584
Stools and foods	586
Constipation	586



Caroline Cloutier

Food allergies

When a child's **immune system** reacts to a particular food that he eats, he is said to suffer from a food allergy. Some allergies are permanent and very serious. A child with a known allergy to a particular food must never eat that food. It's important to always take allergies seriously.

Some children may not be able to tolerate certain foods, but are not necessarily allergic to them. This is known as a food intolerance. The difference between food intolerance and food allergy is that food intolerances do not trigger an immune system reaction.

Is my child at risk of developing a food allergy?

A child is at greater risk of developing a food allergy if

- A member of his immediate family (mother, father, brother, or sister) has an **allergic disorder**

or

- The child suffers from severe eczema (shows signs of eczema most of the time)

Talk to your doctor.

Preventing allergies

In the past, it was recommended that parents wait until their babies had reached a certain age before introducing foods more likely to cause allergies. We now know that delaying the introduction of these foods does not prevent allergies, even in children with a greater risk of developing food allergies (see [A word about food allergies](#), page 523).

Don't hesitate to consult a doctor if you have concerns.

How do I recognize allergies?

An allergic reaction can be sudden and severe, or it can be delayed.

Sudden and severe reactions (known as anaphylaxis) usually occur anywhere from a few minutes to two hours after eating the food in question. Such reactions are rare. See the red box (page 573) for the most common symptoms.

Delayed reactions can occur several days after eating the food in question. They are harder to diagnose. The most common symptoms include diarrhea, blood in the stools, and excessive irritability.

Any child can experience these symptoms at times, but they last longer in children with allergies. If you suspect that your child has a food allergy, stop giving him the food in question and consult a doctor.



Call 9-1-1 if your child develops

- Red patches on the skin

AND one or more of the following:

- Sudden and severe change in her general condition (e.g., irritability, drowsiness, loss of consciousness)
- Swollen lips or tongue
- Difficulty breathing
- Sudden vomiting

She could be having a severe allergic reaction.

Breastfed babies and allergies

There is no evidence linking the food breastfeeding mothers eat with the risk that their babies develop food allergies. Even if other members of the family have food allergies, you don't need to stop eating allergy-causing foods when you're breastfeeding.

Babies are not allergic to breast milk, since it is perfectly adapted for their intestines. In rare cases, however, some babies may have an allergy to protein from a food their mother is eating that passes through their milk. Such proteins can come from a variety of foods, most often dairy products.

If your breastfed baby has certain symptoms (e.g., excessive crying, blood in stools, repeated refusal to feed), she may be intolerant or allergic to something you eat (see [How do I recognize allergies?](#), page 572).

What to do?

If your baby reacts to your breast milk after you eat a particular food, he will feel better as soon as you eliminate it from your diet, but will react if you eat the same food again. Try proceeding by elimination to see whether your baby is allergic:

- Stop eating the suspected food for 7 days.
- Keep an eye on your baby's behaviour.
- If your baby is feeling better after 7 days, try eating the food in question again.

- Keep an eye on your baby's behaviour.
- If the symptoms reappear, it means your baby is reacting to that particular food. Refrain from eating it.
- If you need to make changes to what you eat, consult a nutritionist. She can advise you.

If there is no real improvement after you eliminate the food, it's best to consult a doctor.

Severe allergies

If your child has a severe allergy, you will have to be very vigilant. If you buy prepared meals, read ingredient lists carefully to be sure they don't contain the product your child is allergic to. When dining out, ask what's in the dishes you order for your child.

For more information contact Allergies Québec at [1-800-990-2575](tel:1-800-990-2575) / [514-990-2575](tel:514-990-2575) or visit allergies-alimentaires.org/en/.



If your child has an epinephrine injector (e.g., EpiPen®), make sure you know when and how to use it. Explain the allergy symptoms to babysitters and post the emergency procedure to be followed in a visible location. Have your child carry a card or wear a bracelet (e.g., MedicAlert®) indicating her allergy.



Lactose intolerance

Lactose intolerance is one form of food intolerance that we hear a lot about.

Lactose is a sugar present in all milk—breast milk, cow’s milk and commercial infant formula. It contributes to the development of children’s nervous systems and to the absorption of calcium.

Lactose intolerance is rare in children under 3. There is no need to buy lactose-free products unless a doctor confirms the intolerance.



Lactose intolerance is rare in children under 3.

Anemia

Iron deficiency **anemia** is a fairly common problem among babies between the ages of 6 and 24 months. It must be treated as it can harm your baby's health and development.

To prevent anemia, make sure your child's diet includes iron-rich foods at each meal. Iron supplements are not necessary, except in the case of premature babies.

Symptoms of iron deficiency in children include lack of energy, poor appetite, irritability, difficulty concentrating, slow weight gain and recurrent infections. However, these symptoms can also indicate other health problems. When in doubt, consult a doctor.



Warning about cow's milk

Babies who are fed cow's milk before the age of 9 months can become anemic because

- Cow's milk can cause blood loss in the delicate intestines of infants.
- Cow's milk reduces absorption of iron from other foods.
- Cow's milk in your baby's diet reduces intake of other foods rich in iron.

Once your baby is over 9 months and is eating a variety of foods, she can drink cow's milk without the risk of developing anemia. However, she should not drink more than 750 ml (25 oz) of cow's milk per day.

Preventing anemia

Your baby's daily diet should contain foods rich in iron. The following foods are the best sources of iron:

- Iron-enriched baby cereal
- Meat and poultry
- Fish
- Tofu
- Legumes
- Eggs

Vitamin C helps the body absorb iron from foods. It's a good idea to serve foods that are rich in vitamin C at every meal. The following fruits and vegetables are good sources of vitamin C:

- Citrus fruits (orange, grapefruit, clementine, tangerine, mandarin orange)
- Strawberries, cantaloupe, cloudberries, mango, kiwi, pineapple
- Pepper (green, red or yellow), snow peas, broccoli, Brussels sprouts

If your child refuses to eat baby cereal, try different kinds or add fruit.

If she accepts different textures, you can also try giving her cereal O's for children.

You can also add baby cereal to recipes for pancakes, muffins, cookies and other baked goods by replacing half of the flour with iron-enriched dry cereal, like in the recipe below.

Baby-cereal cookies (for ages 1 and over)

- 125 ml (½ cup) butter, margarine or oil
- 125 ml (½ cup) sugar or fruit purée (e.g., apple, date, banana)
- 10 ml (2 tsp.) vanilla
- 1 egg, beaten
- 150 ml (⅔ cup) white or whole wheat flour
- 150 ml (⅔ cup) iron-enriched baby cereal
- 5 ml (1 tsp.) baking powder
- 1 pinch of salt
- 30 ml (2 tbsp.) cocoa powder (optional)

Preheat oven to 190°C (375°F). Grease two cookie sheets. Cream butter with sugar or fruit purée. Gradually add vanilla and beaten egg. In another bowl, mix remaining ingredients. Carefully add the dry ingredients to the liquid ingredients. Shape into 24 balls and place on cookie sheets. Flatten with a fork.

Bake for 10 minutes.

Poor appetite

Children, like adults, may have periods when they experience reduced appetite. Sometimes the reason is discomfort caused by sore throat, teething or the effect of medication. Other times, poor appetite in children can be due to overexcitement, fascination with new discoveries, fatigue or a normal slowing of growth.

Serious food-related problems are rare. So long as your child is growing normally, he is eating enough to satisfy his needs. It is more important to make family mealtime fun than to insist that your child eat a specific amount of food.

What to do?

Take the time to observe what's going on in your child's life. The older he gets, the more he wants to do things by himself. Learn to accept his pace, his clumsiness and a bit of wasted food without scolding him.

Give your child small servings of age-appropriate healthy foods. Let him choose how much he wants to eat and in what order. Milk can be served at the end of the meal. If your child hasn't eaten anything after a certain time, simply remove his plate without scolding him or making a big deal of it, then let him leave the table.

Offer snacks between meals, but keep serving sizes small so you don't spoil your child's appetite for the next meal. Serve fruit, vegetables, cheese and water. Avoid giving too much juice or milk between meals.

Normally, your baby shouldn't need vitamin or mineral supplements. When in doubt, ask your doctor or a nutritionist whether your child's nutritional requirements are being met.

Chubby babies

There is no evidence to suggest that chubby babies become obese adults. In most cases, baby fat will disappear as your baby grows. Don't worry if people comment on your baby's plumpness.

And don't worry either if your breastfed baby seems chubby during the first few months. It won't last!

In fact, breastfeeding actually reduces the risk of obesity in children. Continue breastfeeding as long as you like.

Take the time to observe your baby. Learn to recognize her needs (often emotional) and fulfill them with other means than food. Try not to reward or punish your baby with food.



Stools and foods

Babies who eat a variety of foods will pass stools that vary in colour and consistency, depending on what they have eaten. New foods such as fruits or vegetables may result in soft stools for a few days if the food is not completely digested, and they may be a different colour than usual. For example, a baby who eats green vegetables may pass green stools.

Don't worry if your baby's diaper contains bits of vegetable or fruit. This is common and normal.

Constipation

If your baby has infrequent bowel movements during her first few weeks of life, she may not be drinking enough milk.

After the age of 6 weeks, babies don't absolutely have to have a bowel movement every 24 hours. Your baby may sometimes go several days without a bowel movement. If this is the case and her stools are soft, everything is normal and there is no cause for concern.

Does your baby strain and turn red during bowel movements? If her stools appear normal, there's no need to worry, either.

However, if she is in pain and her stools are small, hard and dry, she is probably constipated.

Hard stools can cause anal fissures (small tears), which can further complicate the problem.

Good to know ●●●

Iron contained in commercial infant formula does not cause constipation.

Introducing food or juice before the age of 6 months or so does not prevent constipation.

Babies under 6 months who are exclusively milk-fed (breast milk or commercial infant formula)

What to do?

If your baby appears to be suffering, try the following helpful tips:

- Make sure your baby is drinking enough breast milk or commercial infant formula (see [Is your baby drinking enough milk?](#), page 370).
- If your baby is being fed with commercial infant formula, make sure you are diluting the formula with the proper amount of water, as recommended on the label.

Whether you are breastfeeding or using commercial infant formula, giving your baby water before the age of about 6 months is not recommended (see [When to give your baby water](#), page 511).

See a doctor if you don't think your baby is getting any relief.

Babies 6 months and older who are eating food

No single food causes constipation. It's usually the lack of fibre in food that is responsible.

What to do?

If your baby appears to be suffering, try the following helpful tips:

- Give your child foods that are rich in fibre:
 - Fruits (including prunes, pears, and apples)
 - Vegetables
 - Whole grain products
 - Legumes
- Give her water in addition to milk. This is especially important if you are giving her more fibre.

If the constipation persists, your baby vomits, has blood in her stools, or is not gaining enough weight, see a doctor.



Never give your baby a laxative or commercial fibre supplement without medical advice.

