

Bottle feeding with formula

If you choose to bottle feed your baby with artificial formula, you will need bottles with caps and teats, infant artificial formula and sterilising equipment. Although breast milk is the best feeding choice for babies, artificial formula is readily available and nutritionally adequate.

Reasons for feeding with artificial formula

There are many reasons why a mother may choose to feed with artificial formula or to wean her baby from the breast to the bottle:

- The mother does not wish to breastfeed.
- The baby is unable to breastfeed successfully because of an illness or a congenital condition that prevents breastfeeding.
- The mother has an illness that prevents her from breastfeeding.
- The mother wishes to wean her baby from the breast prior to 12 months of age.
- The mother is going back to work and her workplace does not provide facilities for breastfeeding or expressing breast milk.
- The baby is adopted and the adoptive mother is not lactating.

Bottle-feeding equipment

The equipment you need includes:

- Infant artificial formula
- Bottles
- Teats
- Sterilising equipment.

Artificial formulas explained

A baby who is not receiving breast milk should be fed infant artificial formula. Cow's milk is not suitable for children under 12 months of age. Most infant artificial formulas are based on cow's milk but contain other important ingredients as well. They are suitable for the majority of healthy full term infants.

All artificial formulas sold in Australia conform to the Australia New Zealand Food Standard Code (Standard 2.9.1 – Infant Formula Products). There is little difference in nutritional value or quality between differently priced brands. There are a variety of artificial formulas available. They include:

- **Standard infant artificial formula** – labelled 'suitable from birth', this is for babies up to 12 months of age. Standard infant artificial formula is usually cow's milk based, but may be soy or goat's milk based. Soy may be preferred by vegan mothers or if the baby cannot tolerate cow's milk protein. However, unless there are compelling reasons against using cow's milk based artificial formula, it is the recommended choice.
- **Follow-on infant artificial formula** – labelled 'suitable only for babies over six months', this is for babies aged six to 12 months. There is no research to show these preparations are any better than standard artificial formula, and they are not considered nutritionally necessary.
- **Thickened artificial formula** – is sometimes recommended for babies who frequently 'posset' or regurgitate large amounts after feeding. However, a thickened artificial formula may not solve the problem and should not be used without guidance from a qualified health professional.

- **Premature infant artificial formula** – is specifically designed for the nutritional needs of a premature baby. This is not suitable for healthy term babies.

Bottles

Issues to consider include:

- You will need at least three large bottles with leak-proof caps, discs and teats.
- Plastic bottles are the best because glass breaks more easily.
- Choose a bottle that is smooth on the inside, with no ribbing or indentation on the inside surface. These bottles are easier to clean properly and, therefore, safer to use.
- Choose bottles with clearly marked measurement guides that will not wear off over time.

Teats

Issues to consider include:

- **Flow rate** – make sure the teat is right for your baby's age. Most teats are labelled according to age. The flow will then be at a suitable rate for your baby. Test the flow by holding the bottle upside down – milk should drip out at a constant, steady rate. If it drips too slowly, the baby will get tired before the feed is finished. If it pours out in a stream, the baby may dribble and splutter during feeding.
- **Teat shape** – there are lots of teats available which claim to be an exact replica of a mother's nipple in the baby's mouth. None have been shown to be of any particular advantage. 'Orthodontic' teats are no better than regular-shaped teats and there is even some evidence to suggest they may, in fact, not be good for later tooth development. Over time, you will discover which teat works best for your own baby.
- **Time** – your baby should take 15 to 30 minutes to drink a bottle.
- **Air** – loosen the cap a little if the teat flattens during feeding. Air bubbles should rise through the milk as the baby drinks.

Sterilising all equipment is essential

You will need to sterilise all bottle-feeding equipment until your baby is 12 months old. First, wash all the equipment in warm, soapy water. Use a clean bottlebrush to thoroughly remove all traces of milk, rinse and then sterilise. There are a number of different sterilising methods you can use including boiling, chemicals, steam and microwave.

Boiling

Boiling is the preferred option. You will need to:

- Place all equipment in a large pot and cover with tap water (make sure your water meets the Australian Drinking Water Guidelines if you are not using town water).
- Make sure there are no air bubbles trapped inside the bottles.
- Put the saucepan lid on and bring to the boil.
- Allow five minutes of rapid boiling.
- Turn off heat and allow to cool.
- Make sure you wash your hands thoroughly with soap and water before handling the equipment.
- Store the sterilised equipment in a clean container in the fridge and re-boil after 24 hours if it has not been used before then.

Sterilising chemicals

Sterilising chemicals usually come in liquid or tablet form. It is very important that you follow the manufacturer's instructions to ensure correct strength. Generally, you need to mix the chemicals with water in a big plastic or glass bowl and then:

- Place all equipment in the solution. It is important that every surface is covered in solution – for example, squirt solution through the teats and get rid of any air bubbles.
- Soak the equipment for at least one hour and change the solution every 24 hours.

- Scrub the container with warm soapy water and rinse thoroughly before refilling with new solution.
- Remove the equipment and shake off excess solution, but **do not rinse**.
- Use only glass or plastic, as metal will rust when left in the solution.

Steam steriliser

Steam steriliser appliances plug into a power point. They are automatic once turned on. It is very important you use the steriliser according to the manufacturer's directions. Generally:

- Place the equipment in the steriliser and add the recommended amount of water.
- Put the lid on and steam the equipment for the recommended period of time.
- Keep the lid on until the bottles are needed.
- Wipe and dry the inside of the container once a day to keep it clean.

Microwave steam sterilisers

These units are specifically designed to use in a microwave oven. You should:

- Read the instructions carefully.
- Check the microwave power needed to sterilise the equipment properly because not all microwave ovens are the same.
- Do not use metal inside these sterilisers.

Amount of food required per day

A full term healthy infant will need, on average, 150ml per kg of body weight per day from when they are five days to three months old. For example, if your baby weighs 3kg, your baby will need 450ml a day.

From three to six months, this reduces to 120ml per kg of body weight per day. From six to 12 months, it falls to between 90–120ml per kg of body weight per day. Premature babies need more than this: initially, they usually require 180–200ml per kg of body weight per day.

See your doctor or child health nurse if you are concerned about your baby's appetite or growth.

Mixing and storing the artificial formula

Before you use any artificial formula, always check the date on the bottom of the tin to ensure it has not passed its expiry date. You should also:

- Use the artificial formula powder within one month of opening the tin.
- Follow the manufacturer's instructions strictly when making up artificial formula; accuracy is important to make sure your baby receives the correct nutrition.
- Always wash your hands thoroughly before preparing artificial formula and ensure your preparation area is clean.
- Use **cooled**, boiled water only. Very hot water will destroy many of the nutrients in the artificial formula.
- Pour the recommended amount of water into the bottle.
- Use the enclosed spoon to measure the exact amount of artificial formula. Level the powder (do not pack it down) with a sterilised knife or spatula. Add artificial formula to the bottle of cooled, boiled water.
- Place the disc and cap on the bottle, and shake until the artificial formula is thoroughly mixed.
- Store the made-up bottle of artificial formula in the back of the fridge where it is coolest.
- Discard the scoop that was provided with the tin of artificial formula when the tin is empty.
- Read the instructions carefully if you change artificial formula brands to ensure you use the correct amount of water and powder.

Warming the bottle

While it is not harmful to feed cold artificial formula to babies, most people prefer to warm the mixture first. You should:

- Warm the bottle by standing it in a container of hot (not boiling) water for 10 minutes.
- Test the temperature by turning the bottle upside down and allowing a few drops onto the inside of your wrist. It should feel the same temperature as your skin.
- **Never** warm a bottle in the microwave oven. It is unsafe as it does not heat evenly and there may be 'hot spots' in the bottle that can burn your infant's mouth.

Enjoy mealtimes with your baby

Mealtimes are an opportunity to communicate. Just as adults and children enjoy interacting with each other at mealtimes, so do babies. Hold your baby close to your body, facing you, when feeding; it should be an enjoyable social experience for you both.

It is dangerous to prop a bottle in a cot for the infant to feed alone. Your baby may choke and there is a higher incidence of middle ear infections and tooth decay among children who are regularly fed this way.

Do not use leftovers

Discard any leftover artificial formula following the feed. Never offer your baby leftover artificial formula at the next feed. It can grow bacteria (germs) that may make your baby unwell.

Where to get help

- Your doctor
- Maternal and child health nurse – contact your local council for the name of your nearest centre
- Maternal and Child Health Line (24 hours) Tel. 132 229

Things to remember

- All artificial formulas sold in Australia conform to the Australia New Zealand Food Standards Code. There is not a lot of difference in nutritional value from one brand to the next.
- You will need to sterilise all bottle-feeding equipment until your baby is 12 months of age.
- Discard any unused portion of a feed.
- Feeding time should be an enjoyable experience. However you choose to feed your baby, all babies need and enjoy cuddling, holding and talking with at feed times.

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