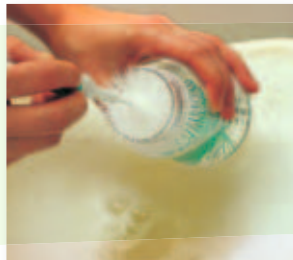


Guide to bottle feeding

How to prepare infant formula and sterilise feeding equipment to minimise the risks to your baby



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About this booklet

The information in this booklet comes from the Department of Health and the Food Standards Agency. It will help you minimise the risks to your baby when you prepare and give infant formula, and sterilise equipment.

It is very important that you follow the instructions in this booklet when you are:

- preparing infant formula feeds;
- sterilising feeding bottles; and
- sterilising feeding equipment.

If you need more information about bottle feeding your baby, speak to your midwife, health visitor or GP.

What is infant formula?

Infant formula is made from cow's milk that has been treated to make it suitable for babies. There are a number of different brands in the shops that meet the required legal standards. The cow's milk in infant formula contains a mix of two types of proteins – whey and casein.

Different types of infant formula

Infant formula is available in two forms:

- ready-to-feed liquid infant formula, sold in cartons, which is sterile; and
- powdered infant formula, which is not sterile.

First infant formula

This is often described as suitable for newborns. It is based on the whey of cow's milk and is thought to be easier to digest than other types of infant formula. This should always be the first formula you give to your baby.

Unless your midwife, health visitor or GP suggests otherwise, this is the only infant formula your baby needs. Your baby can stay on this formula when you start to introduce solid foods at around six months, and continue on it throughout the first year.

When your baby is one year old, they can start to drink whole cow's milk.

There is no evidence to suggest that changing the brand of infant formula your baby drinks does any good or harm. However, if you think a particular brand of infant formula disagrees with your baby, try another. Your midwife or health visitor will be able to discuss this with you.

Casein based infant formula

Infant formula that is mostly based on casein is thought to take your baby longer to digest than whey-based formula. It is not recommended for young babies.

There is little nutritional difference between this formula and first infant formula. Although it is often described as suitable for 'hungrier babies' there is no evidence that babies settle better or sleep longer when fed this formula.

Follow-on formula

This is also casein based and should never be fed to babies under six months of age. Research has found no clear benefit from its use. However, the labels on this formula can look very similar to those on first infant formula, so read them carefully to avoid making a mistake.

Other formulae

Some follow-on formula has cereal added to it, and is described as a 'night-time feed for babies'. This type of formula is not necessary and there is no evidence that babies settle better or sleep longer when fed this. It should never be given to babies under six months.

Soya infant formula is made from soya beans, not cow's milk. Do not use soya formula unless it has been prescribed or recommended by your GP. If your baby is diagnosed as being allergic to cow's milk, your GP will prescribe an appropriate infant formula with fully hydrolysed proteins.

Infant formula with partially hydrolysed proteins is available in the shops, but this is not suitable for babies with a cow's milk allergy.

Remember, if you have any questions about the infant formula you are giving your baby, you can ask your midwife, health visitor or GP for information and help.

KEY FACTS:

Types of milk to avoid

Not all milk is suitable for feeding babies. Here are some of the types of milk you should never give to a baby under one year:

- Condensed milk
- Evaporated milk
- Dried milk
- Sheep's milk
- Goat's milk
- Other types of drinks known as 'milks' such as rice, oat or almond drinks
- Cow's milk as a drink.

How do I choose feeding equipment?

There is a large variety of feeding equipment available in shops. You will need a number of bottles and teats, as well as sterilising equipment to keep them clean.

Feeding teats can be made from rubber or silicone and vary in shape. There is no evidence that one teat is better than another. You can try different teats and use the one that suits your baby best.

Feeding bottles are made of food-grade plastic. However, some shapes and patterns on bottles can make them difficult to clean. A simple, easy-to-clean bottle is best.

How to sterilise feeding equipment

There are several ways in which you can sterilise your baby's feeding equipment, such as:

- using a cold water sterilising solution;
- steam sterilising; and
- sterilising by boiling.

The following instructions apply to all feeding equipment you use for your baby – whether you are using expressed breast milk or infant formula.

Before sterilising, always clean and rinse

- Clean the feeding bottle and teat in hot, soapy water as soon as possible after a feed, using a clean bottle brush.
- Rinse all your equipment in clean, cold running water before sterilising.

Cold water sterilising solution

- Follow the manufacturer's instructions.
- Change the sterilising solution every 24 hours.
- Leave feeding equipment in the sterilising solution for at least 30 minutes.



- Make sure that there is no air trapped in the bottles or teats when putting them in the sterilising solution.
- Keep all the equipment under the solution with a floating cover.

KEY FACT:

All feeding items must be washed and rinsed before they are sterilised. It is important to follow the instructions that come with your steriliser.



Steam sterilising (electric steriliser or microwave)

- As there are different types of sterilisers it is important to follow the manufacturer's instructions.
- Make sure the openings of the bottles and teats are facing down in the steriliser.
- Manufacturers will give a guide as to how long you can leave equipment that you are not using straight after sterilising before it needs to be resterilised.

Sterilising by boiling

- When using this method, care must be taken to ensure safety and prevent scalds or burns. Hot pans and liquids should not be left unattended, especially if children are present.
- Make sure that whatever you sterilise in this way is safe to boil.
- Boil the feeding equipment in water for at least 10 minutes, making sure that all items stay under the surface of the water.
- Remember that teats tend to get damaged faster with this method.

KEY FACTS:

Be careful to prevent anyone, especially children, from being burned or hurt if you are using the boiling method.

Regularly check that teats and bottles are **not torn, cracked or damaged**.

- Wash hands thoroughly. Clean and disinfect the surface where you will put together the bottle and teat.
- It is best to remove the bottles just before they are used.
- If the bottles are not being used immediately, they should be put together fully with the teat and lid in place to prevent the inside of the sterilised bottle and the inside and outside of the teat from being contaminated.

How to make up a feed



Bacteria in infant formula

Even when tins and packets of powdered infant formula are sealed, they can sometimes contain bacteria such as *Cronobacter sakazakii* (formerly know as *Enterobacter sakazakii*) and more rarely Salmonella. Although these bacteria are very rare, the infections they cause can be life-threatening.

To reduce the risk of infection, make up each feed as your baby needs it, using boiled water at a temperature of 70°C or above. Water at this temperature will kill any harmful bacteria that may be present.



KEY FACTS:

Make up feeds, one at a time, as your baby needs them.

Always use boiled water at a temperature of at least 70°C, but remember to let the feed cool before you give it to the baby.

Bacteria multiply very fast at room temperature. Even when the feed is kept in a fridge, bacteria can still survive and multiply, although they do this more slowly. The risk of infection increases over time so that is why it is important to make up the feed only as your baby needs it.

Preparation and hygiene

A baby's immune system is not as strong nor as well developed as an adult's. This means that babies are much more susceptible to illness and infection. Therefore, good hygiene is very important when making up a feed.

All equipment used to feed your baby must be sterilised. Bottles, teats and any other feeding equipment need to be cleaned and sterilised before each feed to reduce the chances of your baby getting sickness and diarrhoea.

It is best to use boiled drinking water from the tap to make up a feed.

Do not use artificially softened water or water that has been previously boiled.

Bottled water

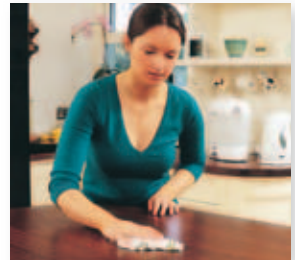
Bottled water is not recommended to make up a feed as it is not sterile and may contain too much salt (sodium) or sulphate. If you have to use bottled water to make up a feed, check the label to make sure the sodium (also written as Na) level is less than 200 milligrams (mg) per litre, and the sulphate (also written as SO or SO₄) content is not higher than 250 mg per litre. It is not usually sterile so it will still need to be boiled, like tap water, before you prepare the feed.

KEY FACT:

Always use freshly boiled water to make up a feed.

A step-by-step guide to preparing a powdered-formula feed

Step 1:	Fill the kettle with at least 1 litre of fresh tap water (don't use water that has been boiled before).
Step 2:	Boil the water. Then leave the water to cool for no more than 30 minutes so that it remains at a temperature of at least 70°C .
Step 3:	Clean and disinfect the surface you are going to use.
Step 4:	It's really important that you WASH YOUR HANDS .
Step 5:	If you are using a cold-water steriliser, shake off any excess solution from the bottle and the teat, or rinse the bottle with cooled boiled water from the kettle (not the tap).



KEY FACTS:

As manufacturers' instructions vary as to how much water and powder to use, it is important to follow the instructions very carefully.

Do not add extra powdered infant formula when making up a feed. This can make your baby constipated and may cause dehydration.

Too little powdered infant formula may not provide your baby with enough nourishment.

Step 6:	Stand the bottle on a clean surface.
Step 7:	Keep the teat and cap on the upturned lid of the steriliser. Avoid putting them on the work surface.
Step 8:	Follow the manufacturer's instructions and pour the correct amount of water that you need into the bottle. Double check that the water level is correct.



KEY FACT:

Always put the water in the bottle first, while it is still hot, before adding the powdered infant formula.

Step 9:

Loosely fill the scoop with formula – according to the manufacturer's instructions – and level it off using either the flat edge of a clean, dry knife or the leveller provided.

**KEY FACT:**

Different tins of formula come with different scoops. Make sure that you use only the scoop that is enclosed with the powdered infant formula that you are using.

**Step 10:**

Holding the edge of the teat, put it on the bottle. Then screw the retaining ring onto the bottle.

**Step 11:**

Cover the teat with the cap and shake the bottle until the powder is dissolved.

Step 12:	It is important to cool the formula so it is not too hot to drink. Do this by holding the bottom half of the bottle under cold running water. Make sure that the water does not touch the cap covering the teat.
Step 13:	Test the temperature of the infant formula on the inside of your wrist before giving it to your baby. It should be body-temperature, which means it should feel warm or cool, but not hot.
Step 14:	If there is any made-up infant formula left after a feed, throw it away.



KEY FACTS:

Do not add sugar or cereals to the feed in the bottle.

Never warm up infant formula in a microwave as it can heat the feed unevenly and may burn your baby's mouth.

Ready-to-feed liquid infant formula

Ready-to-feed liquid infant formula is sterile. This can help to reduce the risk of infections. It is suitable for high-risk infants – for example those that are pre-term, low birth-weight or particularly vulnerable to infections.

Ready-to-feed liquid infant formula should be prepared and stored according to the manufacturer's instructions.

KEY FACT:

Once opened, any unused liquid infant formula that remains in the carton needs to be stored in the fridge, with the cut corner turned down, for no longer than 24 hours.

Storing a feed

A feed should be freshly made up when it is needed to reduce the risk of infection that can make your baby ill. If a feed is stored in the fridge, this should never be for longer than 24 hours.

Any infant formula left in the bottle after a feed should be thrown away.

Infant formula that has not been used and has been kept at room temperature must be thrown away within two hours.

Feeding your baby

- Hold your baby fairly upright for feeds, with their head supported so that they can breathe and swallow comfortably.
- When feeding, keep the teat full of milk, otherwise your baby will take in air.
- Never leave your baby alone with a bottle.
- Your baby may need short breaks during the feed and may need to burp sometimes. When your baby does not want any more feed, hold them upright and gently rub or pat their back to bring up any wind. This may be a very small amount.

KEY FACT:

Never leave your baby alone with a bottle as they might choke.

How often should I feed my baby?

Newborn babies may take quite small amounts of infant formula to start with. However, by the end of their first week, most will require approximately 150 to 200 millilitres (ml) per kg of the baby's weight per day, until they are six months old. This amount will vary from baby to baby.

Although most babies gradually settle into a feeding pattern, they vary in how often they want to feed and how much they want to drink.

Feed your baby when they show signs that they want it. Babies tend to feed little and often, so they may not finish their bottle. However, a big feed does not mean that your baby will go longer between feeds.

How will I know if my baby is hungry?

After a while, you will get to know the signs that show your baby is ready to feed.

- Your baby will start to move about as they wake up.
- Your baby will begin to move their head and mouth around.
- Finally, they will find something to suck – usually their fingers.

Try to feed your baby before they cry as this is a late sign of hunger.

How do I know if my baby is getting enough infant formula?

Your baby's weight gain and the number of wet and dirty nappies will help to tell you if your baby is getting enough formula.

Your baby should be producing around six wet nappies a day a few days after the birth. These nappies should be soaked through with clear or pale yellow urine.

For the first few days after birth your baby will pass dark sticky stools (known as meconium). After the first week, however, your baby should pass pale yellow or yellowish-brown stools.

Your baby will usually be weighed (naked) at birth and again at five and ten days. Once feeding is established, healthy babies should be weighed (naked) no more than once a month up to six months of age and at one year.

This weight should be filled in on the chart in your Personal Child Health Record (the red book). If you have any questions or concerns about your baby's weight gain, speak to your midwife or health visitor.

Feeding away from home

If you need to feed your baby away from home, take with you:

- a measured amount of infant formula in a small clean and dry container;
- a vacuum flask of hot water that has just been boiled; and
- an empty sterilised feeding bottle with cap and retaining ring in place which can be removed when you are ready to make up the feed.

Make up a fresh feed only when your baby needs it. The water must still be hot when you use it, otherwise any bacteria in the infant formula may not be destroyed.

Remember to cool the feed before giving it to your baby by holding the bottom half of the bottle under cold running water. Make sure that the water does not touch the cap covering the teat.

The vacuum flask does not need to be sterilised but should be clean and only used for your baby. The boiling water should kill any bacteria present in the flask. If the flask is full and sealed, the water will stay above 70°C for several hours.

KEY FACTS:

If you need to feed your baby away from home, take:

- a measured amount of powdered formula in a clean dry container;
- a vacuum flask of hot water that has just been boiled; and
- an empty sterilised feeding bottle with cap and retaining ring in place.

Make the feed up only when it is needed.

Alternatively, you could use ready-to-feed liquid infant formula when you are away from home.

Transporting a feed

If it is not possible to follow the advice above or if you need to transport a feed – for example to a nursery or childminder – you should prepare the feed at home and cool it, for at least one hour, in the back of the fridge.

Take it out of the fridge just before you leave and carry it in a cool bag with an ice pack – and use it within four hours.

If you do not have an ice pack, or access to a fridge, the made-up infant formula must be used within two hours.

KEY FACTS:

- If made up formula is stored in a fridge: use within 24 hours.
- If made up formula is stored in a cool bag with an ice pack: use within 4 hours.
- If made up formula is stored at room temperature: use within 2 hours.

Breastfeeding, giving infant formula and introducing solid foods

If you are combining both breastfeeding and formula feeding, and would like to discuss any changes, such as increasing your milk supply, remember to talk to your midwife or health visitor. You can also call the **National Breastfeeding Helpline** on **0300 100 0212**, to speak to someone, often local, about breastfeeding your baby.

Choosing to restart breastfeeding

Breastfeeding is the healthiest way to feed your baby. If you decide not to breastfeed or have stopped breastfeeding, it is possible to restart. This can be difficult because your milk supply will naturally reduce once you are not breastfeeding, but it can increase again to meet your baby's needs.

Starting solid foods

You can start introducing your baby to solid foods at around six months. Carry on offering your baby breast milk or first infant formula, as well as other foods.

If you're pregnant or have a young child under four in a family getting certain benefits or tax credits, or are pregnant and under 18, you could get Healthy Start vouchers. These can be spent on milk, fruit and vegetables, or can be put towards infant formula if you are not breastfeeding. Coupons for free vitamin supplements are also available through the Healthy Start scheme.

For more information or an application leaflet, visit www.healthystart.nhs.uk or call the Healthy Start helpline on **0845 607 6823**.

If you are already on Healthy Start, ask your midwife or health visitor whether you and your baby should be taking Healthy Start vitamin supplements and where you can collect them locally.





The **Baby Friendly Initiative**



For further information please visit www.nhs.uk/start4life or refer to the Birth to Five resource: www.nhs.uk/planners/birthtofive.

Breast milk is the best form of nutrition for infants, and exclusive breastfeeding is recommended for the first six months (26 weeks) of an infant's life. Thereafter, breastfeeding should continue for as long as the mother and baby wish, while gradually introducing the baby to a more varied diet.

The information in this leaflet was prepared in consultation with the Department of Health and the Baby Friendly Initiative. With thanks to the Public Health Agency (Northern Ireland).



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302064 2ap 325K Feb 11 (AHP)
Produced by COI for the Department of Health

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