Infant milks:

A simple guide to infant formula, follow-on formula and other infant milks

FIRST STEPS NUTRITION TRUST

Infant milks: A simple guide to infant formula, follow-on formula and other infant milks

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A PDF of this resource is available on the First Steps Nutrition Trust website www.firststepsnutrition.org/parents-carers

Although we use the terms breastfeeding, breastmilk and mother in this document, we acknowledge that not all lactating parents use the terms mother, breastmilk and breastfeeding.

This resource is provided for information only and individual advice on infant feeding should always be sought from appropriate health professionals**. The information in this resource is updated regularly so check that you are using the latest version available**.

We have written this simple guide to infant formula, follow-on formula and other infant milks, to ensure that clear, evidence-based information on infant milks is available to all.

First Steps Nutrition Trust fully supports public health recommendations that mothers should exclusively breastfeed for the first six months wherever possible and continue to breastfeed alongside appropriate complementary foods, into the second year of life or for as long as they wish to do so.

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First Steps Nutrition Trust is a charity which provides evidence-based and independent information and support for good nutrition from pre-conception to five years of age. For more information, see our website www.firststepsnutrition.org

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What is in this guide?

This guide provides simple advice on the infant milks to choose in the first two years of life if parents are not breastfeeding. The reasons for these recommendations are summarised in the frequently asked questions on page 5. The guide also provides information on the amount of milk that current recommendations suggest an infant and young child needs and on how to make up powdered formula milk safely.

If you want support or further information about infant milks, talk to your midwife or health visitor. If you have any concerns about your baby's health, talk to your GP or another health professional.

Types of infant milks

In the UK there are a variety of infant milks for sale. These are marketed as:

- **Infant formula** – milks which are the sole food for infants from birth
- **Follow-on formula** – milks to be used after 6 months of age
- Specialist infant milks which are called **foods for special medical purposes**, and
- **Milks marketed for children over the age of 1 year** for which there are no specific compositional, labelling or marketing regulations.

There are clear regulations that govern the composition, safety and marketing of infant formula and follow-on formula in all areas of the UK. There are different regulations for some of the specialist formula (which should only be used under medical supervision). There are currently no specific compositional regulations for milks marketed for children over 1 year of age.

A safe, nutritionally adequate infant formula is needed where parents cannot, or choose not to breastfeed or provide breastmilk for their infants. Many of the other infant milk products marketed are not needed. As infant formula must meet specific compositional regulations, all those for sale in the UK are suitable for use from birth. Some manufacturers add additional ingredients or use different formulations, but these additions are not agreed to offer any health benefits, and simply make the products more expensive for families. It is important that everyone has access to independent, simple and evidence-based information about which milks to choose in the first years of life.

First, we give a simple guide to which infant milks are suitable at what age. Then, in the *Frequently asked questions* section on page 5, we give some explanations about this guidance.

You may see information on company websites about different milks, why they are useful and claims about special properties they may have. Remember that infant milk manufacturers use their marketing budgets to provide information on infant feeding to parents and health professionals and are not an independent source of information.

The information on their websites can be misleading and may not reflect current health policy in the UK. Sources of independent information for the UK can be found at the back of this resource and we recommend these are used rather than commercial helplines and websites.

A simple guide to choosing milk for infants and toddlers

✓ = Safe to give. **XX** = Do not give this milk

X can use in cooking or food preparation but <u>not</u> as the main milk drink

	Infants 0-6 months	Infants 6 months – 1 year	Toddlers 1 year – 2 years
Breastmilk	✓	✓	✓
Pasteurised animal milk (whole/full fat or semi-skimmed)	**XX**	**X**	✓
Infant formula marketed as suitable from birth (first milk) (cows' or goats' milk-based)	✓	✓	Only if recommended by a health professional
Infant formula marketed as suitable from birth (first milk) (lactose-free)	Only use under medical supervision	Only use under medical supervision	Not needed
Infant formula marketed as suitable from birth for hungrier babies (cows' milk-based)	Not recommended	Not recommended	Not needed
Specialist milks available over the counter: anti-reflux milks and comfort milks (comfort milks are marketed as specialist milks but lack evidence of effectiveness)	Only use under medical supervision	Only use under medical supervision	Not needed
Soya protein-based infant formula marketed as suitable from birth	**XX**	Only use under medical supervision	Not needed
Follow-on formula marketed as suitable from 6 months of age (cows' or goats' milk based)	**XX**	Not recommended	Not needed
Growing-up milks and toddler milks marketed for use from 1 year of age (cows' milk, goats' milk or soya-based)	**XX**	**XX**	Not needed
Unsweetened calcium fortified milk alternatives (e.g. soya, nut, oat, hemp, coconut-based). *If a milk alternative is given in the second year of life, then great care is needed as these are lower in energy and other nutrients than animal milk. Families should seek advice from a health visitor or GP before use.*	**XX**	**X**	✓
Rice milk/rice drink – **Do not give** as main milk drink to children under 5	**XX**	**XX**	**X** up to 50ml per day

Frequently asked questions

- **Where can parents get advice to help them continue breastfeeding if they are having difficulties, or are thinking about introducing infant formula?**
- **Is there an infant formula milk that is closest to breastmilk?**
- **Is there any evidence that a hungry baby milk will help babies to sleep better?**
- **Is infant formula based on goats' milk less allergenic than infant formula made from cows' milk?**
- **If a baby is bringing up milk after feeds, do they need a special milk to prevent reflux?**
- **My baby is unsettled in the evenings and cries a lot. Will a comfort milk help settle her stomach?**
- **My baby has diarrhoea and I think he may be in pain after feeds. Could he need a lactose-free milk?**
- **I am worried my baby might be allergic to cows' milk. Is there a milk I can buy which is suitable for babies with this allergy?**
- **Is soya-based infant formula a good option if there are allergies in the family?**
- **Which milk should we use if we want a vegetarian infant formula for our baby?**
- **Is there a suitable infant formula if we want to bring our baby up on a vegan or plant-based diet?**
- **Are infant milks halal?**
- **Are ready-to-feed milks different to powdered milks?**
- **What are partially hydrolysed proteins in some infant formula?**
- **Do babies need follow-on formula after 6 months of age?**
- **At what age can I use cows' milk as the main drink?**
- **What non-dairy alternatives to cows' milk are suitable from 1 year of age?**
- **How do toddler milks and growing-up milks differ from whole animal milk?**
- **Is an infant milk for 'fussy eaters' useful?**
- **Is home-made infant formula safe to use?**

Q. Where can parents get advice to help them continue breastfeeding if they are having difficulties, or are thinking about introducing infant formula?

A. There are several national helplines and organisations that can offer support for breastfeeding. Many women regret not meeting their breastfeeding goals and really value the opportunity to get support to continue. Most health professionals and lactation consultants agree that once infant formula is introduced, breastfeeding continuation is compromised, and there is research that shows this too. Every breastfeed counts in terms of protecting the health of mums and babies. Even if you plan to introduce infant formula, you can still give your baby some breastmilk. If you keep some breastfeeding going, you can increase breastfeeding later if you want to. Mums who want support can seek help to continue breastfeeding even if you plan to introduce infant formula as you can still give your baby some breastmilk. Never be afraid to ask for help at any stage of your breastfeeding journey. All the helpline volunteers know what you are going through.

Breastfeeding drop-in groups or cafés are a useful source of support when you can get face to face help with breastfeeding issues in a supportive environment, along with the chance to meet other parents. Local groups may be run by either health professionals or volunteers, and you can check in your red book, contact your health visitor or midwife or visit your local council or NHS website to find out about face to face or virtual groups in your area.

Breastfeeding helplines

National Breastfeeding Helpline
0300 100 0212
The National Breastfeeding Helpline is staffed by volunteers from the Breastfeeding Network and The Association of Breastfeeding Mothers. Calls can be answered in English, Welsh and Polish. For **Bengali and Sylheti languages call: 0300 456 2421.**
Lines are open 24 hours a day, every day of the year including bank holidays.
There is also an online chat service. See: https://www.breastfeedingnetwork.org.uk/chat

La Leche League Helpline
0345 120 2918
La Leche League (LLL) is a charity who provide information and support for breastfeeding mothers. LLL volunteers staff the helpline, and there are local LLL breastfeeding support groups meeting in person and online all over the UK. See: https://www.laleche.org.uk/get-support
Lines are open from 8am to 11pm every day.

NCT Infant Feeding Helpline
0300 330 0700
NCT is a charity who support new and expectant parents. The helpline is staffed by volunteers who are trained NCT Breastfeeding Counsellors.
Lines are open 8am to midnight every day.

Q. Is there an infant formula milk that is closest to breastmilk?

A. No. It is impossible to recreate breastmilk. Breastmilk is not only nutritionally uniquely suited to the human infant it also contains hundreds of tailored components and living cells to protect infants from infection and to aid their physical and mental development. These components cannot be made in a laboratory. All infant formula milks must be of a similar composition to comply with UK compositional requirements and all brands are nutritionally adequate for infants. Higher priced infant formula milks offer no additional benefits.

If a substance was found that was definitely beneficial for infant health that could be added to infant formula, it would be in all infant formula by law.

Q. Is there any evidence that a hungry baby milk will help babies to sleep better?

A. No. There is no evidence that milks marketed for hungry babies offer any advantage, make babies full for longer, reduce waking or delay the introduction of solids. It is recommended that first infant formula (made with cows' or goats' milk) is used throughout the first year of life if babies are not being breastfed. Milks marketed for hungry babies have more 'casein' than 'whey' in the protein mix, and casein is harder for babies to digest. An infant has a tiny tummy and needs to eat little and often, day and night, in the first few weeks and months.

First infant formula milks are the best alternative if babies are not being breastfed (or are not receiving expressed breastmilk or human donor milk) and can be used for the first year of life.

Q. Is infant formula based on goats' milk less allergenic than infant formula made from cows' milk?

A. No. Infant formula can have cows' milk or goats' milk protein as the main protein source. They are equivalent in terms of allergenicity and safety.

Q. If a baby is bringing up milk after feeds, do they need a special milk to prevent reflux?

A. Many babies will bring up small amounts of milk after feeds or if they burp, and this often causes them no distress. Crying, vomiting milk after feeds, and back-arching or being unsettled are not symptoms of reflux in most babies. Reflux should be properly diagnosed by a GP or paediatrician. If your baby brings up milk after feeds, it may be that he needs smaller milk feeds more often or may need more frequent winding during a feed. Responsive feeding reduces symptoms of reflux and

your health visitor can explain responsive feeding to you. As long as your baby is growing adequately, many of these problems will disappear as he gets bigger. You can talk to your health visitor or GP for reassurance if you are worried. Thickened (anti-reflux) milks do not have to comply with infant formula regulations in the UK, and they should only be used under medical supervision. There are several reasons to be cautious about using these milks:

- These formula milks contain thickeners such as potato starch and carob or locust bean gum.
- Manufacturers recommend that anti-reflux milks are made up at lower temperatures than the temperature currently recommended for safety, and it is important that this potential risk is considered by a medical practitioner. Powdered infant milks are not sterile and making them up at lower temperatures will not kill any harmful bacteria that might be present.
- If your baby is taking certain medicines, it may not be advisable to give them an anti-reflux milk.

For information on reflux in babies see www.nhs.uk/conditions/reflux-in-babies/

Q. My baby is unsettled in the evenings and cries a lot. Will a comfort milk help settle her stomach?

A. It is not uncommon for young babies to be unsettled or fussy in the evenings and to cry more than they might at other times of the day. You may be surprised to know that the average amount a baby cries in the first six weeks of life is about 110 minutes a day, reducing to about 75 minutes a day at 10-12 weeks. All babies are different, and many need more attention and soothing in the evenings. Frequent small feeds, responsive feeding and frequent winding (during and after feeds) in the first few months is recommended. There is no consistent evidence that infant milks marketed as 'comfort milk' improve babies' wind, colic, constipation or fussiness, and these will pass as the baby gets older. Often small changes to the timing and quantity of feeds can be effective in managing periods of fussiness.

For more information on colic see www.nhs.uk/conditions/colic/

Q. My baby has diarrhoea and I think he may be in pain after feeds. Could he need a lactose-free milk?

A. Lactose intolerance is rare in babies, and it is important not to self-diagnose lactose intolerance in case your baby has a cows' milk allergy, which needs to be treated very differently. Cows' milk allergy is also uncommon but, if your baby has sickness or diarrhoea and has signs of an immediate allergic reaction after a milk feed (a red itchy rash around his mouth, facial swelling, red lumps on the body, or a

streaming nose), or symptoms of a delayed allergic reaction such as eczema or poor growth, it is important to seek help as soon as you can for a proper diagnosis. If a baby ever has breathing problems or goes floppy after a feed, call an ambulance. Thankfully this is very rare.

Diarrhoea may be a symptom of a gastro-intestinal infection rather than an intolerance, and some babies might have a temporary lactose intolerance after a bout of gastrointestinal illness but there is no guidance to suggest a lactose-free formula is helpful. If you think your baby may be intolerant to lactose you should talk to your GP or health visitor. It is important to only use lactose-free milks under medical supervision, as the source of carbohydrate in these milks is more likely to damage teeth and promote weight gain, and the risks of using any specialist milk products should always be weighed up against any potential benefit.

Q. I am worried my baby might be allergic to cows' milk. Is there a milk I can buy which is suitable for babies with this allergy?

A. If you have allergies in your family, breastfeeding is the best way to protect your baby from developing allergies. Some infant milks may claim to reduce the risk of a baby developing an allergy, but experts in the UK do not believe there is good enough evidence to make this claim. Cows' milk allergy is estimated to affect only about 1 in 100 babies under two, and most will outgrow it as they get older.

Cows' milk allergy can only be diagnosed and managed by your GP or a paediatrician, and they will follow specific clinical guidelines to do this. If you are breastfeeding, it is currently recommended that you carry on doing so but make some changes to your own diet. If a baby already has infant formula, an extensively hydrolysed formula (or more rarely an amino-acid based formula) is suitable for managing cows' milk allergy, and these are only available on prescription. Don't try and self-diagnose your baby. Talk to your GP about your concerns and avoid websites which may offer confusing information or suggest tests which are not recognised as helpful.

Information on cows' milk allergy can be found at www.nhs.uk/common-health-questions/childrens-health/what-should-i-do-if-i-think-my-baby-is-allergic-or-intolerant-to-cows-milk/

Q. Is soya-based infant formula a good option if there are allergies in the family?

A. No. Soya-based infant formula is not recommended for use in infants under 6 months of age, and in infants over 6 months it should only be used under medical supervision. This is for several reasons:

- Children are as likely to be allergic to soya protein as to cows' milk protein
- Soya is a rich source of phyto-oestrogens and these mimic sex hormones in the body. For older children and adults, some soya is not a problem, but for babies under 6 months who have soya protein-based infant formula as their sole source of nutrition, or older infants who have high volumes of milk, current guidance in the UK is that the phyto-oestrogens in soya-based infant formula should be carefully considered as a risk.
- The carbohydrate source of soya protein-based infant formula is maltodextrin, which has a greater potential to damage teeth than the lactose in infant formula based on cows' or goats' milk. If infants are allergic to cows' milk, they will be prescribed a suitable infant formula by their GP.

Q. Which milk should we use if we want a vegetarian infant formula for our baby?

A. Many infant formula milks contain either fish oils and/or use the animal-derived enzyme rennet during production. Rennet is used to separate curds from whey and, although vegetarian alternatives are available, they are not used by most manufacturers. Therefore, most infant formula milks are not suitable for vegetarians. Although soya protein-based infant formula are vegetarian and are advertised as suitable for vegetarians by manufacturers, these are not recommended for use in the first 6 months of life, and are not for use from 6-12 months of age unless with medical supervision.

You can find out which infant milks are suitable for vegetarians by looking at the product information sheets at www.infantmilkinfo.org. In July 2024 Kendamil First Infant Milk, Kendamil Goat First Infant Milk, Kendamil Organic First Infant Milk and Similac First Infant Milk say they are suitable for vegetarians. Always check the label of products as ingredients and formulations may change.

Q. Is there a suitable infant formula if we want to bring our baby up on a vegan or plant-based diet?

A. Currently there are no infant milks suitable for vegans on the UK market, since even those that do not contain a source of animal protein contain vitamin D sourced from sheep's wool. Those who choose a vegan diet for themselves and who

breastfeed throughout the first year can move their child onto a plant-based, non-dairy milk at one year of age (with care), although continued breastfeeding remains the best option. See also the answer to Q: What non-dairy alternatives to cows' milk are suitable from 1 year of age?

It is recommended that parents who want to bring up their baby as a vegan seek expert advice to make sure that all their baby's nutritional needs are met. Guidance on how to ensure a breastfed baby with a vegan mum gets all the nutrients he or she needs, can also be found in the resource *Eating well: vegan infants and under-5s*, which can be downloaded from https://www.firststepsnutrition.org/eating-well-early-years

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Q. Are infant milks halal?

A. Some, but not all infant milks are halal approved, and it is important to check the label. Status may also vary by type of milk within the same brand. The powdered infant milks may be halal approved but the ready to feed liquid versions of the same milks might not be, for example.

Please check our individual product datasheets for each product formulation's halal status. They can be found at www.infantmilkinfo.org

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Q. Are liquid ready-to-feed milks different to powdered milks?

A. There are some small compositional differences between powdered and ready-to-feed infant milks (RTF) since RTF products are ultra-heat treated, but there is little information available as to whether these are of any significance. Current evidence does not support anecdotal ideas that ready-to-feed milks are easier to digest or prevent constipation. RTF infant milks are less likely to be halal approved than powdered formulations so always check the packaging, and different sizes of RTF infant milks may be made in different factories so not all products of the same brand may be halal approved. RTF infant milks are much more expensive than powdered infant milks, particularly when sold in 'starter kit' 70ml bottles. RTF milks also require considerably more packaging, which has an impact on the environment.

Q. What are partially hydrolysed proteins used in some infant formula?

A. Partially hydrolysed proteins in some infant milks contain whey proteins that have been broken down into smaller fragments. In the UK, infant milks marketed as 'comfort milks' are based on partially hydrolysed whey protein, and they are now also in some standard infant formula and follow-on formula. Claims that have been made for these ingredients include that partially hydrolysed protein is more easily digested

than intact protein and that feeding hydrolysed protein can result in more soft stools and fewer hard stools. There is no convincing evidence to suggest any benefit for infants from using infant formula based on partially hydrolysed whey protein over those based on intact cows' or goats' milk protein.

Concerns have also been raised that little is known about the long-term effect of hydrolysed protein in infant milks on infant health.

Q. Do babies need follow-on formula after 6 months of age?

A. No. The Department of Health and Social Care and the NHS do not recommend that babies move on to follow-on formula at 6 months of age (this is why it is not possible to buy these milks with the Healthy Start allowance). The World Health Organization has made a clear statement that follow-on formula is not needed. Current advice suggests that parents and carers who use infant formula continue with a first (whey-based) infant formula throughout the first year, as infant formula is nutritionally closer to breastmilk than follow-on formula. Companies make follow-on formula to advertise their brand, since advertising infant formula is not allowed in the UK. There is evidence that many parents are confused by the advertising of these products, and a third of parents have been found to use follow-on formula for children under 6 months of age, which is potentially harmful. There are no health-related advantages to moving on to follow-on formula, and in the second six months of life, if babies are not breastfed or receiving breastmilk, a first infant formula should be given alongside a good variety of complementary foods.

Q. At what age can I use cows' milk as the main drink for my child?

A. After 1 year of age, children should be consuming three meals and two 'mini-meals' a day, eating a wide variety of nutrient-dense foods and avoiding salty and sugary foods. Nutrient-dense foods are foods that contain lots of vitamins and minerals in a relatively small amount of the food. It is recommended that non-breastfed children aged 1-4 years are also given about 350ml-400ml of whole or semi-skimmed animal milk a day to drink, or a suitable alternative.

If there are concerns about the quantity and quality of food a child is eating, a health visitor or GP may recommend continued use of first infant formula into the second year, but this is rare, and food should be the main source of nutrients for toddlers.

Q. What non-dairy alternatives to cows' milk are suitable from 1 year of age?

A. Any animal milk is suitable as the main drink from 1 year of age – cows', goats' or sheep's milk, as long as these are pasteurised. Alternatively, unsweetened

calcium-fortified plant-based alternatives made from plants such as soya, oats, hemp, nuts, coconut or peas can be given. These can also be called soya drink, oat drink etc. However, care needs to be taken if milk alternatives are used for children under 5 that the diet is energy and nutrient dense as plant-based milk alternatives are lower in energy and some nutrients. Some plant-based milk alternatives do not provide important nutrients such as riboflavin and iodine that animal milks provide. Seek advice from a health visitor if you want to use a milk alternative. **Do not give rice milk alternative (also called rice milk drink)** to infants or children under 5. For information on non-dairy sources of calcium and milks to choose for children who avoid dairy products, see *Eating well: vegan infants and under-5s*, available from www.firststepsnutrition.org/eating-well-resources

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Q. How do toddler milks and growing-up milks differ from animal milk?

A. Toddler milks and growing-up milks contain more sugar than animal milk and may have the wrong balance of nutrients. The Department of Health and Social Care and the NHS, and experts across Europe have agreed that young children do not need these fortified milks to obtain particular nutrients. Children will get the majority of nutrients from food in their second year and beyond, and there is some evidence that giving lots of extra nutrients in fortified drinks to children who don't need them may be bad for health in the longer term. Offering sweetened drinks to young children may also contribute to development of a sweet tooth and to overweight in childhood. You can find out more about these products at www.firststepsnutrition.org/milks-marketed-for-children.

Q. Is an infant milk for 'fussy eaters' useful?

A. Periods of fussy eating are common in young children and in most cases resolve themselves if families continue to offer a range of foods, eat with their children and act as a good role model for eating a range of foods. Occasionally a child will have a more serious case of food refusal, and advice should be sought on how to manage this most effectively. Giving a fussy child a sweet milkshake drink will not help them eat better in the long term, and we discourage the use of any fortified milks for this purpose unless they are used under strict medical supervision.

Q. Is home-made infant formula safe to use?

A. No. We do not recommend that anyone attempts to make home-made infant formula. Home-made infant formula may not have an appropriate nutritional composition and therefore may not support proper growth and development. The ingredients themselves, or the way in which they have been prepared, increases the risk of severe bacterial infection in infants. Unlike commercially prepared infant

formula, home-made infant formula milks are not subject to any compositional standards and their preparation, storage and handling have not been subject to risk assessment and subsequent recommendations for safe usage.

Whilst there is no national guidance in the UK on the use of home-made infant formula, international health authorities in other developed countries do not endorse the use of any home-made infant formula. Healthy infants who are not breastfed, or receiving breastmilk, should only be given commercially-prepared first infant formula based on cows' or goats' milk protein. Other commercially-prepared infant milks should only be used under medical supervision.

Do you have any more questions? Email vicky@firststepsnutrition.org

How to bottle-feed

The **Unicef UK Baby Friendly Initiative** makes the following recommendations about how to encourage responsiveness and discourage overfeeding when bottle-feeding:

- Hold the baby close and look into their eyes during feeds.
- Respond to cues that baby is hungry.
- Invite the baby to draw in the teat rather than forcing the teat into the mouth.
- Pace the feed so that the baby is not forced to feed more than they want to.
- Recognise the baby's cues that they have had enough milk.

The **NHS** website makes the following suggestions about bottle-feeding infants.

Equipment

You will need several bottles and teats, and a bottle brush, as well as sterilising equipment. There is no evidence that one type of teat or bottle is better than any other. A simple, easy-to-clean bottle is probably best. Make sure your bottles and teats are sterilised.

Giving a feed

- 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. If the teat becomes flattened while you're feeding, gently poke your little finger into the corner of your baby's mouth to release the suction. If the teat gets blocked, replace it with another sterile teat.
- Your baby may take short breaks during the feed and may need to burp sometimes. When your baby has had enough milk, hold them upright and gently rub or pat their back to bring up any wind.
- Check that the hole in your baby's teat is not too big – giving milk too quickly can cause sickness. Sitting your baby upright on your lap after a feed may help.
- Throw away any unused formula or breast milk after you have finished feeding your baby.
- All babies are different. Some want to feed more often than others, and some want more milk. Feed them when they seem hungry and don't worry if they don't finish the bottle. Don't force them to take more milk than they want during a feed.
- Never leave a baby alone to feed with a propped-up bottle, as they may choke on the milk.

You can access a 1-page leaflet produced by UNICEF Baby Friendly and First Steps Nutrition Trust on *'What formula to choose' and responsive bottle feeding* at:

https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2019/04/Infant-formula-and-responsive-bottle-feeding.pdf

Bringing up milk after feeds

Some babies bring up more milk than others during or just after a feed. This is sometimes called 'posseting' or 'regurgitation' or 'reflux'. It can be upsetting when this happens, and you may be worried that something is wrong. If it happens often, or if your baby is violently sick, appears to be in pain or you're worried for any other reason, talk to your health visitor or GP.

If your baby brings up a lot of milk, they may be hungry again quite quickly. Don't force them to take more milk than they want during a feed. Every baby is different. Some prefer to feed little and often.

You can get advice on reflux in babies here https://www.nhs.uk/conditions/reflux-in-babies/

How much milk do babies need, and how often should I offer milk feeds?

If fed responsively, healthy infants will naturally regulate their feeding and will take enough milk to meet their needs. They should be allowed to feed when they show signs that they are hungry and not be encouraged to ‘finish the bottle’ or take more milk than they want.

Newborn babies need quite small amounts of formula to start with. In the early weks of life it is quite normal for full-term babies to show signs that they want to be fed every 2-3 hours, day and night, and it is not unusual for babies to be fed 10 or 12 times a day at this stage. As they develop, they will require feeding less frequently but it is quite normal for babies to expect to be fed up to 8 times a day. By the age of 6 months this may have gradually reduced to around 4 times a day although some babies may still require more frequent feeds.

The guidance below suggests approximate amounts of infant formula milk needed per day at different ages. This is based on average energy needs and weights of babies, and your baby may need more or less. If your baby is unwell, in pain due to teething, or having a growth spurt, the amont they want may vary. Try not to focus on whether your baby is accepting the exact amount of milk stated as this is just a guide. Your baby's weight gain and the number of wet and dirty nappies will help tell you if your baby is getting enough formula. Every day, your baby should have at least 6 wet nappies and at least one soft poo.

From about 6 months, when complementary feeding begins, introduce a free flowing cup for milk feeds. The table below provides some guidance on how you could spread milk feeds throughout the day.

If you would like further advice or have a question, consult your healthcare professional.

Age	Approximate intake per day
Birth to 2 weeks	See text above
2 to 4 weeks	850ml
1 to 2 months	950ml
2 to 3 months	950ml
3 to 4 months	900ml
4 to 5 months	950ml
5 to 6months	1000ml
General guidance on milk feeding after 6 months	
7 - 9 months	About 600ml per day Infant formula could be offered at breakfast (150ml), lunch (150ml), tea (150ml), and before bed (150ml).
10 - 12 months	About 400ml per day Infant formula could be offered at breakfast (100ml), tea (100ml), and before bed (200ml).
1 - 2 years	About 350-400ml per day. Full-fat or semi-skimmed cows' milk or another suitable animal milk or plant-based milk alternative could be offered at snack times. Seek advice if using plant-based milk alternatives as these are lower in energy than full-fat animal milk.

Making up powdered milks safely

It is very important that powdered infant milks are made up carefully. Using too much powder, or too little, can both impact on an infant's health and well-being. Always follow the instructions on powdered infant formula tins carefully.

Powdered infant milks are **not** sterile and they may contain harmful bacteria. However, if milks are made up appropriately for infants, they should be safe. *Salmonella* and *Cronobacter sakazakii* are the organisms of greatest concern in infant formula. Bacteria multiply most rapidly at temperatures between 7°C and 65°C (and they like body temperature 37ºC best of all). Even at 5°C – the temperature recommended for domestic fridges – multiplication will continue but at a much reduced rate.

The guidelines for making up powdered infant milks are designed to reduce the holding time between making up and using feeds, in order to minimise the amount of time during which bacteria can multiply. The guidelines also include recommendations for cleaning and sterilising all feeding equipment.

General recommendations

Recommendation	Why?
Make up feeds one at a time as the baby needs them.	To reduce the holding time between reconstituting and using feeds, to minimise the amount of time during which bacteria can multiply.
Sterilise all bottles and equipment to be used.	The infant's immune system is not as well developed as an adult's. This recommendation minimises the risk of illness and infection.
Use water from the cold tap to make up feeds. Do not use bottled or artificially softened water or water that has been re-boiled.	Bottled water is not sterile and may contain too much sodium or sulphate. If you must use bottled water, check on the label that the sodium (Na) level is less than 200mg per litre and the sulphate (SO or SO4) level is no higher than 250mg per litre. Re-boiled water is not recommended as it has concentrations of some minerals that might be harmful in large amounts.

Recommendations for making up a feed using formula milk powder	
Recommendation	**Why?**
Boil at least 1 litre of fresh water taken from the cold tap in a kettle. Do not use previously boiled water. Leave the water to cool *for no more* than 30 minutes.	This step should ensure that the water used to make up the feed is at a temperature above 70°C, which will kill most of the pathogenic micro-organisms that may be present in powdered formula.
Clean and disinfect all equipment and work surfaces to be used and wash your hands. Keep the teat and bottle cap on the up-turned lid of the steriliser. If using a cold-water steriliser, shake off excess solution and rinse bottles in cooled boiled water from the kettle. Do not use tap water.	To avoid contamination of bottles with bacteria from tap water or unclean work surfaces.
Pour the correct amount of cooled, boiled water (this will still be at more than 70°C if it has been left to cool *for less than 30 minutes*) into bottles and double-check the volume before adding the powder. Fill the scoop loosely with milk powder according to the manufacturer's instructions. Level off the scoop using the leveller provided or the back of a clean, dry knife. Always use the scoop provided with the powder you are using. Add the powder to the water in the bottle.	Adding the water before the powder makes it possible to measure the water accurately. Scoop sizes differ between manufacturers and between different milk powders from the same manufacturer. Too much powder may result in constipation or dehydration.
Holding the edge of the teat, put it on the bottle and then secure the retaining ring and cap. Shake the bottle until the powder is dissolved.	
Cool the formula by holding the bottom of the bottle under cold running water. Do not allow the tap water to touch the bottle cap. Test the temperature of the milk by shaking a small amount onto the back of your wrist. It should be body temperature and feel warm or cool but not hot.	
Discard any of the feed that has not been used.	

Making up powdered milks safely: Frequently asked questions

You can find answers to frequently asked questions about making up, handling and storing infant formula on our website at infantmilkinfo.org. These include answers to questions like:

- **How should powdered infant milk be made up safely away from home?**
- **Are formula preparation machines safe?**
- **Are rapid cooling devices safe to use when preparing powdered infant formula?**
- **How long can prepared infant milks remain at room temperature?**
- **Is filtered water safe to use for preparing powdered infant formula?**
- **Why is it advised to use water at >70ºC to prepare powdered infant formula?**
- **Is it necessary to sterilise feeding cups used for milk feeds for infants?**
- **How long can I store ready to feed (RTF) infant milks once opened?**

For more information

Bottle-feeding advice is available from the **NHS** website.

http://www.nhs.uk/Conditions/pregnancy-and-baby/Pages/bottle-feeding-advice.aspx

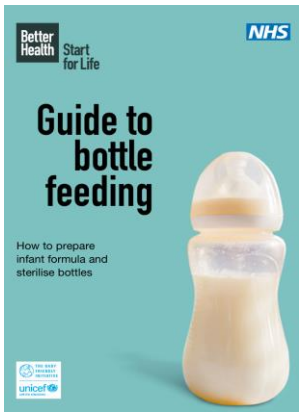
and from **Unicef UK Baby Friendly**

https://www.unicef.org.uk/babyfriendly/baby-friendly-resources/bottle-feeding-resources/

and **Better Health Start for Life**

https://www.nhs.uk/start-for-life/baby/

Guide to bottle feeding, shows all the information on how to make up bottles safely in picture form at: https://www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2022/10/Bottle-feeding-leaflet.pdf



Additional sources of Information for those living in Scotland

The **NHS Health Scotland** bottle feeding leaflet can be accessed at

http://www.publichealthscotland.scot/media/19537/formula-feeding-how-to-feed-your-baby-safely-may2023-english.pdf

Information on feeding your baby can also be found in the **Pregnancy Book, Ready Steady Baby**;

http://www.readysteadybaby.org.uk/first-days-together/feeding-your-baby/formula-feeding-your-baby/index.aspx

Information on inant feeding can also be found at the Scottish Parent Club which now hosts **Feedgood**. https://www.parentclub.scot/articles/feedgood

Additional sources of information for those living in Northern Ireland

In NI parents who are bottle-feeding are provided with a leaflet which provides safety information on the preparation and storage of infant formula milk. Photographs are used to explain how to sterilise feeding equipment and make up formula milk, and the leaflet highlights the safety precautions that need to be observed.

You can download this very useful leaflet from
https://www.publichealth.hscni.net/publications/bottlefeeding

Information on feeding your baby can also be found in the **Pregnancy Book**
https://www.publichealth.hscni.net/publications/pregnancy-book-0 (Chapter 9)

and
Birth to Five
https://www.publichealth.hscni.net/publications/birth-five (Chapter 1)

Additional sources of information for those living in Wales

Information on **Making up a bottle feed** and on **Sterilising equipment** from **Every Child Your Pregnancy and Birth** can be accessed at:

https://everychild.wales/parent-information-2/

This resource is also available in Welsh at:

https://pobplentyn.cymru/parent-information-page-welsh-2/

Infant milks: A simple guide to infant formula, follow-on formula and other infant milks

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