How to prepare your baby’s bottle
Why this leaflet is important

If you have decided to bottle feed your baby, this booklet is for you. Like any food, powdered infant formula is not sterile. It may contain bacteria like *Cronobacter spp* and *Salmonella* – that could make your baby sick, causing vomiting, diarrhoea and, in rare cases, meningitis.

This leaflet will help you to prepare your baby’s bottle feeds safely.

Here are four key things to remember

1. Use equipment that has been cleaned and sterilised.

2. Boil one litre (1L) of freshly drawn cold tap water and leave to cool for 30 minutes before using it to prepare feeds.

3. Cool prepared feeds quickly.

4. Either:
   - use the feed immediately and throw away any left over within two hours; or
   - store made-up bottles in the back of the fridge at 5°C or less and use within 24 hours.

Pullout and keep poster

There is a pullout and keep poster at the back of the booklet. To remove tear along the dashed line.

The Department of Health and Children recommends that babies should be fed on breast milk for the first six months, and then continue to be fed with breast milk in combination with suitably nutritious foods for up to two years of age or beyond. Following this guidance is the safest and best way of making sure your baby grows and develops as healthily as possible.
If you are feeding your baby expressed breast milk in a bottle, you should follow the instructions this booklet gives for cleaning and sterilising bottles. If you are introducing formula feeds for the first time, ask your public health nurse for advice.

**What you need**

To feed your baby formula milk, you need:

- a clean work surface;
- facilities to wash your hands and equipment;
- a supply of bottles and teats;
- a bottle brush and a small teat brush;
- sterilising equipment and tongs;
- suitable water and a way to boil it; and
- formula powder.

**Formula milk**

- Formula milk labelled ‘First milk’ and/or ‘From birth’ is the recommended formula for babies and can be used until your baby is one year old.

- When your baby is settled on a particular formula milk, there is no need to change. You should avoid ‘chopping and changing’ your baby’s formula milk. If your baby is not settled or feeding well, contact your public health nurse or doctor.

**Don’t forget the Vitamin D!**

Whether you are breastfeeding or bottle feeding, to help your baby get enough vitamin D you should give them five micrograms of a vitamin D₃ supplement every day from birth to 12 months.

You can buy vitamin D₃ products for babies in pharmacies, some supermarkets and other outlets. It is important that you buy products that are suitable for babies, and contain vitamin D₃ only.

For more information visit [www.hse.ie/go/vitaminD](http://www.hse.ie/go/vitaminD)
It is very important that you clean and sterilise all the equipment you use to feed your baby, such as bottles, teats and lids. When cleaning, make sure you remove any leftover milk from hard-to-reach places. Leftover milk can be a good source of food for bacteria to grow.

Cleaning and sterilising removes harmful bacteria that could grow in the feed and make your baby sick. Sterilise all equipment until your baby is one year old.

### Cleaning

**Step 1**
Wash your hands well with soap and warm water. Dry your hands with a clean towel.

**Step 2**
Wash all feeding equipment well in hot soapy water. Use a clean bottle brush and teat brush to scrub the inside and outside of bottles and teats to make sure you remove any leftover milk from the hard-to-reach places.

**Step 3**
Rinse the bottles and teats well in clean running water.

### Did you know?

You can use your dishwasher to clean bottles and feeding equipment that are dishwasher proof. Check with the manufacturer if you’re not sure if the bottles or equipment can be used in a dishwasher.
Sterilising

Sterilise the clean bottles, teats and feeding equipment before you use them. Sterilise using one of the following methods.

<table>
<thead>
<tr>
<th>Sterilising methods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Steam</strong></td>
</tr>
<tr>
<td>Steam is the best way to sterilise items. You can buy plug-in sterilisers or microwave sterilisers. Always follow the instructions.</td>
</tr>
<tr>
<td><strong>Boiling water</strong></td>
</tr>
<tr>
<td>Fill a large saucepan with tap water and make sure all equipment is completely covered by the liquid. Make sure there are no trapped air bubbles. Cover the saucepan and bring it to the boil. Boil for at least three minutes. Make sure the feeding equipment is fully covered with boiling water at all times. Keep the saucepan covered until you need to use the equipment.</td>
</tr>
<tr>
<td><strong>Chemical steriliser</strong></td>
</tr>
<tr>
<td>Make up a batch of sterilising liquid (such as Milton) following the instructions. Make sure all equipment is completely covered by the sterilising liquid and that there are no trapped air bubbles. Leave the equipment covered for the length of time stated on the instructions.</td>
</tr>
</tbody>
</table>

**Remember**

Dishwashers do not sterilise bottles or feeding equipment.
Storing sterilised bottles

If you are not making up feeds, you will need to put the sterilised bottles together immediately to keep the teat and inside of the bottle sterile. Because even washed hands can have bacteria on them, do not touch the bottle neck, the inside of the collar, the inside or outside of the teat or the inside of the cap with your hands.

If you need to make bottles of sterile water for travelling, you can pour the correct amount of freshly boiled water into the bottle before putting the sterile collar, teat and lid on (see Option C page 12).

<table>
<thead>
<tr>
<th>Putting bottles together after sterilising</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
</tr>
<tr>
<td>Make sure your hands and the work surface are clean.</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
</tr>
<tr>
<td>Touching only the outside of the collar, place it over the teat and use sterile tongs to pull the teat through the collar.</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
</tr>
<tr>
<td>Screw the collar onto the bottle and tighten fully.</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
</tr>
<tr>
<td>Place the cap over the bottle, being sure not to touch the inside of the cap when doing this.</td>
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<tr>
<td><strong>Step 5</strong></td>
</tr>
<tr>
<td>Store the bottles in a clean place. If put together correctly the empty bottles and bottles with sterile water will be safe for 24 hours. If not used within 24 hours, sterilise again. Once you open a bottle to add water or powder it is not sterile.</td>
</tr>
</tbody>
</table>
How to prepare a bottle feed

When preparing a bottle feed, it is important that the water is boiled and left to cool for 30 minutes. By boiling the water you make it sterile. By allowing it to cool for 30 minutes, the water reaches a temperature of 70°C. At this temperature it is hot enough to kill harmful bacteria that may be in the formula powder and cool enough not to damage a lot of the nutrients in the formula.

10 steps to prepare a bottle feed

**Step 1**
Empty your kettle and fill it with one litre (1L) of freshly drawn cold tap water and boil. Alternatively, boil one litre (1L) of water in a clean pan.

**Step 2**
Leave the boiled water to cool in the kettle or pan. **Cool it for 30 minutes, but no longer.** This will make sure that the water is not too hot, but also that it is no less than 70°C.

**Step 3**
Clean the work surface well. Wash your hands with soap and warm water and dry them on a clean towel.

**Step 4**
Read the instructions on the formula’s label carefully to find out how much water and powder you need.

**Step 5**
Pour the correct amount of water into a sterilised bottle. **Water that is 70°C is still hot enough to scald, so be careful.**

**Step 6**
Add the exact amount of formula to the boiled water using the clean scoop provided. Reseal the packaging to protect it from germs and moisture. **Adding too much or too little formula could make your baby sick.**
Step 7
Screw the bottle lid tightly and shake well to mix the contents.

Step 8
To cool the feed quickly, hold the bottle under cold running water or place it in a large bowl of cold water. Make sure that the cold water does not reach above the neck of the bottle.

Step 9
To check the feed is not too hot, shake the bottle and place a drop of liquid on the inside of the wrist – it should feel lukewarm, not hot. Feed your baby.

Step 10
Throw away any feed that your baby has not taken within two hours. If your baby is a slow feeder use a fresh feed after two hours.

Bottled water
You may need to use bottled water to make up feeds:
• if you have a water softener system;
• have been told to boil all tap water before use; and/or
• are on holiday abroad.

How to use bottled water
• Use still water only, never fizzy or sparkling water
• Always boil the bottled water before using it to make up feeds
• It is best not to use bottled water labelled as ‘natural mineral water’ as it can have higher levels of sodium and other minerals. It can be used if no other water is available, for as short a time as possible, as it is important to keep babies hydrated.

Warning
Do not use tap water that has a water softener system. It may contain too much sodium.

Can I use an automatic machine to prepare my baby’s bottle?
The use of automatic machines to prepare bottles of powdered infant formula is not recommended. These machines are not recommended because there is not enough information available on their safety.
Storing and warming feeds

Storing made-up bottles
It is safest to prepare a fresh feed each time you need one, and to give it to your baby as soon as it has cooled to the right temperature. This is because warm milk provides ideal conditions for bacteria to grow – especially at room temperature.

To safely store made-up bottles:
• make up bottles following steps 1 to 8;
• place cooled bottles in the back of the fridge;
• make sure the temperature of the fridge is 5°C or less; and
• throw away any feed not used within 24 hours.

How do I warm up refrigerated bottle feeds?
• Remove the bottle from the fridge just before you need it.
• To warm it, place it in a bowl of warm water, making sure the level of the water is below the neck of the bottle. You can also use a bottle-warmer.
• Do not warm it for more than 15 minutes.
• Check the temperature of the milk by dripping a little onto the inside of your wrist. It should feel lukewarm, not hot.
• Throw away any feed that your baby has not taken within two hours.

Never re-warm feeds.

Warning
Never use a microwave to warm feeds. Microwaves heat unevenly and may cause ‘hot spots’ that could scald your baby’s mouth.
Feed size and feeding patterns

If you have any concerns about how much milk your baby is having or how often they are feeding, speak to your public health nurse or doctor.

Your baby will develop their own pattern of feeding, which can vary a little from day to day. Babies generally feed according to their appetite. It is good to allow your baby to recognise their own hunger cues and feeling of fullness. Do not force your baby to take more than they want or to finish the amount prepared.

Babies may not always want to feed at regular intervals (for example, every three or four hours). Young babies tend to need feeds more regularly, including during the night. However, this varies from baby to baby.

Babies tend to gradually increase the amount they drink at each feed. Once you start introducing food, the amount of milk they drink will reduce gradually. The following chart shows how much a baby usually drinks.

<table>
<thead>
<tr>
<th>Age</th>
<th>Average number of feeds in 24 hours</th>
<th>Average daily fluid intake according to baby’s weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth to 3 months</td>
<td>6 to 8 (feeding every 3 to 4 hours)</td>
<td>150 ml per kg (2.5 fluid oz per lb)</td>
</tr>
<tr>
<td>4 to 6 months</td>
<td>4 to 6 (feeding every 4 to 6 hours)</td>
<td>150 ml per kg (2.5 fluid oz per lb)</td>
</tr>
<tr>
<td>7 to 9 months</td>
<td>4 (baby also having food)</td>
<td>120 ml per kg (1.7 fluid oz per lb)</td>
</tr>
<tr>
<td>10 to 12 months</td>
<td>3 (baby also having food)</td>
<td>110 ml per kg (1.7 fluid oz per lb)</td>
</tr>
</tbody>
</table>
Feeding your baby

- Make sure you and your baby are well supported and comfortable during feeds.
- Make sure the milk is at the correct temperature.
- Help your baby to avoid swallowing air while feeding.
- If necessary, wind your baby to help get rid of swallowed air.
- Do not leave your baby alone with the bottle.
- Throw away any milk not used within two hours from when you start to feed your baby.

Other drinks

- Give your baby breast milk or formula milk as their main drink until they are at least one year old.
- Young babies generally do not need extra drinks.
- Cooled boiled water is the most suitable drink if your baby does need extra drinks between feeds.
- From about six months, gradually introduce a cup or beaker for drinks. Aim to replace all bottles with a cup or beaker by the time your baby is about one year old.

Remember

Young babies tend to need feeds more regularly, including during the night. Babies tend to gradually increase the amount they drink at each feed. Once you start introducing food, the amount of milk they drink will reduce gradually.
Feeding your baby while travelling

If you go out with your baby you need to keep the made-up bottle cold or make bottles up as you need them.

Short journeys
You can travel with made-up bottles if the journey will be less than two hours in total and you can keep the feeds cold while travelling.

- Before your journey, prepare feeds as normal, cool them quickly and place them at the back of the fridge at 5°C or below.
- Just before you leave home, remove the bottles from the fridge and place them in an insulated cool bag with ice packs.
- When you arrive, place the bottles in a fridge as soon as you can. Warm a feed when you need one.

Longer journeys
When going on journeys of two hours or longer, or if you have no way of keeping made-up bottles cold, you need to choose one of the options below.

Options A and B are the safest options and are recommended for babies aged two months or less. Option C isn’t as safe as options A and B but is safer than bringing made-up bottles with you and trying to keep them cool.

Option A
Use cartons of liquid formula. You can buy these in chemists and supermarkets. You do not need to keep them in a fridge or heat them up before feeding your baby.

Option B
Bring the powder with you and prepare a feed as normal using water that is no less than 70°C (see pages 6 and 7).
Option C

If you will not be able to boil fresh water, bring the powder and sterile bottles of water with you.

Make up sterile bottles of water at home, following instructions on page 5.

When you are out and need to feed your baby

1. Warm the bottle of water to feeding temperature by standing it in a bottle warmer or a bowl of warm water for no longer than 15 minutes.
2. Add the exact amount of powder to the bottle.
3. Put the lid back on the bottle tightly, and shake well to mix the contents.
4. Test the temperature of the milk by dripping a little onto the inside of your wrist. It should feel lukewarm, not hot.
5. Use the feed right away, and throw away any feed that has not been taken within two hours. If your baby is a slow feeder, make up a fresh feed after two hours.

Travel tip

If you choose to bring formula powder when travelling you can measure the correct amount for each feed into a small, clean, plastic container with a tight-fitting lid or use individual sachets of powder, which you can buy from chemists or supermarkets.
Bringing feeds to crèches, childminders and other childcare

Childcare
Childcare services such as crèches and nurseries rarely prepare bottle feeds. Parents normally prepare all the feeds their baby will need at home and bring these with their baby each day. If you need to do this:

At home
• Sterilise bottles and prepare feeds as explained on pages 3 to 7.
• Cool quickly and place, at the back of the fridge until they are completely cold. The temperature of the fridge should be 5°C or less.
• Label each bottle carefully with your baby’s name and the date and time they were made.
• Bring the made-up bottles to the childcare service in a cool bag with ice-packs.

At childcare
• Childcare staff should put the made-up bottles in a dedicated fridge straight away.
• The temperature of the fridge should be 5°C or less. The fridge should have a thermometer so staff can check the temperature.
• Take all feeding bottles home with you when you collect your baby.

At home
• Throw away any leftover feeds.
• Clean all bottles thoroughly.

Don’t forget
Feeds cannot be stored for longer than 24 hours.
**How to prepare your baby’s bottle**

1. Boil one litre (1L) of freshly drawn cold tap water.

2. Leave to cool for 30 minutes.

3. Clean work surfaces and wash hands.

4. Read the instructions on the formula's label carefully to find out how much water and powder you need.

5. Pour the water into sterile bottle.

6. Add the formula using the scoop provided.

7. Screw the teat on tightly, put on the bottle's lid and shake well.

8. Cool the bottle quickly.

9. Check the temperature of the feed.

10. Throw away any feed not used within two hours.

**Do and Don’t**

**Do**
- Always sterilise bottles
- Wash hands before making up the formula
- Add the formula when boiled water has cooled for 30 minutes
- Cool the feed quickly
- Feed when cooled or store cooled feed

**Don’t**
- Don’t use a dishwasher to sterilise bottles and equipment. But you can use a dishwasher to wash the bottles and equipment
- Don’t heat feed in a microwave
- Don’t use water from hot tap or from a water softener system
- Don’t use water that has been boiled more than once
- Don’t leave made up bottles at room temperature for more than 2 hours

We used information provided by the Food Safety Authority of Ireland in Guidance Note 22 when preparing this poster.