

## Fact Sheet

# Feeding babies and food safety

A very important part of looking after babies younger than 1 year old is to ensure their food is safe and healthy.

Food safety is particularly important for the early months of a baby's life. Food poisoning can be especially severe for babies because their digestive and immune systems are immature.

These tips are for healthy full-term babies only.

If your baby is premature, of low birth weight or unwell, in the first instance talk to your doctor, midwife or child and family health nurse for advice on feeding.

## Breastmilk

Breastmilk gives babies the best possible start. SA Health supports the National Health and Medical Research Council's [Infant Feeding Guidelines](http://www.eatforhealth.gov.au) ([www.eatforhealth.gov.au](http://www.eatforhealth.gov.au)) which recommend:

- > Encourage support and promote exclusive breastfeeding to around 6 months of age;
- > Continue breastfeeding while introducing appropriate solid foods until 12 months of age and beyond, for as long as the mother and child desire;
- > While breastfeeding is recommended for the first 6 to 12 months and beyond, any breastfeeding is beneficial to the infant and mother.

These guidelines support the World Health Organization's view that "breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants".

## Important food safety tips include:

- > use fresh breastmilk whenever possible;
- > if expressing breastmilk, wash and dry hands first;
- > use sterile equipment and containers;
- > store expressed breastmilk in a sterile, food-grade container and label the container with the date it was expressed;
- > store expressed breastmilk in:
  - > the fridge (in the back where it is coldest) for no more than 72 hours; or
  - > the freezer compartment inside a fridge (-15°C) for up to 2 weeks; or
  - > in the freezer section of a fridge with a separate door (-18°C) for 3 months;
- > Thaw frozen milk in the fridge. Thawed breastmilk should be used within 24 hours;
- > rewarm expressed milk by standing the container in heated shallow water for no more than 15 minutes;
- > microwave ovens are not recommended to re-warm milk as they heat unevenly and overheated parts of milk can contain 'hot spots' that can burn a baby's mouth;
- > Check temperature of milk before feeding your baby by placing a drop of liquid on the inside of the wrist. It should feel warm;
- > do not re-freeze expressed breastmilk;



- > discard expressed milk after 4 hours at room or warm temperatures;
- > once feeding has begun, any unused breast milk should be discarded after the feed; and
- > use extra care with hygiene if caregivers are suffering illnesses with vomiting or diarrhoea.

### Diet tips for breastfeeding women:

- > Breastfeeding women should eat a balanced and varied diet in line with the [Australian Dietary Guidelines \(www.eatforhealth.gov.au\)](http://www.eatforhealth.gov.au)
- > Pregnant and breastfeeding women should avoid fish that may contain high levels of mercury. Food Standards Australia New Zealand recommend consuming no more than: one serve (100g cooked) per fortnight of shark/flake, marlin or broadbill/ swordfish, and no other fish that fortnight; or one serve (100g cooked) per week of orange roughy (deep sea perch) or catfish and no other fish that week.
- > Breastfeeding women can eat the foods they avoided because of *Listeria* risk during pregnancy. The risk of transmitting *Listeria* to a newborn baby from breastfeeding is extremely low and outweighed by the significant benefits of breastfeeding.
- > If you are ill or taking any medications talk to your health professional.

### Infant formula

Some parents and caregivers choose infant formula as an alternative to breastmilk, or might be advised to use it for health reasons. In Australia, infant formula is available in powdered and liquid preparations.

All commercially produced infant formulas in Australia are required to meet food and safety standards to meet the nutrition requirements of babies aged up to 12 months.

SA Health supports the use of the Australian National Health and Medical Research Council Infant Feeding Guidelines, which recommend that “if an infant is not breastfed or is partially breastfed, commercial infant formulas should be used as an alternative to breast milk until 12 months of age”. It is important to prepare and store feeds correctly.

Always follow the label instructions closely that come with each infant formula product and use only the enclosed scoop to ensure that the formula is made up correctly.

### Important safety tips

#### Powdered formula

Harmful microorganisms such as *Cronobacter sakazakii* (previously known as *Enterobacter sakazakii*) and *Salmonella* occur naturally in the environment and might be present in many foods, including powdered infant formula. While manufacturers have strict controls in place to minimise contamination, powdered infant formula is not sterile. Take care to prepare and store formula powder safely, to help reduce any risk of illness.

#### Before preparing formula

- > Wash thoroughly hands and food contact surfaces (e.g. benchtops) with soap and warm water and dry thoroughly.
- > Wash and sterilise equipment such as bottles, teats and utensils.
- > Use sterile tongs to remove bottles and so on, to avoid re-contaminating the equipment

#### Preparing formula

- > Wash hands thoroughly with soap and warm water and dry with a disposable paper towel.
- > Whenever possible, make a fresh batch of infant formula before each feed.
- > Prepare infant formula exactly according to manufacturer’s instructions.

- > Check temperature of infant formula before feeding your baby by placing a drop of liquid on the inside of your wrist. It should feel warm.
- > Avoid preparing infant formula if caregivers are suffering illnesses with vomiting or diarrhoea, and take extra care with hygiene.

### After preparation storage

- > If not used immediately, when made up infant formula must be stored in a sterilised bottle or container at the back of the fridge, in the centre where it is coldest.
- > Discard un-used infant formula after 24 hours if refrigerated.

### Re-warming stored, made-up formula

- > Remove the prepared formula just before it is needed.
- > Re-warm by placing the container in heated, shallow water for no more than 15 minutes or use a commercial bottle warmer.
- > Microwaves are not recommended to rewarm formula as they heat unevenly and overheated parts of formula can burn the baby's mouth.
- > Discard un-used infant formula after two hours at room temperature.

## Liquid infant formula

Liquid infant formula is sterile before the package is opened.

It may be a good alternative when travelling, but consult a health professional to ensure it is appropriate for your baby.

Follow the instructions for the product.

Once opened, if the liquid infant formula is not to feed to your baby immediately:

- > Pour into a sterile food-grade container.
- > Store immediately in the coldest part of the fridge: at the back, in the centre
- > Re-warm by placing the container in heated, shallow water for no more than 15 minutes or use a commercial bottle warmer.
- > Microwaves are not recommended to rewarm formula as they heat unevenly and overheated parts of formula can burn the baby's mouth.
- > Discard un-used infant formula after two hours out of the fridge.
- > Discard after 24 hours in the fridge.

## Standards

Special formulas are available where parents' families have a history of allergies. Talk to your doctor, midwife or child and family health nurse about these in the first instance.

Commercially produced infant formulas in Australia are required to meet specific standards, designed to ensure they have a nutritional profile that satisfies the unique nutrition requirements of babies up to 12 months old. Commercial infant formula producers must also have processes and systems in place to minimise food safety risks, such as the risks posed by microbiological pathogens like *Salmonella*.

## Paleo and other home-made infant formula

Home-made infant formula recipes (for example the Paleo DIY formula) are increasingly available online, with no assurance of their safety, nutritional quality or appropriateness for babies. While these home-made formulas may appear safe and nutritious, this is not assured as it is for commercially produced formulas which are required to meet certain standards.

These home-made formulas can present risks to babies through inadequate nutrition (including nutrient levels that are too high or not suitable for the baby's immature digestive system and kidneys) and increased food safety risks.

There are specific ingredients in many home-made formula recipes that are of particular concern, from both a nutrition and food safety perspective. Babies are particularly vulnerable to the food safety risks posed by these ingredients, as their immune systems are not yet fully developed. The ingredients listed below are just some of the potential high risk ingredients common in home-made formula recipes.

### Raw milk

- > Many infant formula recipes specify the use of raw milk that has not undergone a pasteurisation process to kill any bacteria that might be present.
- > Raw milk and raw milk products may come from a number of milking animals including cow, goat, sheep, buffalo, horse and camel. Raw cow's milk is prohibited for retail sale for human consumption in Australia.
- > The use of raw milk in home-made formulas presents an increased risk of contamination with bacteria. It also does not provide any dietary advantage compared with pasteurised milk.
- > Raw milk is known to carry several disease causing organisms including:
  - > *Campylobacter jejuni*
  - > *Salmonellosis*
  - > *Listeria monocytogenes*
  - > Shiga toxin-producing *Escherichia coli* (STEC)
  - > *Cryptosporidium*
  - > *Staphylococcus aureus*
- > Complications from bacteria that can contaminate these products can be extremely severe, such as Haemolytic Uraemic Syndrome (HUS) caused by Shiga toxin-producing E. coli. HUS can result in renal failure and death in otherwise healthy babies.
- > The Australian Infant Feeding Guidelines state that any unmodified milk from animal sources is not suitable for infants due to differences in protein and electrolyte concentrations. The Guidelines further state that unmodified milk from animal sources should not be given as a main drink before 12 months of age.

### Raw chicken livers

- > Some home-made infant formula recipes specify the use of raw meat ingredients, particularly raw chicken livers.
- > The feeding of raw and under-cooked chicken livers to babies is not advised as their immune systems are still developing and there is an increased risk of foodborne illness.
- > While freezing may lead to a small decrease in the level of contamination of chicken livers, it will not completely eliminate organisms that can cause serious illness in babies.

### Introducing Solids

At around six months of age, babies are physically and developmentally ready to eat other foods. Signs of readiness for solids include baby being able to hold his/her head up and sit with support; looking, reaching and grabbing for food; baby seems hungry even after a full breastfeed or bottle; and baby progressing from sucking to biting.

At around six months of age baby's iron stores are also becoming depleted, so when introducing the first solid foods it is recommended that these are iron-rich nutritious foods. Iron containing foods include iron-fortified baby cereals, pureed meat, chicken, tofu or legumes. Then add different types of pureed vegetables, fruit and other foods from the Five Food Groups. For further information about introducing solids and texture progression, see the Infant Feeding Guidelines pamphlet [Giving your baby the best start-the best foods for infants \(www.eatforhealth.gov.au\)](http://www.eatforhealth.gov.au).

Raw or partially cooked eggs, honey and salt are not recommended for babies and toddlers, and should be avoided:

### Raw/partially cooked eggs

- > The primary hazard of concern for eggs is *Salmonella*, which can contaminate egg shells through environmental contamination and through contact with bird faeces.
- > Egg shells are porous and can also have hairline cracks which are not visible to the naked eye, but can still allow disease causing organisms to enter into the egg.
- > Consuming eggs without an effective heat treatment presents a significant food safety risk to babies.
- > The feeding of raw and partially cooked eggs to babies is not advised as their immune systems are still developing and there is an increased risk of foodborne illness, including from *Salmonella* that may be present on or in eggs.
- > The Australian Infant Feeding Guidelines state that eggs should not be introduced into a baby's diet before 6 months of age. The Guidelines also state that to prevent *Salmonella* poisoning of babies and toddlers aged 6 to 24 months, all eggs should be cooked thoroughly (i.e. until the white is completely set and yolk begins to thicken) and uncooked products containing raw eggs should not be used.

### Honey

- > Honey should not be given to babies younger than 12 months. At this age even small amounts of the organism in honey that causes botulism can be harmful. Honey has been linked to some cases of infant botulism overseas.

### Salt

- > Salt should not be added to foods for babies. This is an important precaution as baby's kidneys are immature and unable to excrete excess salt.
- > For further information on unsuitable foods for infants, see the Infant Feeding Guidelines pamphlet [Giving your baby the best start-the best foods for infants \(www.eatforhealth.gov.au\)](http://www.eatforhealth.gov.au).

## How to sterilise

Everything that comes into contact with a baby's food needs thorough cleaning and sterilising. This includes bottles, teats, cups, utensils & dummies or pacifiers.

All equipment should be rinsed in cold water after use, washed in soap and hot water using a bottle brush to thoroughly clean everything, then rinsed again, before being sterilised.

There are a number of ways to sterilise bottles and other equipment including:

- > **boiling**  
put utensils in a large saucepan of water and boil for 5 minutes.
- > **chemicals**  
add an approved sterilising liquid or tablet to the container of water used to soak clean equipment. Follow manufacturer's instructions.

> **steam sterilisers**

automatic units which sterilise clean equipment. Follow manufacturer's instructions.

> **microwave steam sterilisers**

put bottles and other equipment into steriliser, which is then heated in the microwave. Follow manufacturer's instructions.

For more information about bottle feeding and sterilising equipment, talk to your Child and Family Health nurse or a pharmacist.

Adapted with permission from NSW Food Authority, March 2015.

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## For more information

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**For more information on healthy eating visit**

**[www.sahealth.sa.gov.au/healthyliving](http://www.sahealth.sa.gov.au/healthyliving)**

Public I1-A1

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