



The NUK Guide on infant feeding was produced in collaboration with Petra Fricke, Qualified Nutritionist, Hamburg, Germany.

**This brochure is the second publication in the NUK Library Series and contains valuable information on the following topics:**

- **Feeding babies from the 6th month**
- **Milk feeds**
- **The first solid foods**
- **Home cooking or ready-made foods**
- **Feeding tips for infants with allergy risks**
- **Food education**

The NUK Guide on infant feeding.

A guide on infant feeding after weaning, produced in collaboration with Petra Fricke, Graduate in home economics and Consultant on nutrition

# Editorial

## Dear Parents,

As the saying goes, “The way to someone’s heart is through their stomach!” And it really is the case that what you give your baby to eat and drink is an expression of your instinctive love and care. Mummy’s breast may initially have been the only source of bliss and contentment for your hungry, precious little one, but the time soon comes when your growing baby needs more.

Baby’s nourishment requirements are changing and the curiosity for different food experiences is becoming noticeable.

Certainly by now there will be many questions to be asked and decisions to be taken as to when, what and how you can feed your precious little one. Of course, your wish to do everything correctly wherever possible is understandable and a sign of your parental care and concern. You do, after all, want to be able to give your infant the best start towards a healthy life and to promote development the best way possible.

However, I know from many years of working in this field, and also from personal experience, that there are many uncertainties concerning the feeding of infants. The range of prepared infant cereals and feeds is overwhelming, even for an expert. It is helpful when deciding on which products are suitable for your baby, if you have an idea beforehand of the dependable, practical evaluation criteria. For example, do you want to prepare meals for your child



yourself? This is possible, too, provided that you take certain things into consideration. This brochure is based on specialist knowledge and should answer your questions on all aspects of feeding your infant, at the same time offering many practical tips for you to put into practice.

Rest assured: with your love and your respect for certain basic rules, you will ensure that your infant will enjoy food and become a healthy eater.

I hope you enjoy reading this guide and putting it into practice!

A handwritten signature in green ink that reads "Petra Fricke". The signature is fluid and cursive, with a long, sweeping underline.

*Petra Fricke*  
Qualified Nutritionist, Hamburg, Germany

# Contents



## Food & drink

Feeding from the bottle – an overview of baby milk feeds . . . . .	6
Hygiene when preparing feeds . . . . .	8
The first solid foods – when is the right time? . . . . .	9
Eating plan for the first twelve months . . . . .	12
Home cooking or ready-made food . . . . .	13
Food choice made simple . . . . .	14
What our baby should drink . . . . .	16
Home cooking – a selection of recipes . . . . .	18
A vegetarian diet – what do I need to watch? . . . . .	20
Perishable foods and their storage . . . . .	21

## Food & health

Risk of allergies and their prevention . . . . .	22
Food tips if your baby has health problems . . . . .	25

## Learning to eat

Eating like grown-ups do . . . . .	28
Food education – your child learns how to eat . . . . .	32

## Last but not least

Imprint . . . . .	37
Food Table . . . . .	38

# Food & drink

## Feeding from the bottle – an overview of baby milk feeds

Without doubt, breastfeeding is best for your baby, as nature has made mother's milk to provide exactly all the nourishment your baby needs, helps prevent excessive weight gain and strengthens the immune system. Moreover, breast milk is normally free of germs, it is the correct temperature and readily available without any preparation. At least four months of just breastfeeding is recommended, extended to six months if your baby is developing well. Even if, for example, you start giving your baby cereal at lunchtime after approx. six months, you can still continue breastfeeding for the other feeds, if that is what suits you and your baby.

If however, for career reasons or due to illness, for example, you as a mother either do not wish to or are unable to continue breastfeeding for that long, you don't need to have a guilty conscience about it. You

can also feed your infant from the bottle. You can also give that important feeling of closeness and intimacy conveyed when breastfeeding when you bottle-feed. The important thing is: what is in the bottle. The composition of the nutrients in baby milks should be as close as possible to breast milk. Pure cow's milk is unsuitable for infants for the first twelve months. Its higher protein and mineral content, for example, would be too much for your baby's sensitive kidneys to cope with (see Table).

The so-called alternative milks, such as corn milk, almond milk and soya milk, are just as unsuitable, as these are not meant for feeding to infants. Their composition of nutrients is unbalanced and they are lacking in essential nutrients such as calcium and some B-group vitamins. In addition to this, an infant is unable to digest the raw grains of corn milk at all. This could result in growth problems and seriously hinder the child's development.

The safest alternative to breast milk is offered by commercial baby milks. Stringent food regulations control their composition, and they simulate breast milk, some types being better than others.



The composition of bottle milk feeds should match breast milk as far as possible.

## Important

**Important:** it is essential that you adhere strictly to the powder quantities specified by the manufacturer when preparing commercial baby milk feeds.

### Baby milks labelled "Pre", 1, 2 and 3

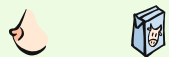
Commercial baby milks are labelled "Pre", 1, 2 or 3, depending on the composition and degree of similarity to breast milk.

"Pre"-milks are the nearest to breast milk in their composition. They are just as thin a fluid and the only type of carbohydrate they contain is lactose – just like breast milk. Baby can be fed these for the first twelve months from birth. Just as with

breast milk you can feed your baby with "Pre"-milk feeds on demand, in other words whenever baby is hungry. From the psychological aspect this is an advantage, as your baby will be more satisfied this way than when fed according to plan.

Milks labelled 1 contain additional carbohydrate in the form of starch. This makes them thicker, which means baby will be satisfied for longer. They are also suitable for feeding throughout your infant's first year. However, it is necessary to adhere to the milk quantities specified for the relevant age and to keep to a rough plan as given on the pack. Due to the starch content, feeding too frequently could result in overfeeding. Some of these products also contain other types of sugar, e.g. sucrose and glucose, which are undesirable from the nutritional aspect.

### Contents of breast milk and cow's milk



Nutrients per 100 g	Breast milk	Cow's milk
Protein	1.1 g	3.3 g
Carbohydrate	7.0 g	4.6 g
Fat	4.0 g	3.5–3.8 g
Minerals	210 mg	740 mg

**Tip:** if you wish to give your baby sugar-free feeds, take a look at the list of ingredients before buying.

Follow-on milks labelled “2” and “3” are only slightly similar to breast milk in their composition. They contain more calories, protein, calcium and iron than the pre-milks and are usually thicker due to the higher starch content. They may also contain other types of sugar. These can, if desired, be given to your baby from the 5th to 8th month.

**Tip:** you should feed your baby to plan to avoid overfeeding.

**Tip:** in order to prevent your baby from feeding too hastily and choking, it is important that you select the correct size of hole for the teat. This will be the right choice if the feed drips but doesn't pour out of the bottle when turned upside down. When buying bottles ensure that they have vented teats.

## Hygiene when preparing feeds

Baby's digestive system only develops during the course of the first twelve months. On the one hand, certain food components can only be broken down little by little. On the other hand, baby's immune system in the intestine is so

underdeveloped to start with, that harmful bacteria ingested with the feed can quickly result in gastrointestinal infections and diarrhoea. Food containing protein in particular, such as prepared milk feeds, form the ideal breeding-ground for undesired bacteria.

When preparing bottle feeds and when cleaning, sterilising and storing bottles, it is therefore essential that you observe some basic rules of hygiene.

- Always freshly prepare milk feeds. Storing of prepared feeds in warm conditions or at room temperature is not suitable. Dispose of any leftovers after each feed.
- At least during the first few months always use boiled water for the preparation of feeds. Later, once your baby is crawling and putting everything in his or her mouth anyway, you can be more relaxed about this rule.
- Always store milk powders well-sealed and in a clean, dry place. Never store in the refrigerator.
- Bottles and teats must be cleaned thoroughly and sterilised after use. It will suffice if the components used are cleaned thoroughly using a bottle brush with bottle cleanser (e.g. NUK Baby Bottle Cleanser) and then all put into a large pan and boiled in clean, clear water for 2–3 minutes. The sterilised bottles can then be left to drain upside down on a clean tea towel. Using a dishwasher is not recommended, as the minimum temperature of 80°C required for killing bacteria is not attained in the dishwasher. The aggressive cleaning agents used in dishwashers also damage the bottle

motifs and lead to premature wear of the teats. A much more practical, material-friendly and energy-saving method is to use the NUK Steriliser, in which six bottles complete with accessories are cleaned and hygienically sterilised with steam, and completely without the use of chemicals.

## The first solid foods – when is the right time?

After a few months your infant's nutritional needs will also change. After 4 months at the earliest (i.e. in the 17th week) and at 6 months at the latest (from the 25th week), baby will require more than just milk. The time has come to move on to the first solid foods. It does not really make sense to start on solids earlier, nor is it necessary, as the risk of allergies is increased. Smaller infants also have trouble feeding from a spoon, as the sucking reflex is still so strong. However, from the 5th month your child will be increasingly able to digest foods other than milk. Month for month you can then replace the milk feeds with cereal-based feeds and pureed food. After about 9 months your infant can try more and more solid foods and also gradually try eating the same as the rest of the family.

As a general rule we recommend starting with a meat-potato-vegetable puree for baby's lunch. From experience it makes sense to start by offering your baby just a few little spoonfuls of finely pureed



Well-prepared for a trip out.

bottle feeds can be prepared for either a trip out or for the night as follows: simply pour the required amount of milk powder into a clean, dry bottle and, as required, add boiled hot water from a thermos flask you have prepared before. Shake, then check the temperature. Bon appétit!

vegetables (e.g. baby carrots), preferably before the milk feed. Build this up each week by adding first of all butter or oil, then well-mashed potatoes and finally, finely pureed meat and fruit juice.



By the end of the 6th month at the latest it's time to start on solids.

Don't be discouraged if your infant immediately spits out the first solid feed and screams in a heart-rending way. Each child is a different personality. Some think it's great trying something new, whereas others find it irritating. A spoonful of pureed carrot is new; it has a different consistency, tastes different and also has to be eaten a different way from milk. Maybe it was too soon for your little one. Just try again after another few days.

After about a month you can replace the evening milk feed with a cereal made with milk. The main ingredients here are milk, oats and some fruit juice or fruit puree. Giving a cereal in the evening will make your infant feel content (and you, too) and help with sleeping

**Tip:** as soon as your baby starts on solid foods, he or she will need something to drink with the meal. It helps the food slip down more easily and aids digestion. Suitable drinks include water, unsweetened tea (from a teabag) or highly diluted fruit juice without sugar.

through the night. If preparing the meal yourself use wholemeal products, such as oats or semolina where possible, and do not add sugar. Instant baby cereals that only have to be stirred into the hot milk, although practical, should also not contain any added sugar or other additives.

A quick look at the list of ingredients will offer guidance.

After approximately another month you can give your infant an afternoon feed of wholemeal oats and pureed fruit with a little oil. This will provide your infant with vitamins and iron. This meal should contain no milk or milk products at all, as milk makes it more difficult to absorb the iron. Further sweetening with sugar is not necessary, and adding honey is actually dangerous due to the pathogen *Clostridium botulinum*, as this settles in the stomach and can poison the body.

At 9 months, most infants are able to sit up, they may have quite a few teeth and they are starting to grasp anything within their reach – including anything edible. Your little one is gradually growing out of babyhood and the semi-solid food phase, and is now able to try more solid foods. The transition has begun to eating what the family eats. It is now sufficient to mince the food or cut it up into small pieces – there's no need to puree any more.

You can now also start gradually giving your baby bread and milk for breakfast. Remove the crusts from a slice of fine-grained wholemeal bread, spread with butter and cut into mouth-sized pieces. Baby can reach out and help himself or herself. The milk will now not necessarily come from the breast or bottle, but from training cups. The leakproof NUK FIRST CHOICE Learner Bottle and NUK EASY LEARNING Cup, for example, prevent the drink from constantly "flooding out". Pieces of fruit or vegetable with bread can be given as a mid-morning or afternoon snack and will increase the amount of


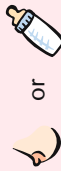
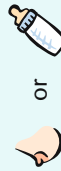
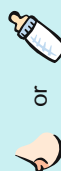

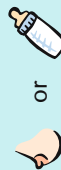
vitamins. What's more, infants will love nibbling on these. Suitable fruit and vegetables to start with include soft fruit such as bananas, soft pears and nectarines as well as cucumber, and later also pieces of raw vegetables to crunch on, such as carrots and kohlrabi.

**Important:** fruit and vegetables cut up into small pieces for your infant are not "only" good for your child from the nutritional aspect; they also promote both the development of the jaw muscles and help develop speech. Support your child's wish with regard to feeding himself or herself – even if not everything lands in the mouth to start with.



A new experience for baby: the first spoonful of solid food.

## Eating plan for the first twelve months

	Breakfast	Mid-morning snack	Lunch	Mid-afternoon snack	Supper
<b>0 to 4 months</b> *	 or 	 or 	 or 	 or 	 or 
<b>From 5th month</b>	 or 	 or 	 or 	 or 	 or 
<b>From 6th month</b>	 or 	 or 	 or 	 or 	 or 
<b>From 7th month</b>	 or 	 or 	 or 	 or 	 or 
<b>10th to 12th month</b> ***	 +  + 	 +  + 	 +  + 	 +  + 	 +  + 
	Breastfeeding Bottle feed Milk	Cereals Fruit Bread	Vegetables Potatoes Meat	Fruit cereal	Cereal with full-cream milk

\*Breastfeeding and infant first solid foods if required, initially approx. 5 to 8 feeds a day, gradually reducing to 5.

\*\*The first cereal can be given at 6 months if your infant is ready for it.

\*\*\*From the 10th month solid foods can be gradually introduced (bread, fruit, etc.). This will very much depend on your child and whether the teeth are through.

## Home cooking or ready-made food

Both have advantages and disadvantages. The essential criteria are illustrated below. So you can decide for yourself!

### Harmful ingredients

The preparation of infant foods in jars or as instant cereal is subject to stringent food regulations. Thanks to the careful selection of raw products, which are increasingly being organically grown, coupled with continuous controls, the strict limits regarding use of nitrates and pesticides are being observed. If you would like to cook for yourself, you should select the foods carefully, preferably using organically grown products.

### Price

It is always cheaper to prepare the food yourself rather than buy ready meals, even when using the somewhat more expensive organic products.

### Taste

The natural taste of food retains its flavour better when freshly prepared; this applies just the same to baby foods as to food for adult consumption.

### Composition

You should note the ingredients when buying ready-made meals. The following are not suitable for infant feeding: salt and spices, refined sugar and other types, such as glucose, fructose, glucose syrup and maltose. When cooking you can determine yourself which ingredients to use.



A freshly made cereal retains the flavour for longer.

### Preparation

This point clearly goes to the ready-made foods and instant cereals. Much time and effort can be saved here. Of course, cooking isn't exactly a challenge for you; a few tricks, however, will soon reduce the work here to an acceptable level.

**Conclusion:** if you wish to cook for yourself you should select the relevant ingredients carefully. When buying ready meals, such as jars and instant cereals, I recommend taking a good look at the list of ingredients.



Food Table pull-out – see last page

## Food choice made simple

Whether you wish to prepare the purees and solid foods yourself for your little treasure, or whether you prefer to buy the ready-made jars, instant cereal, etc. –

the ingredients used will determine the nutritious quality of the meal. There is a comprehensive food table to pull out on the last page.

### Tips for selecting ready-made foods and cereals

Jars, tins and other ready-made products can complement baby's eating plan in a practical way. You can choose between complete, ready-to-eat meals, that only have to be heated up or may be eaten cold, and individual ingredients for preparing cereal feeds (e.g. oats or semolina, fruit, vegetable puree and meat puree).

The range is so diverse that you should allow yourself enough time when buying prepared infant foods, especially at the beginning, to enable you to study the product ingredients. These lists give you the relevant information on the processed ingredients. Manufacturers of baby foods are increasingly orienting themselves towards nutritionists' recommendations when it comes to the selection of the ingredients. Not to be recommended are salt, sugar and other sweeteners, spices, and onions. Only wholemeal pasta and cereal products and natural brown rice should be used.

**All these are types of sugar:** sucrose (household or granulated sugar), glucose (grape sugar), glucose syrup, fructose (fruit sugar), maltose (malt sugar).

When selecting foods: preferably buy products with few additives in accordance with the list of ingredients on page 39. The composition of these products makes them suitable for the basic cereal recipes in this brochure. Your baby will then be fed

well. Equally suitable are individual ingredients without any additives used for further processing, such as pure fruit or vegetable meals (e.g. apple and pear compote, baby carrots, pureed meat), and rolled oats or wheat cereal or similar, also as instant cereals. Iodine makes a sensible additive to ready cereals (potassium iodide or potassium iodate).

Ready meals in jars or tins frequently do not contain the required amount of fat (8 to 10 g per meal). By referring to the table of nutrients on the label you can establish this for yourself. You may then need to add the required amount of fat to the heated food.

Some fruit cereals in jars also often contain either insufficient fat or no fat at all. Then it makes sense to add the necessary amount to make it up to 5 g (= 1 teaspoon) per meal. You should also ensure that this cereal does not contain any milk or milk products, as these hinder the absorption of iron.

*A large selection of jars and ready meals complements baby's food plan.*





## What our baby should drink

The fluid requirement of a baby in relation to body weight is much greater than for adults. During breastfeeding a healthy infant gets the necessary amount of fluid automatically from mother's milk. When starting on semi-solids, however, you should start giving your child something to drink as well. The best drink is water, but this does need to be low in nitrates for your baby and to contain few minerals, and naturally no harmful substances such as lead, copper or other substances damaging to the environment either. Nitrate hinders the transport of oxygen in the blood. A higher level of minerals – although desirable for adults – is too much for baby's kidneys, which are not yet fully developed. Mineral water types stating that they are suitable for feeding infants and baby water produced by some baby food manufacturers fulfil these criteria and are therefore safe.

You can establish from your local water supplier whether your tap water is suitable for your baby, in other words low in nitrates and free from harmful substances. Especially in rural areas, if there is a well, you should have the water thoroughly tested in a laboratory. This also applies if you live in a house that has old lead piping or new copper piping. Poisonous metals like lead and copper can accumulate in tap water and can damage the health of babies and small children. Some water boards will undertake these analyses free of charge if there are infants or expectant mothers living in the house. If the analyses confirm too high a figure, then

you should not give your child tap water, changing to mineral water or baby water instead – even for making tea and preparing cereal feeds.

Other suitable drinks for babies are diluted fruit juices, special children's teas using tea bags or loose tea and heavily diluted tea.

**Tip:** find out from your local water supplier about the quality of your water. If you live in a rural area and there is a well, or you live in a house with old lead piping or new copper piping, you should have the water analysed. Some water boards will undertake these analyses free of charge if there are infants or expectant mothers living in the house.

Drinks not considered suitable include instant infant teas, pure fruit juices, all types of drink sweetened with sugar or sweetener, fruit drinks and fruit syrups. The sugar content of these drinks will attack baby's teeth. Tea without milk and green tea both contain the stimulant tannin and should not be given to your baby.

It is best to start by giving your baby drinks from a bottle with the smallest teat hole (extra-fine, "S"), then from the 6th month at the earliest, the leakproof NUK FIRST CHOICE Learner Bottle and NUK EASY LEARNING Cup, for example, can help your child learn to drink like grown-ups do. From the 12th month and



The fluid requirement of a baby in relation to body weight is much greater than for adults.

depending on the development, your child may be able to practise drinking from a beaker or cup without a spout.

**Important:** never give a bottle or cup just to suck on, to help your baby go to sleep or for comfort! The teeth will develop caries if constantly flushed with drink. Although this applies in particular to sweet drinks and/or those containing fruit acid, it also applies to pure water and tea!



Home-cooked meals – a real treat.

## Home cooking – a selection of recipes

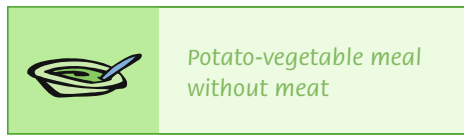
Home-cooked meals – a real treat, one that your little treasure will surely also appreciate. This section contains some basic recipes for home-made infant feeds, both cereal and vegetable-based. The quantities given are based on past experience. It may well be that your infant prefers either smaller or larger portions. This is fine, as long as your child is developing at an appropriate rate according to his or her age. It is therefore not necessary to weigh out every single gram. You also do not need to have a guilty conscience if not serving a freshly cooked meal to your little treasure every day. Ready-prepared foods can easily complement your child's food plan.



- 1 medium-sized carrot (approx. 100 g) or other vegetable
- 1 small potato (approx. 50–70 g)
- 20–30 g meat or fish fillet
- 10 g oil or butter (1 level tablespoon)
- 2 tablespoons fruit juice (30 ml)

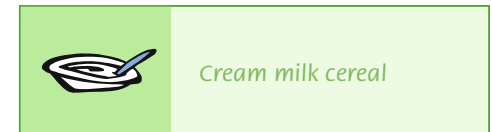
Peel and wash potatoes and other vegetables, cut into small pieces and cook until soft with the finely chopped meat or fish and a little water in a pan with the lid on. Finely puree and stir in fat and juice.

**Tip:** it is practical to cook and freeze larger quantities of meat in advance. Boil 600 g finely chopped meat in 100 ml water until soft, puree, divide the pureed mixture into portions (1 portion = 30–35 g = 2 heaped tablespoons), fill ice-cube bags or trays and shock-freeze. Frozen meat cubes should be stored in airtight containers until consumed. If desired, add to freshly cooked potato-vegetable meal. Approx. 20 portions.

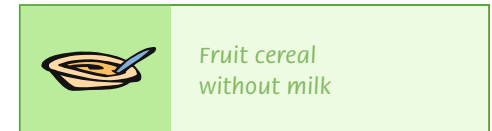


- 100 g vegetables
  - 1 small potato
  - 1 heaped tablespoon wholemeal cereal (oat flakes, millet, rice)
  - 10 g oil or butter (1 level tablespoon)
  - 2 tablespoons fruit juice
- Peel and wash potatoes and other vegetables, chop finely and cook until soft with the cereal and a little water in a pan with the lid on. Finely puree, and then stir in fat and juice.

**Tip:** if you have a freezer, you can cook larger quantities in advance and freeze in portions. In this case, add the fruit juice or fat after re-heating and just before serving. For approx. 20 portions you will need approx. 600 g meat, 1 kg potatoes, 2 kg vegetables.



- 200 ml pasteurised full-cream milk
  - 2 heaped tablespoons wholemeal cereal or semolina (20 g)
  - 50 g fruit puree, grated apple or 2 tablespoons fruit juice
- Boil up cereal flakes or semolina in milk and leave to soak for 5 minutes. Stir in fruit puree or juice.



- 90 ml water
  - 2 tablespoons wholemeal cereal flakes
  - 100 g fruit puree or finely grated apple
  - 1 level teaspoon butter or oil (5 g)
- Boil up cereal flakes in water and leave to soak. Stir fruit and fat into the warm cereal. Tastes good hot or cold.



Tips on quantity	
Food type	Weight in grams
Oil/butter, 1 level teaspoon	5 g
Oil/butter, 1 level tablespoon	10 g
Wheat semolina, 1 tablespoon	10 g
Wheat semolina, 1 heaped tablespoon	20 g
Rolled oats, fine-grained, 1 tablespoon	5 g
Rolled oats, coarse-grained, 1 tablespoon	10 g
Instant cereal flakes, 1 tablespoon	2 g
Potato, 1 small	approx. 60 g
Carrot, 1 small	approx. 40 g
Carrot, 1 medium-sized, peeled	approx. 80 g
Kohlrabi, peeled	approx. 100 g
Potato-vegetable puree, 1 tablespoon	30 g
Apple, 1 small	approx. 100 g
Pear, 1 medium-sized	approx. 150 g
Banana, 1 small	approx. 125 g
Apricot, 1	approx. 50 g
Fruit juice, 1 tablespoon	15 ml
Fruit puree, 1 tablespoon	approx. 30 g



### A vegetarian diet – what do I need to watch?

Some parents do not wish to feed their child meat. This is of course possible, but care must be taken when preparing food to ensure a sufficient supply of iron. Iron is important for the formation of blood and an iron deficiency can manifest itself in the form of pallor and an increased susceptibility to infection. The iron absorbed with food is utilised considerably less from vegetarian foods than

from meat. You should therefore observe the following: if you decide not to feed your child meat, you should conscientiously buy ingredients with a high iron content and you should replace meat with wholemeal flakes that are rich in iron. You should also add vitamin C-rich juice or fruit to every cereal – as vitamin C improves the absorption of iron. Iron-enriched baby fruit drinks are also suitable.

## Important

**Important:** a strict vegan diet, whereby not only meat and fish, but also eggs and dairy products are excluded from the diet, is totally unsuitable for infants. This type of diet is lacking in highly nutritious protein, calcium, iron and vitamin B12, all of these nutrients being necessary for healthy growth.

Plant foods with high iron content (mg/100 g)	
Millet	7.0
Rolled oats	4.6
Cornmeal (polenta)	3.9
Wheat flakes	3.2
Whole-rye	2.7
Fennel	2.7
Carrots	2.0
Peas	1.8
Courgettes	1.5
Broccoli	1.3
Strawberries/raspberries	1.0
Kohlrabi	0.9
Parsley root	0.9
Pumpkin	0.8

### Perishable foods and their storage

Whether a vegetable-based meal or instant cereal, care and hygiene are top priority when preparing foods for infants. Here are a few questions and answers on this topic.

#### How long does baby food keep?

With baby milks and instant cereals the best-before date is printed on the pack. Opened packs will keep for two to three weeks, provided they are stored in a sealed container and in a cool, dry place. Opened packs should not be stored in the refrigerator due to water condensation. Any leftovers from prepared milk feeds must be discarded. Cereals may be stored in the refrigerator for no longer than one day.

#### What must parents watch out for with ready-made meals?

The best-before date is printed on the label of jars. These can be stored unopened in the cupboard, but once opened they will keep at the most for one to two days in the refrigerator. If you wish to feed the contents of one jar in several portions, you should place the required amount in different bowls. This way you will prevent the food from becoming contaminated.

#### Which is the best way to heat up baby foods?

For jars of fruit, room temperature will suffice. Vegetables and ready-made meals should be heated to eating temperature, but not boiled. A double saucepan, baby food warmer or microwave are all suitable. N.B.: remember to unscrew the top when using the microwave and only heat up for approx. 30 seconds and at 300 to 400 watt. Stir well before feeding and ensure that the food is not too hot. Never reheat baby foods or leave longer than 30 minutes in the pan, otherwise essential nutrients will be destroyed.

# Food & health

## Risk of allergies and their prevention

There is widespread fear amongst most parents that their own child may develop neurodermatitis or an allergy. And not without justification – as approx. 25% of all newborn babies are born with an increased risk of allergy. Hereditary predisposition will play a decisive part here. However, it is not the allergy itself that is inherited, simply the susceptibility to developing one.

If you, as mother or father, or an elder sibling already suffer from an allergy such as hay fever, asthma or an allergy to house dust, the probability of your child also developing an allergy will increase.

Preventive measures make sense here, as they can reduce the risk of an allergy occurring, or at least postpone its onset for some time.



<b>The allergy risk with other family members already sufferers</b>	
No allergies in the family	5–15%
One sibling with allergy	25–35%
One parent with allergy	20–40%
Both parents with allergy	40–60%
Both parents with same allergy	60–80%

### *Our infant is at risk of allergies – what can we do?*

What your child eats will play a major part in the prevention of allergies, although this alone is not decisive. The immune system of a baby is initially still underdeveloped; the intestinal mucous membrane is sensitive and at the moment can still absorb foreign protein ingested with food, e.g. from milk or eggs. If these enter the bloodstream they can cause an allergy.

It therefore makes sense to avoid certain foods for the first year.

→ Try and breastfeed for as long as possible and exclusively for six months at least.



*Food plays a major part in the prevention of allergies.*

- If it is not possible to breastfeed for this long, hypoallergenic baby milks are the only recommended alternative to breast milk. These are recognisable by the “HA” label on the pack. Do not give your baby normal infant feeds from cow’s milk or soya milk. The latter can trigger an allergy just as easily as cow’s milk.
- Other semi-solid food and drinks such as fruit juices, teas and cereals should not be given for the first six months.
- Whether prepared by yourself or in ready-made products, there are certain foods that your child should not eat for the first year. However, you need not worry about any lack of nutrients, as these can easily be substituted in other ways.

**Prevention of allergies with babies at risk by selecting suitable foods**

**Food additives to be avoided in the first twelve months**

**Substitute with**

Cow's milk	Breast milk, HA milk
Milk-based cereals, instant milk-based cereals	Prepare HA milk-based cereals or breast milk, HA milk-based instant cereals
Milk products, ice cream	No substitute
Soya milk	Breast milk, HA milk
Soya products, e.g. tofu	No substitute
Fish	Meat
Eggs	No substitute
Egg pasta	Pasta without egg, wholemeal pasta, rice, potatoes
Wheat bread, bread rolls, biscuits	Bread types made without wheat, rice, potatoes
Wheat flakes, wheat semolina, muesli	Rice flakes, millet, rolled oats
Citrus fruits, orange juice	Apples, pears, apricots, also as juice
Nuts	No substitute
Instant teas (protein-based)	Water, diluted fruit juices, baby teas (tea bag)
Jars or other ready meals containing many ingredients	Jars or ready meals with few ingredients and equivalent to home-made meals

→ It is also wise to avoid too many different foods, introducing them to your infant one at a time and not more often than at weekly intervals. This will make it easier to determine any possible reaction. Exotic fruits such as pineapples and mangoes should be avoided. Apples, pears and bananas will almost certainly be better tolerated.

→ Try and stay relaxed. Not every rash that appears is necessarily neurodermatitis or an allergy. Seek advice from your family doctor or a paediatrician if you are unsure. If neurodermatitis is diagnosed, there is one consolation: with many children any allergies occurring in the first twelve months frequently disappear after a few years.

# Important

**Important:** hypoallergenic baby milks (HA) serve only to prevent allergies with infants at risk. If your baby has already developed an allergy to cow's milk or soya, you should consult a paediatrician who will advise on special milk feeds.

Baby comes into contact with many potential allergens, not only through food and drink, but also from the air breathed in and materials from clothing worn against the skin. These can all increase the risk of allergy. Keep yourself informed of other preventive measures from an early stage, preferably during the pregnancy.



Feed your baby correctly right from the start.

## Food tips if your baby has health problems

If your baby has a health problem you should always seek advice from your family doctor or a paediatrician. Only a doctor can assess whether your child has a harmless condition or an illness requiring treatment. So do not shy away from going to the doctor, even for seemingly minor problems.

### Flatulence

Flatulence is completely normal with babies. It only becomes a problem if the wind becomes trapped, causing the child pain. If you, as the child's mother, are still breastfeeding, it is wise to check your own feeding plan and try excluding any flatulent foods from your diet. Such foods include vegetables like cabbage,

onions, leeks, garlic and pulses as well as raw wholemeal products, and sometimes even fruits with stones such as cherries and plums. These food types should also not be added to cereals, so as not to overtax the sensitive digestive system. With persistent flatulence special anti-colic teas, e.g. fennel, caraway or aniseed can help. Try also carrying baby around face-down or in a sling, or a gentle tummy massage with special ointment from your pharmacy – these have also been known to help in some cases. With bottle-fed babies persistent flatulence may also be put down to lactose intolerance or allergy to cow's milk.



*If your baby has a health problem you should go straight to the doctor.*

### Diarrhoea

Your baby has diarrhoea if he or she is regularly producing stool that is loose and often mucous, and which also has a noticeably different odour. A temperature or vomiting at the same time indicates a gastrointestinal infection. In this case you should seek medical advice immediately, taking the last full diaper with you in order to clarify the cause. Particularly in the first twelve months this is not to be taken lightly. Until then you

should put your baby to the breast or offer herbal tea slightly sweetened with grape sugar. This is because the most important thing with diarrhoea is to ensure that your baby is given sufficient fluids to prevent dehydration, which is always feared. The doctor will then probably prescribe an electrolytic preparation and recommend a special remedial food plan. In mild cases of diarrhoea a mashed banana or finely grated apple can help from the 5th month.

If the stool is very soft, but the child is otherwise perfectly content, then there is no cause for alarm.

### Hard stool

Breastfed babies hardly ever suffer from constipation. However, as soon as your baby starts on solids, there may initially be some digestive problems. Serious constipation needs to be treated by your doctor. If your baby complains frequently due to constipation, it is essential that you give him or her enough to drink: still mineral water, unsweetened infant teas or diluted fruit juices are all suitable. Apricot puree and wholemeal flakes and semolina added regularly to cereal can also aid digestion. Do not give your infant more milk than is specified in the feeding plan. Bananas and grated apple should be removed temporarily from the diet. Although adding lactose to cereal will have a laxative effect, it is not a long-term solution.

### Soreness

If your baby is prone to having a sore bottom, this may be caused by acid fruits. Rather than giving orange juice it is better to add juice or puree from fruit with a low acid content, such as apples or pears. As the acid can also be absorbed into breastmilk, it is advisable for mothers still breastfeeding not to drink too much fruit juice with a high acid content.

However, a sore bottom may also be caused by intolerance to toiletries or by not changing diapers frequently enough. Even when teething some babies have sore bottoms irrespective of their diet.

### Temperature

A temperature is often accompanied by loss of appetite. If your baby is not eating, there is no immediate cause for concern; every child has enough in reserve to last a few days with little food. But you should give your child something to drink on a frequent basis, as the fluid requirement is increased with a fever. Breastfed babies will continue to suck at the breast. Apart from receiving nourishment, baby should be comforted, so important when feeling poorly. Fruit and vegetable feeds "slip down" better if they are prepared with more liquid than normally. It is important though, that medical help is sought to establish the reason for the temperature.

### Being sick or vomiting

It is nothing to worry about when your infant regurgitates a little milk when bringing up wind, provided he or she is flourishing and putting on weight. It may help to ensure that your baby isn't feeding too quickly and thus swallowing too much air. You should also check that you are using the correct hole size for the teat. If possible, always use vented teats. Violent motion directly after feeding is not a good idea either. If, however, your child is vomiting large amounts and also possibly the stool looks different; this probably means either an infection or a food allergy. In this case you should seek medical advice.

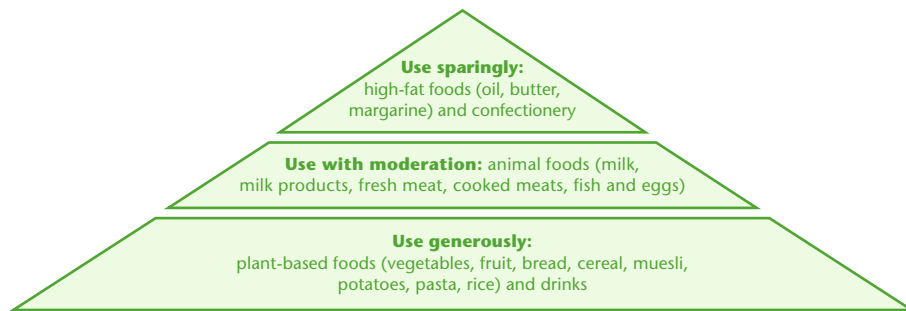
# Learning to eat

## Eating like grown-ups do

Once your baby is one year old he or she can gradually start to eat what the family eats. By this time you should certainly be getting baby accustomed to healthy eating by choosing suitable foods. So what exactly do we mean by a suitable choice of foods? In their composition and quantity suitable food items should cover the nutritional needs and thus promote the growth and development of your child

as well as help prevent illness. The meals should be tasty, which will encourage your infant to enjoy eating. Becoming accustomed to a healthy and varied diet will stand your child in good stead for the rest of his or her life. As the saying goes "You can't teach an old dog new tricks". Studies show that what a child gets to like early on, will still be appreciated later in life.

### Three simple food rules



Plant foods should, therefore, form the basis of an infant's diet plan and should be included in every meal, complemented by small portions of animal foods and sparing use of foods with a high fat content. As with adults it is important for children to drink ample fluids. The quantities specified in the following table offer a rough

guide; it is not necessary to weigh the ingredients. Children will sometimes eat a larger amount, sometimes less, depending on their personality, how hungry they are at the time and the stage of development. Each child is an individual and will eat as an individual.



From approx. the 12th month a child can gradually start eating the same as the rest of the family.

Quantities recommended for 12–24 months		
Food	Quantity	Comments
Drinks	600–650 ml/day	Water, herbal/fruit teas; diluted juices are best
Bread, cereals (flakes)	80–100 g/day	2 slices or 1 slice of bread (flakes) and 1 portion of cereal flakes
Potatoes	80–90 g/day	2 small potatoes, alternatively noodles or rice
Other vegetables	120–130 g/day	Fresh, frozen or raw
Fruit	120–130 g/day	For example 1 apple
Milk/milk products	300 ml/day	100 ml milk or 1 slice of cheese
Fresh meat/cooked meats	30 g/day	Preferably lean
Eggs	1–2/week	Eggs should be well-cooked
Fish	50–60 g/week	Preferably sea fish
Oil, butter, margarine	15–20 g/day	3–4 teaspoons
<i>(Total energy 950–1,050 kcal per day)</i>		

#### Examples of menus



- 1 slice of wholemeal toast with a cream cheese or butter and Gouda, a few pieces of cucumber or pear, 1 cup of milk
- **or** small portion of fine muesli with sliced banana and natural yoghurt, 1 cup of fruit tea



- Home-made creamed potatoes, broccoli, steamed fish fillet, herb sauce, diluted grape juice
- **or** wholemeal pasta with freshly made tomato sauce, fruit fromage frais, mineral water
- **or** colourful rice and vegetable risotto, chicken fillet, fruit salad, diluted apple juice



- 1 slice of wholemeal bread, with or without crusts, with margarine and mild cheese or delicatessen chicken breast, raw vegetable pieces with fromage frais dip, herbal tea or mineral water
- **or** cream of vegetable soup with a wholemeal bread roll, 1 cup of milk
- **or** 1 slice of wholemeal bread with herb fromage frais, pieces of raw apple, fruit tea mixed with fruit juice)

#### Three meals are not enough

A child's stomach is small. Children therefore need a little snack every two to three hours, i.e. between main meals, to increase their energy levels.

Fruit and wholemeal cereals are recommended, as well as plenty to drink (water or diluted fruit juice). Every child likes pieces of fruit such as apples, pears, bananas, oranges, mandarin segments, peaches, nectarines, plums and apricots and whole strawberries. They also love slightly sweetened wholemeal cookies, rice cakes, pretzels and wholemeal rusks. These snacks are also ideal to take with

*Not only sweets: small pieces of fruit are ideal for snacks.*







Children learn by copying and watching how “the grown-ups” do it.

you to the playground for example. And a slice of cake, some biscuits or even an ice cream are fine once in a while. This should, however, be just that. It is all too easy for your child to become accustomed to these, then becoming reluctant to accept nutritious snacks.

## Food education – your child learns how to eat

Eating habits, taste preferences and, in particular, the attitude to food, are developed during the first few years of your life – and the basic traits at least usually remain for life. In the first ten to twelve

months you as parents will decide to a great extent what is put into your baby’s feeding bowl or bottle. But soon your infant will become a little child full of curiosity, will increasingly want to eat independently and also have a say in what goes into his or her mouth and what does not! Certainly at this time you will need to be loving and patient, at the same time exercising prudence to enable you to assess the various learning situations and gently guide your child through this process.

### Set a good example

Children learn by copying and watching how “the grown-ups” do it. This applies just as much to food preferences and dis-

likes as for how to learn to eat. If Daddy categorically refuses to eat vegetables, Mummy drinks her coffee on the hop, most of the food comes from a can or in the form of takeaways, big brother or sister continuously walks around with a bag of potato chips/crisps and dinner is eaten in front of the television – how is your little one supposed to learn how to eat healthily and appreciate good food? Do it right yourself and set your child a good example – at least most of the time – of how it should be done. For many young parents the birth of their child is the opportunity to rethink their own eating habits.

### Ensure a good atmosphere at the table

A hectic atmosphere, scolding and complaining and meaningless conversation ruin the appetite. A friendly, cosy atmosphere on the other hand, and an attractively set table promotes the appreciation of food – and this applies not only to children. It can also help to start mealtimes with a “ritual”, maybe a little rhyme for example.

### Not only sweets

Children – but not only children – love sweet things. From the psychological point of view this means a taste that offers “security”, as baby started with mother’s milk, which is very sweet. Many infant foods such as yoghurts, drinks and infant cereals are, for this reason, heavily sweetened. From the nutritional aspect and for healthy teeth, however, this bodes ill. Furthermore, it encourages a preference for sweet foods. To ensure that your child does not become a “sugar

junkie” avoid oversweet foods and give your child the chance to get to know other tastes. The natural taste of foods without added sweeteners, prepared with loving care, offers many different possibilities.

**Tip:** if your child starts crying at the supermarket checkout where all the sweets are on display, stay calm – and don’t give in.

It can help if you take a toy with you or if your child is allowed to select something before you reach the checkout, e.g. a special yoghurt or fruit juice.

Not everything lands in baby’s mouth.



### *Learning to eat – splashing and spilling has to be*

Your child will soon be grasping for spoon and beaker and will try to feed himself or herself.

Even if most of it lands on clothing and on the floor to start with, instead of in baby's mouth, try and stay relaxed – your child can't do any better at this point. But do encourage it, as practice makes perfect. A large bib, preferably with sleeves, a wipe-clean tablecloth and a second one under the high-chair as well as a facecloth kept ready will help keep cleaning to a minimum. A child's own cutlery, such as the NUK Cutlery Set, will help your child to learn to eat. To help with drinking there are beakers and cups to "grow" with baby, e.g. the NUK EASY LEARNING Cup.

### *Food is not an educational tool*

Giving a bar of chocolate to console your child or as a reward is a sure way to upset the child's natural relationship with food. Your child will learn to relate to food as follows: when I'm sad, eating helps and when I've done something good, I get something to eat. And this is irrespective of whether the child is hungry or not. This message becomes imprinted in the subconscious and will be there for life. Many overweight adults have such related problems.

### *Respect nature's rule of hunger and contentment*

Everyone is born with a natural feel for hunger and contentment. A child will eat when hungry and stop when satisfied – irrespective of how the food tastes. The portions will vary considerably. In growth

phases or after physical activity the child will eat more, and when resting, not as much. Often the child eats so little that some mothers become concerned as to whether their child will actually ever grow. However, this concern is normally unfounded, as each child has sufficient reserves. Let your child decide whether to finish the plateful or not. If you keep making your child eat then the natural feel for hunger and contentment will be lost – and that will be the start of the power struggle at the table. Not every whine means that your child is hungry – certainly not with infants and small children. If your child learns that every time he or she is not happy this will be "treated" with food, the result will probably be eating problems or disorders in adult life.

### *Don't let your child constantly suck at the bottle or eat when doing something else*

Whether you are at home with your child or on the road – ensure you put aside time for meals – a start and a finish. Eating at the same time as doing something else, e.g. a sand pie in one hand, a banana in the other, will encourage subconscious eating and eventually overeating. Constant sucking at the bottle or beaker causes caries and can lead to jaw deformities.

### *Cook together with your child*

All children love it – first watching Mummy or Daddy cooking and later helping. Even very small children can help mix foods such as fromage frais, stir cake mixture or knead pizza dough; older children can chop up fruit and vegetables or cut up cooked potatoes for a potato salad. There



*Children love it: cooking with Mummy and Daddy.*

are plenty of opportunities to help. At the same time your child will learn a lot, and without your having to especially say, for example, that a hotplate is hot and must not be touched, or explain what various foods look like, what they are called and how they taste, or that preparing food takes time, etc.

Cooking with children takes longer and means that you can forget all thoughts of perfection for a while. It also requires much patience. But it's worth it! Your child will enjoy a meal more if he or she has helped to prepare it.

# Last but not least

## Dear Parents,

In my family, emphasis was always placed on good food right from the start. To this day it is important to my mother to lovingly cook each meal fresh; we never bought cakes from the baker's, nor did we have canned vegetables. Even during hard times – and there were many – the principle was never to save on food! Today I am extremely grateful to my parents that they passed on to me this appreciation of eating, both of the food itself and its preparation.

This is how I have come to be of the opinion that good food and drink are an invaluable cultural asset and worth fostering. Nowadays children are exposed to numerous external influences from kindergarten, friends and food advertising. Hectic hustle and bustle everywhere and the constant immediate satisfaction of all needs – even food – seems to be what children want. Fidgety, badly nourished and overweight children speak another language – and these are increasing all the time.

Eating and drinking means more than simply satisfying hunger and quenching thirst. Eating meals together can become conscious calm points during the hectic daily routine, giving the whole family much-needed time to relax. The sense of togetherness that your child experiences from eating with the whole family is precious and just as important as the food that is being consumed.

This conscious appreciation of food is, however, only possible, if no one is playing or reading at the same time or if the television is constantly on, distracting everyone from eating.

Don't let eating become a tiresome triviality taking place alongside other activities.

The time that you invest in preparing and enjoying meals is valuable; it is an investment in the health of your child.

With this in mind I would just like to say – enjoy preparing your food and bon appétit!

*Petra Fricke*

## Imprint

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## Food Table



# Easy guide to food

Foodstuff	Recommended	Not recommended	Comments
Meat 	Lean, tender, non-stringy chicken, turkey, beef, veal, pork	Fatty meat cuts, ready-made dishes from mince; cured, smoked and seasoned meats, cooked meats and sausages, offal	Meat is an important source of iron and provides valuable protein, 6x weekly 20–30 g as part of the midday feed
Fish 	Filletted low-fat sea fish such as coley, plaice, cod, fresh or frozen	Smoked fish, canned fish, fatty fish such as eel, carp	Eating 20–30 g sea fish once a week improves iodine intake
Vegetables 	Carrots, pumpkin, parsnips, fennel, kohlrabi, cauliflower, peas, broccoli, courgettes, spinach, later also cucumber, tomatoes, peppers	Flatulent vegetables such as cabbage, Brussels sprouts, beans, leeks, onions, garlic, pulses, mushrooms	Vegetables are an important source of vitamins and should form part of the midday feed, later on with bread or raw as a snack, up to 6 months from a jar
Fruit 	Bananas, pears, apples, peaches, nectarines, bilberries, raspberries, strawberries, stoned cherries, apricots, seedless grapes, plums, unsweetened frozen fruit, fruit puree without additives from a jar	Exotic fruits such as mango, pineapple, kiwi, tinned fruit in syrup, small whole nuts and whole berries (risk of choking), powdered fruit	Fruit provides essential vitamins and satisfies baby's desire for something sweet in a healthy way, pureed in fruit cereal or milk pudding and later small pieces of fruit as a snack. Fruit should always be washed before consuming and peeled if necessary
Cereals, bread, cereal products, rice, pasta 	Cooked fine wholemeal flakes of oat, millet, rice, wheat, cooked wholemeal semolina, unsweetened instant cereal, later fine wholemeal bread, wholemeal toast and rice wafers, mixed rye-wheat bread, wholemeal rice and pasta	Cereal feeds without any wholemeal component, raw cereals, e.g. uncooked cereal feeds, sweetened instant cereal, white bread, coarse-grained wholemeal bread, uncooked muesli, refined rice and pasta	Cereals contain valuable satisfying carbohydrates; wholemeal products contain more iron and more vitamins than refined cereal feeds. Babies are unable to digest uncooked wholemeal cereals
Potatoes 	Potatoes boiled in their jackets, or peeled and boiled without salt if the water is then used	French fries, potato chips/crisps	Potatoes contain valuable protein, carbohydrates, essential minerals as well as vitamin C
Fats and oils 	Soya oil, rapeseed oil, sunflower oil, wheatgerm oil, cornseed oil, safflower oil, olive oil, butter	Other oils of uncertain composition, margarine, lard, low-fat margarine	As a source of fat-soluble vitamins and essential fatty acids the specified fats and oils are the most suitable. Tip: alternate between butter and oil
Eggs 	An occasional hard-boiled egg yolk added to the cereal feed	Raw or lightly boiled egg	Insufficiently cooked eggs can contain salmonella
Seasonings, herbs and spices, other 	Fresh or frozen finely chopped herbs	Salt, pepper, all spices in whatever form, ketchup, mustard, cocoa, chocolate, sugar, honey, sweeteners	Salt puts a strain on baby's delicate kidneys; spices can cause indigestion
Milk, dairy products 	Full-cream pasteurised milk (3.5% fat) with cereal, proprietary infant milk feeds, at 1 year mild natural yoghurt or small amounts of cream cheese, fromage frais, quark	Semi-skimmed or skimmed milk, unpasteurised milk if not boiled, sweetened infant yoghurts, salty cheeses, tinned evaporated or condensed milk	Due to its low vitamin D content low-fat milk is unsuitable for infants; vitamin D is necessary for processing calcium, which is essential for growth of bones and teeth