Infant& Toddler Forum

The healthiest start in life from pregnancy to preschool

10 STEPS FOR

Feeding Babies

0-12 months

Introduction

Feeding can be a rewarding and enjoyable bonding experience for parents with their infant. During the first year of life the nutritional intake and the relationship a child develops with food, during milk-feeding, the introduction of complementary foods and the transition to family foods, can be critical for his or her health and development, and have long-term consequences.

Health and childcare professionals are well placed to offer advice and support on best feeding practice: breastfeeding, safely preparing formula milk feeds and the introduction and progression of complementary food (weaning). A recent survey of 120 healthcare professionals revealed three out of four would like more information and training on infant nutrition and common feeding problems.[1] High levels of parental anxiety and encouraging parents not to overfeed were identified as some of the biggest challenges healthcare professionals face when advising parents.[1]

As a group of paediatricians, dietitians, health visitors, midwives and psychologists who work together on child nutrition issues, we set out to review the latest evidence on feeding in the first year of life to produce a set of simple messages, that are based on the latest evidence and on the clinical expertise of the Forum members. Where possible we aim to align with, and complement, current government advice. Our aim is to help parents, carers and healthcare professionals approach feeding infants with confidence.

This document introduces *Ten Steps for Feeding Babies*, which provides simple and evidence-based advice to help parents and carers cater for all babies' nutritional needs and provide positive feeding experiences throughout the first year of life. The aim of the supporting document, rationale for the Ten Steps, is to provide evidence behind each step and links to more information.

As part of the development process, the Ten Steps has undergone an extensive peer review process. We would like to thank all the expert medical reviewers for their time and collaboration in the development of the final publication. We will continue working with partners to ensure the widest dissemination of consistent, evidence-based messages to parents, carers and healthcare professionals.

The Infant & Toddler Forum

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3/4

of healthcare professionals said they would like more information and training on infant nutrition and common feeding problems[1]

1

Breastfeeding helps protect your baby from illness

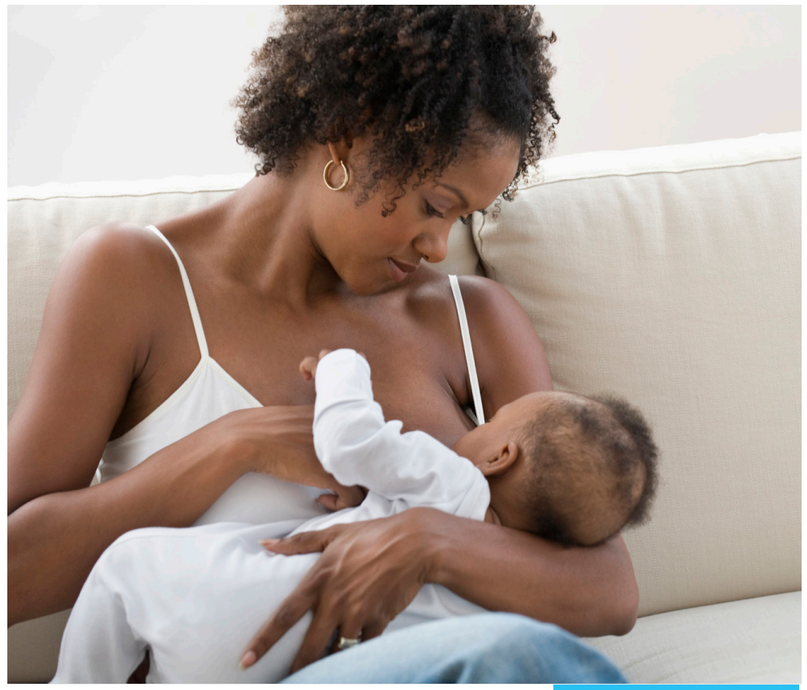
It may take time for you both to learn how it works best for you - ask for help if you need it

The composition of human milk is the biologic norm for infant nutrition.[2] It is a dynamic, bioactive fluid that changes in composition from colostrum, produced in the first few days, to transitional milk – a mixture of colostrum and mature milk – and finally to mature milk from about two to three weeks of age. Breast milk composition also varies with each mother and during each feed, and at different feeds over the day.[3]

There are many reasons why breastfeeding is the best milk for an infant. It contains thousands of distinct bioactive molecules that protect against infection and inflammation and contribute to immune maturation, organ development, and healthy microbial colonisation.[2] In particular, breast milk protects the infant from illness because it contains maternal antibodies to the infective agents that mother and infant are exposed to in their local environment.

Research shows breastfeeding is associated with a lower risk of otitis media (ear infections),[4] respiratory infections and gastroenteritis, particularly for infants under six months of age.[5,6,7,8] In the UK fewer breastfed infants are admitted to hospital than those who are formula fed.[9]

Other key advantages for the parents are that breastfeeding:
- involves no preparation or sterilisation of equipment and is immediately ready at the right temperature when the infant wakes and demands feeding
- is free, whereas formula milk is expensive costing on average about £50 per month



Advantages for the mother of breastfeeding for several months include:
- prolonged amenorrhea although that doesn't preclude conception
- a slightly lower risk of breast and ovarian cancer

Breast milk composition varies with each mother and during each feed, and at different feeds over the day

Supporting and guiding mothers to understand what to expect and how to breastfeed successfully

Some mothers and infants find breastfeeding comes quite naturally while others need more support and advice to learn how to breastfeed successfully. With appropriate support most mothers can breastfeed.

Healthcare professionals, such as a midwife or health visitor can provide this support and further advice as breast milk production varies. Active listening by supporters is preferable to being too prescriptive.

At birth infants can already suck and swallow as they have been doing so in utero. However, they need to learn to coordinate their breathing, sucking and swallowing, which may take a few attempts over the first few days.

Feeding can also be tiring for infants after a traumatic birth, but as infants have a net fluid loss in the first few days, they only need very small amounts of colostrum during this time (Table 2).

The World Health Organisation (WHO) recommends early initiation of breastfeeding within an hour of birth.[10] Mothers can be advised and reassured that the supply of colostrum is under hormonal control and will not be increased by frequent or prolonged feeding.[11] Hence in those first two-to-three days mothers and their infants have plenty of time to find the best way for breastfeeding to be successful. Some mothers need extra support with attachment and the correct latch for the baby on the breast.[12] Ideally, the infant should take the nipple and most of the areola into their mouth for an effective suck and stimulation of the breast tissue.

Around day three infants begin demanding more milk to satisfy their hunger and thirst and usually demand feeds very frequently – about every two hours. At the same time the volume of breast milk produced increases with mature milk mixed in with colostrum (transition milk) to satisfy the infant's

increased demand. Most mothers experience discomfort in their breasts due to the sudden increase in the volume of milk produced. Mothers need to be advised to expect this discomfort and reassured that it will only last about 24 hours.

The hormonal changes occurring at this time may also make some mothers feel anxious, emotional, irrational and depressed - often termed 'baby blues'.

From this time onwards, the volume of breast milk is produced in response to an infant's suckling and the removal of milk from the breast during feeding or expressing the milk.[13] The mother's breast discomfort will diminish as the volume of milk produced adjusts to the amount the infant is demanding. This change to transition milk with an increase in milk production around day three can be delayed where there has been a stressful delivery or where the mother has poorly controlled diabetes.[13] So mothers who have had a traumatic birth or a caesarean section can be reassured that this may be why there is a delay in the change to a larger volume of transitional milk.

Tongue tie (ankyloglossia) may occur in 4 – 11 per cent of infants and may cause breastfeeding difficulties although 50 per cent of these infants remain symptom free.[14,15,16]

1

WHO recommends early initiation of breastfeeding within an hour of birth

Responsive breastfeeding

Parent responsivity has a central role in breastfeeding, as mothers learn to interpret their child's signals of hunger and satiety and to feed or stop accordingly.

If infants are allowed to feed for as long as they continue to suck and to come off the breast when they release the areola and nipple, the volumes taken at each feed will gradually increase and the infant will adjust to a less frequent feeding pattern.[3]

The volume of milk produced varies:[17]
- between women and
- between a woman's two breasts

The composition of breast milk varies considerably between women and depends on:[18]
- beginning or end of feeding – energy and fat content increase during each feed
- duration of lactation
- time of day
- diet and body composition of the mother
- maternal genes
- possibly infant factors such as sex

Some infants demand feeds frequently while others take larger volumes less frequently, but the total daily fat intake is not affected by the frequency of feeding nor whether one or both breasts are suckled at each feed.[17] Some infants will take milk from both breasts at each feed and some will refuse the second breast. It is preferable to:[3]
- offer both breasts at each feed although the second may be refused
- allow the infant to feed as long as he or she wishes at each breast
- have a break after finishing feeding at the first breast when the infant can be winded
- alternate which breast is offered first at each feed

54%

of parents reported that they are generally confident in breastfeeding[1]

Further links

https://www.nhs.uk/conditions/pregnancy-and-baby/breastfeeding-help-support/
https://www.nhs.uk/conditions/pregnancy-and-baby/breastfeeding-first-days/
https://www.nhs.uk/conditions/pregnancy-and-baby/feeling-depressed-after-birth/#the-baby-blues
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/534160/Commissioning_infant_feeding_services_infographics__Part_1_.pdf

Give breast milk, the best option, or infant formula for at least 12 months

It is preferable that breast milk remains an infant's milk drink until at least 12 months of age because as long as breastfeeding continues the infant will benefit from the protection against illness. WHO recommends continuing breastfeeding until two years of age or as long as the mother chooses.

In the UK most mothers choose to discontinue breastfeeding much earlier than 12 months for a variety of reasons.[20] The most common reason is a perception that the mother is producing insufficient breast milk for her infant.[26] This may occur in some cases but if a baby is growing well, he or she is getting enough breast milk. It is therefore important that mothers are offered support by professionals or peer groups to maintain breastfeeding for longer to enable health benefits for both mother and infant.[27] Intensive interventions from community peer support, with at least five planned contacts, has a greater effect on breastfeeding continuation than lower intensity interventions.[28] However, there is very limited provision of this type of breastfeeding support in the UK.

Continuing to breastfeed after returning to work can present challenges where opportunities for flexible working hours or expressing breast milk in the workplace are not made available. The current law requires an employer to provide somewhere for a breastfeeding employee to rest and this includes being able to lie down. The law doesn't require an employer to grant paid breaks from a job in order to breastfeed or to express milk for storage and later use. Neither does it require an employer to provide facilities to breastfeed or express milk.[29] However, mothers can be encouraged to regularly breastfeed or express milk at set times each day, when they are not at work, to maintain breastfeeding for longer. Good maternal nutrition and hydration are essential to maintain optimal breastfeeding.[30]

Preventing iron deficiency and iron deficiency anaemia (IDA)

Infants are vulnerable to iron deficiency and IDA.[19] In the UK the 2011 Diet and Nutrition Survey of Infants and Young Children (DNSIYC) found 13 per cent of UK 5-11 month olds had low haemoglobin levels and 3 per cent had IDA.[20] IDA negatively affects growth and development.

Breast milk is low in iron, but the iron present in the form of lactoferrin is very efficiently absorbed. Formula milks are fortified with higher levels of iron but in a form that is not as efficiently absorbed.

Infants given cow's milk, which contains very little iron, as their main milk drink instead of breast or formula milks before 12 months of age, are at higher risk of iron deficiency and IDA during infancy and in their toddler years.[21,22,23] In the UK, by 6 months of age over 70 per cent of infants are no longer receiving any breast milk and a formula milk is their main milk drink.[20] Cow's milk is much cheaper than formula milks and often used earlier because of the cost. If cost of formula is a concern to families, it may be the main reason parents change from a formula milk to cow's milk before 12 months of age. For some families on low income, vouchers towards the cost of milk, formula milk, fruit and vegetables are available from the UK government's Healthy Start scheme (https://www.healthystart.nhs.uk/). Iron status in infants can be improved by delaying cord clamping at birth for about three minutes which may reduce the incidence of iron deficiency anaemia at the age of three to six months.[24,25] See Factsheet 4.4

UK government policy recommends exclusive breastfeeding for around the first six months of life, with continued breastfeeding alongside appropriate complementary feeding after that. Breast milk should continue to be given as the main drink alongside complementary foods for as long as the mother wishes. Infant formula and follow-on formula are the only suitable alternative during the first 12 months when mothers do not breastfeed or choose to supplement breast milk.

Differing growth patterns and energy intakes

Breastfed infants have a slower pattern of weight gain than formula-fed infants, which may be due to the differing energy contents, different macronutrient composition and lower volumes consumed compared to formula milks.[31] The growth pattern of breastfed infants is regarded as the norm and is the basis for infant growth charts used around the world [Growth charts can be accessed at https://www.rcpch.ac.uk/resources/growth-charts].[32]

The faster weight gain in early infancy due to increased energy and macronutrient intakes in formula-fed infants compared to breastfed infants may contribute to later obesity.[33,34]

Bottle feeding rather than the differing milk composition may also be a key factor as infants fed breast milk from a bottle showed a higher weight gain compared to those who are bottle-fed expressed breast milk.[35,36]

Table 1: Comparison of average energy and macronutrient composition of breast milk compared to formula milks[31]

	Energy (kcals/100mLs)	Protein (g/100mLs)	Fat (g/100mLs)	Carbohydrate (g/100mLs)
Colostrum 1-5 days	53.6 3 2.5	2.5 3 0.2	2.2 3 0.2	5.6 3 0.6
Transition 6-14 days	57.7 3 4.2	1.7 3 0.1	3.0 3 0.1	5.9 3 0.4
Mature from 14 days	65.2 3 1.1	1.3 3 0.1	3.8 3 0.1	6.7 3 0.2
Infant formula various brands	67	1.3 g	3.4	7.4

Table 2: Average volumes in mLs/day of breast milk consumed compared to formula milk intakes[31]

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 7	14 + days
Breastfeeding	21.5 3 4.2	100.3 3 21.8	285.3 3 40.1	383.8 3 17.4	457.2 3 20.9	495.3 3 33.4	673.6 3 29
Infant formula	170.5 3 55.8	265.0 3 67.7	410 3 26	493 3 32	566 3 30	576 3 29	761.8 3 18

Combining breastfeeding and bottle feeding

Infants suck against a lower pressure when sucking from a bottle teat compared to sucking from the nipple[37] and so some will prefer to suck against this lower pressure (which requires less effort) if bottle feeding is offered. Exclusive breastfeeding includes offering expressed breast milk (EBM) in a bottle or cup.

There is little evidence on the best way to combine breast and bottle feeding, if a top up of EBM or formula milk is chosen to supplement breastfeeding.

There are 2 ways to do this:
1. mothers can feed from both breasts to stimulate breast milk production and then offer a bottle if the baby still seems hungry. This may be best in the new born period when breastfeeding is being established. However later, it could lead to a reduction in the breast milk demanded by the infant and consequently a diminishing breast milk production

2. the infant can be given a bottle of formula milk at one feed per day and continue to breastfeed only at the other feeds. Some mothers successfully maintain breastfeeding for longer by doing this[38]

Formula milks

All infant and follow-on formula milks must comply with European regulations on their content and safety.[39] The protein source can be from cow's milk, goat's milk or soya. Soya based formulas are not recommended before six months of age and should only be used under the supervision of a healthcare professional.

Infant formulas are suitable from birth and remain a suitable alternative until 12 months of age. It is not necessary to change to follow on formula from six months of age although the infant feeding policies in some European countries recommend changing because follow-on formulas contain higher levels of iron and other nutrients.[40,41]

Safe preparation

Parents who use formula milks need advice on how to:
- safely make up powdered formula milk using sterilised bottles and water that has been boiled and left in a lidded kettle for up to 30 minutes[42]
- feed responsively in the same way as mothers do when breastfeeding, so that an infant is allowed to stop feeding from a bottle when he or she signals they have had enough[43]

Good maternal nutrition and hydration are essential to maintain optimal breastfeeding

Further links

https://www.nhs.uk/conditions/pregnancy-and-baby/your-breastfeeding-questions/
https://www.nhs.uk/start4life/baby/breastfeeding/
https://www.nhs.uk/conditions/pregnancy-and-baby/problems-breastfeeding
https://www.nhs.uk/conditions/pregnancy-and-baby/combining-breast-and-bottle/

3 Begin a vitamin D supplement from birth

as milk and foods do not necessarily provide enough

Vitamin D is essential for bone health and is a component of the immune system. Some infants are born with low vitamin D stores and cutaneous synthesis, breast milk, formula milk and complementary feeding will not necessarily provide enough. Cutaneous synthesis of vitamin D is the production of vitamin D in the skin which occurs when bare skin is exposed to daylight while outside if UBV light is of sufficient strength. This only occurs in the UK between April and September.

To ensure infants are vitamin D sufficient, the Scientific Advisory Committee on Nutrition (SACN) assessed the evidence and in 2016 advised a safe dietary intake of vitamin D of 8.5-10µg/day for infants from birth.[44] They reiterated a reference nutrient intake (RNI) of 10µg/day for pregnant and breastfeeding mothers.[44]

See Factsheet 4.7

Vitamin D supplementation

Supplements are required for infants from birth because breast milk is low in vitamin D and although infant formula is fortified with vitamin D, the concentration is not necessarily adequate for all infants and especially for those born very early or with very low stores. Only volumes of formula milk of more than 800mLs/day will provide the recommended safe intake of 8.5-10µg of vitamin D.

There is no risk of exceeding the upper safe level of 25µg/day for infants[45] in giving a daily 10µg supplement in addition to formula feeding. The European Society for Paediatric Endocrinology recommend a supplement of 10µg of vitamin D/day for all infants from birth to 12 months of age independent of their mode of feeding, to prevent nutritional rickets.[46]

Sources of vitamin D

Few foods contain vitamin D – oily fish is a good source and eggs and meat contain small amounts.[47] Some foods are voluntarily fortified but these also provide very small amounts.[48]
The principal source of vitamin D is cutaneous synthesis. However, this is prevented by sunscreen and clothing.[48] Cutaneous synthesis is reduced in those with pigmented skin, on cloudy days and at the beginning and end of each day when the sun is less intense.[48]

Vitamin D deficiency

Infants whose mothers had low vitamin D levels during pregnancy and who did not take the recommended vitamin D supplement during pregnancy, are likely to be born with low levels of vitamin D and deficient stores.[49] Exclusively breastfed infants rely on their stores of vitamin D acquired in the womb and any postnatal cutaneous synthesis because of the low vitamin D content in breast milk. Vitamin D levels are even lower in the milks of mothers who are vitamin D deficient.[50]

The UK national dietary survey shows that vitamin D deficiency is common in the UK population: 25 per cent of women of child bearing age are deficient and this varies over seasons from 10 per cent in late summer to 40 per cent in winter.[51] The risk of low levels is highest in women with dark pigmented skins; a survey from Wales has reported that about 50 per cent of pregnant women with pigmented skins have low vitamin D levels.[52]

When body stores are low and cutaneous synthesis and dietary sources of vitamin D are limited, vitamin D deficiency is likely to develop in rapidly growing infants. Symptoms of severe deficiency, which is relatively rare in infants but preventable with supplementation, include rickets, hypoglycaemic seizures and cardiomyopathy.

Over two years (March 2015 - March 2017) British paediatricians reported 125 cases of nutritional rickets.[53] The majority were of black and south Asian origin and more boys than girls were affected. 78 per cent were not taking vitamin D supplements because parents had not been informed by HCPs to give them. Radiological abnormalities included bowed legs and swollen wrists. Comorbidities included:

- delayed gross motor development in 26 per cent
- fractures in 10 per cent
- hypocalcaemic seizures in 8 per cent
- dilated cardiomyopathy in four cases, of whom two died

Vitamin D supplements are required for babies from birth

Further links

- https://www.infantandtoddlerforum.org/media/upload/pdf-downloads/ITF196_Factsheet_4_7_Vitamin_D_v7_web_outline.pdf
- https://www.gov.uk/government/publications/feeding-in-the-first-year-of-life-sacn-report

Let your baby decide how much milk to drink

Offer a feed when your baby is hungry and remember babies cry for reasons other than hunger

Responsive milk feeding is recognising an infant's signals of hunger and satiation, feeding only when the infant is hungry and allowing the infant to decide how much milk to drink. Infants drink different volumes of milk at different feeds.[17]

Responsive feeding is key in preventing over consumption and excess weight gain in both breastfed and bottle-fed infants. Most infants regulate their energy intake very accurately over each day when fed responsively and grow according to their genetic inheritance.[54]

Cross-sectional observational studies have reported greater responsiveness among breastfeeding mothers than among bottle-feeding mothers.[55] However, an earlier study reported satisfaction with life, self-esteem, and number of children, but not breastfeeding, were more likely to be positively related to responsive feeding of infants two to four months of age.[56]

Infant signals to indicate hunger or satiation

Infants can signal both hunger and satiation, and their behaviours to indicate these states change with age. Parents need to learn to recognise these signs and regulate feeding accordingly.

Most very young infants signal when they are hungry with a rooting reflex (head turning with oral sucking movements) and by crying with hunger. Other signals include:

- wakes and tosses
- sucks on fist
- cries or fusses
- opens mouth while feeding to indicate wanting more

However, infants also cry when any of their needs are not being met, for instance when they are cold, in pain, or want some social stimulation. Parents and carers can learn to distinguish the hunger signals from the signals for their infant's other needs to prevent overfeeding.[54,57]

Infants use different behaviours to show that they have had enough milk or food[57] including:

- stops sucking
- spits out the nipple or teat or falls asleep
- turns head away from the nipple or teat
- slows down their feeding pace

Some parents may need support to recognise these signals and allow their infant to stop feeding even though they may not have finished a whole bottle of expressed breast milk or formula milk.

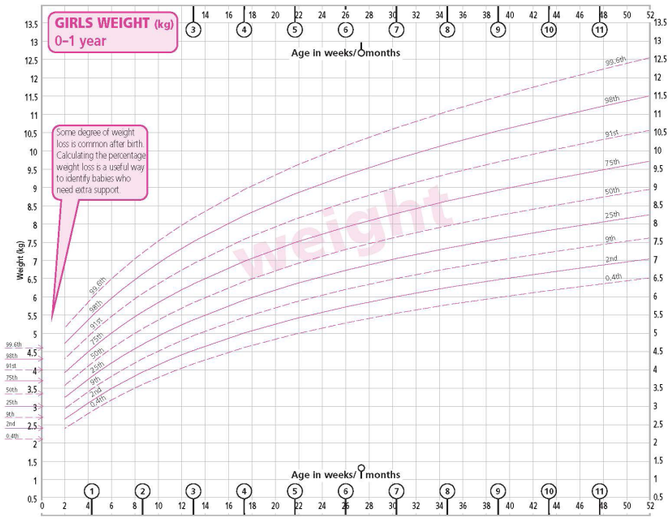
Infants can signal both hunger and satiation, and their behaviours to indicate these states change with age

Monitoring growth

Monitoring the infant's growth can help parents to see whether or not they are over or under feeding their baby. During the first eight weeks of life infants may cross weight-for-age centiles to adjust for any restricted or rapid fetal growth. From eight weeks of age it is usual for healthy infants to roughly track along the weight-for-age centiles. A rise or fall of about one centile space if the birthweight is above the ninth centile on the UK growth charts is considered normal.[58]

Poor appetite regulation and excess weight gain

A small number of infants have poor appetite regulation and may demand too little or too much milk to support optimal growth patterns. After eight weeks of age, consistently rising across the weight-for-age centiles indicates an infant has an excess milk intake and this is a risk factor for childhood obesity.[59,60,61] This can occur with breastfed infants but more commonly occurs with bottle feeding[35] because the bottle teat can be held or forced into an infant's mouth even when the infant has consumed enough milk and is signalling satiation. Infants who are bottle-fed in early infancy are more likely to empty the bottle or cup in late infancy than those who are fed directly at the breast.[62] A recent study in China showed that three-month-old infants with high volumes of formula milk were at greater risk of higher body weight and overweight at 12 months than breastfed infants or those with lower formula intakes.[63]



22%
of parents worried that their baby was not eating enough[1]

Further links

- https://www.gov.uk/government/publications/feeding-in-the-first-year-of-life-sacn-report
- https://www.nhs.uk/conditions/pregnancy-and-baby/your-breastfeeding-questions/#why-is-responsive-feeding-so-important

5 Begin to offer food alongside their milk feeds, by six months but not before four months

when you think your baby is ready for more

Complementary feeding, often referred to as weaning in the UK, is introducing solid foods in addition to an infant's milk feeds when milk alone will no longer meet their energy and nutrient needs. Importantly, complementary feeding/weaning does not mean stopping breastfeeding. Ideally breastfeeding should continue alongside complementary feeding rather than changing to formula milks. See step 4 for further information.

Introducing complementary food gives infants the opportunity to learn to like different tastes and manage different textures when they are developmentally ready, while offering more nutrients in a smaller volume and in particular increasing the iron content of their diet. At the beginning of the complementary feeding period, how much infants eat is less important than getting them used to the idea of eating and introducing them to a range of flavours and textures. They will still be getting most of their nutrients from breast milk or first infant formula.

Heathy full-term infants are ready to learn new feeding skills between four and six months and this is when milk feeds alone no longer provide all the nutrients and energy they need to grow and develop normally.[40,64] Infants exclusively breastfed beyond six months of age are more likely to have low iron levels.[21,65,66]

Varying age recommendations and individual readiness

Although the WHO recommends exclusive breastfeeding to six months of age, mainly to prevent morbidity and mortality from gastroenteritis in developing countries, they also recommend that each country implement the policy as appropriate to national circumstances.[67] In addition, WHO recommends that each infant be considered individually,[68] as there are considerable differences in gestational age at birth (37-42 weeks), and in growth rates and physical development in full-term infants aged around six months old. For European countries where the risk of morbidity and mortality due to gastroenteritis is very low, the European Society for Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) recommends beginning complementary feeding between four and six months of age as this will cause no harm to infants and may provide benefits in terms of improved iron status.[40]

The UK government recommends beginning complementary feeding at 'around six months of age'. However, most countries recommend beginning, when each infant is ready, between four and six months. A recent Cochrane review found no evidence of any risks or benefits related to morbidity or weight change from additional foods given to breastfed infants between four and six months.[69]

Introduction of allergenic foods

There is no evidence that withholding any particular foods beyond four months of age will prevent food allergies developing, in fact in a high risk population for developing allergy (defined by the FASG and BSACI guidelines as a child with eczema and or an existing food allergy),[70] emerging research indicates that babies may benefit from introduction of peanuts and egg earlier, from around four months of age.[40,71,72,73,74,75]

SACN now recommends that allergenic foods such as peanut, hen's egg, gluten or fish can be introduced from around 6 months of age and need not be differentiated from other foods.

Individual signs of readiness

Parents may need to be supported to decide when they perceive their infant is ready to begin complementary feeding between four to six months of age. Signs that infants are ready to begin complementary feeding are:

- able to sit with support and control their head
- seeming less satisfied with milk feeds
- watching others intently when they are eating

Taking food from the spoon needs a different tongue action from sucking from the breast or bottle. Sometimes this means that an infant pushes food back out of their mouth during their first few attempts at eating. Infants learn to move the food backwards to be swallowed with practice.

At this age infants may be sleeping less, and may begin to wake again during the night.

UK statistics on when parents begin complementary feeding

UK studies have shown that mothers of larger male infants introduce complementary feeding at an earlier age than mothers of smaller and female infants.[76] The 2010 Infant Feeding survey (IFS) reported that 30 per cent of infants were receiving solid food by four months, 75 per cent by five months and almost all infants (94 per cent) had been given solid foods by six months. Only five per cent did not receive them until after six months.[26] The UK Diet and Nutrition Survey of Infants and Young Children in 2011 reported 42 per cent of infants receiving solid food by four months but similar figures to the IFS at five and six months.[20] Recent smaller studies have also shown that the median age for introduction is around five months.[77]

Preterm infants

Preterm infants are those born before 37 weeks gestation and this can include babies born as early as 24 weeks gestation. These infants are born with lower nutrient stores than healthy term infants and are therefore more vulnerable and need a more nutrient-dense diet after discharge from their neonatal unit. Breastfed preterm infants are usually prescribed a vitamin and mineral supplement to support their higher nutrient needs and other preterm infants may be prescribed a more nutrient-dense formula milk depending on the gestational age at birth. The preterm infant's medical team is best placed to advise when to begin complementary feeding but, in most cases, beginning at the same biological age as for term infants, i.e. four to six months after their estimated date of delivery (EDD), is considered appropriate. The same developmental signs that an infant is ready to learn new skills can be considered.[78] Preterm infants may need more support to sit upright and control their head as many experience developmental delay.[79]

38%

of parents reported feeling very anxious about moving their baby onto the next stage of feeding[1]

Further links

- https://www.infantandtoddlerforum.org/media/upload/pdf-downloads/3.5_Developmental_Stages_in_Infant_and_Toddler_Feeding_NEW.pdf
- https://www.bliss.org.uk/weaning-your-premature-baby
- https://www.gov.uk/government/publications/feeding-in-the-first-year-of-life-sacn-report

6 Offer high iron foods from beginning of complementary feeding (weaning)

- meat, oily fish, eggs, pulses and nut butters

Iron is the most critical nutrient from the beginning of complementary feeding and foods high in iron should be introduced early in the process.[24,80]

Infants' stores of iron that are mostly laid down during the third trimester of pregnancy last on average until around four to six months following birth. Iron status can be improved by delaying cord clamping at birth for about three minutes[25] and introducing high iron-containing foods from the beginning of complementary feeding.[21] The WHO and ESPGHAN committee make the same recommendations.[40,24,80]

High iron-containing foods

The best sources of iron are red and white meat, oily fish, pulses, eggs, and nut butters. Meat and oily fish provide the haem form of iron which is easily absorbed. Pulses, eggs and nuts only contain the non-haem form of iron and absorption is less efficient but can be improved by combining them with a high vitamin C food. Ideally savoury courses for infants should be made up by volume of:

- 1/3 high iron foods: meat/fish/eggs/nut butter/pulses (lentils, hummus, starchy beans)
- 1/3 starchy food: potato/rice/pasta/bread
- 1/3 vegetables

This will meet the WHO recommendation that complementary foods are energy and nutrient dense providing about 80-120 calories/100g food.[80]

Combining food groups for good nutritional intake

See Factsheet 1.2

To ensure a good nutritional intake, infants need to be offered a combination of all four food groups over each day.[80] This can easily be achieved from early in weaning when the infant has progressed to two or three meals each day.

Table 3: Food groups

Food groups	
Bread, rice, potatoes, pasta, cereals	offer at each meal
Meat, fish, eggs, nuts and pulses	offer at 1 or 2 meals to provide a good source of iron, 2-3 meals for vegetarians
Vegetables and fruit	include in all meals
Food based on cow's or goat's milk: yogurt, fromage frais, cheese, milk puddings, milk to mix with cereals	include at some meals – once or twice per day

Commercial baby foods

In the past, non-organic baby foods (particularly cereals and savoury courses) were usually fortified with iron.[81] Organic food regulations do not allow iron fortification of food and therefore organic baby foods, which are now generally preferred by parents, are not fortified with iron.[81]

Foods to avoid during complementary feeding

- Honey (until 12 months) – as it may contain spores of the bacterium Clostridium botulinum that produce toxins in the infant gut which, once absorbed, may cause infant botulism. Honey is also a form of refined sugar
- Substitutes for milk and milk products such as those based on cereals or nuts as a main milk replacement, as these do not have the same nutrient profile as milk products from cows and goats. However, these can be used in cooking food. Rice milk is not suitable for infants and children until 4.5 years of age as it contains small amounts of arsenic[82]
- Added salt
- Added sugar – which comes in several guises in commercial baby foods including fruit juice concentrate, honey and syrups
- Sweet drinks including juices and smoothies – it is best to encourage water as the only drink in addition to milk
- Raw shellfish – this can increase the risk of food poisoning, so it's best not to give it to babies
- Raw and lightly cooked eggs without a British Lion Quality Mark. If the eggs are hen's eggs and they have a red lion stamped on them, or a red lion with the words 'British Lion Quality' on the box, then infants can have them lightly cooked or raw. Hen's eggs that don't have the red lion mark should be cooked until both the white and yolk are solid, as should duck, goose or quail eggs
- Pasteurised cow's milk before 12 months as a main drink. See step 2 for further information

Further links

- https://www.infantandtoddlerforum.org/media/upload/pdf-downloads/1.2_-_Combining_Food_for_a_Balanced_Diet.pdf
- https://www.infantandtoddlerforum.org/media/upload/pdf-downloads/4.4_-_Iron_Deficiency_Anaemia_in_Toddlers.pdf
- https://www.gov.uk/government/publications/feeding-in-the-first-year-of-life-sacn-report

High iron-containing foods should be introduced from the beginning of complementary feeding

Offer spoon-feeding, soft finger foods and a cup of water

at all meals so that your baby develops all their feeding skills

Some babies learn their new feeding skills more slowly than others and some are more sensitive to tastes, smells and textures.

Feeding skills develop as part of infants' overall development and involve a combination of gross motor, fine motor and oral motor development. Approximately 30 nerves and muscles are involved in the oral motor development for eating and swallowing.

Each infant develops at his or her own pace and development is affected by health status, physical wellness and culture. Infants should always be supervised when feeding and fed with the family at mealtimes as often as possible.

Learning to like new tastes

Infants may need small tastes of certain foods on several different days before they learn to like a new taste.[83] This repeated exposure and introduction of a wide variety of flavours will help their acceptance of new foods. **See Factsheets 2.1 and 3.5**

Sweet tastes are accepted more readily than savoury tastes as infants are already familiar with the sweet taste of breast milk or formula milk.[84] So any taste that isn't sweet (sour, salt, bitter, umami) will need getting used to. Infants who are given home-prepared foods are more likely to accept a wide range of foods in later childhood than those fed commercial baby foods, because they are exposed to tastes that differ from the much preferred sweet taste.[85]

Bitter tastes are the most difficult to accept, and some infants will be more responsive to this taste and therefore more likely to refuse bitter tasting foods, such as green vegetables.[86] Sugar, honey and salt should not be added to infant foods.

Learning new feeding skills to manage different textures

The oro-motor skills required for managing the different textures of complementary foods are only learned if the infant is given food to practice with; the side-to-side tongue movement needed to process solid textures is only learned when foods are in the mouth. Some infants acquire these skills more quickly than others.[87,88,89]

After beginning with smooth foods to develop confidence, offering thicker textures, lumps and soft finger foods allows infants to progress their skills.[90] Some need more practice with new textures before they master eating them and are ready to move on. Others may manage soft finger foods or thicker textures from the beginning of complementary feeding. The gag reflex makes it safe for infants to try finger foods and lumps that they cannot at first process. Lumps or pieces of food that are too big to be swallowed are gagged and cleared from the back of the tongue to the front of the mouth and either spat out or reprocessed to the sides of the mouth.[91,92]

Although gagging is a normal part of learning feeding skills, choking, which is not common, is not.[93,94] Guidelines on treating choking in infants and children can be accessed at: https://www.resus.org.uk/resuscitation-guidelines/paediatric-basic-life-support/.

The wide age range over which parents have reported their infants first exhibiting certain feeding skills depends to some extent on when the parents or carers have given the infant the opportunity to learn and practise the skill by offering different textured foods.

Choking and Gagging

Choking: a piece of food partially or completely blocking the airway, affecting breathing.

Gagging: a reflex closing off the throat and pushing the tongue to the front of the mouth.

Table 4: Age ranges of term babies for key developmental stages in infant feeding[89]

Behaviour	Age range (months)	Mean age (months)
Sits with support with good head and neck control	0.25-9	5.5
Opens mouth when spoon approaches or touches lips	0.5-9	4.5
Tongue moves gently back and forth as food enters the mouth	2-10	4.9
Tongue used to move food to back of mouth to swallow	2-7.5	5
Keeps food in mouth and is not re-fed	0.5-10.5	5.7
Brings top lip down on spoon to remove food	4-16	7.7
Eats food with tiny lumps without gagging	4.8-15.5	8.7
Chews soft foods and keeps most in the mouth	6-14	9.4
Chews firm foods and keeps most in the mouth	4-16	10.5

Some parents are reluctant to give finger foods, but early in complementary feeding soft finger foods offer the opportunity for infants to:

- touch and play with food
- learn to recognise foods visually and to associate them with their smell and taste
- develop their self-feeding skills

Research surveys using parental questionnaires in the UK report that:

- 12 per cent of children were given finger foods at 4-5 months and 40 per cent by 6 months[95]
- 43 per cent of infants were eating toast before 6 months and 27 per cent biscuits[96]

Infants progress in different ways and some develop a preference for finger foods while others for spoon feeding. However, it is best that each infant has the opportunity to learn and acquire both skills. Giving the infant their own spoon during spoon feeding encourages independence and an opportunity to learn to co-ordinate transferring food from spoon to mouth. Including infants in family meals allows them to learn by copying those eating around them.

Baby-led weaning

There is no universally accepted definition of baby-led weaning – for some it means including finger foods alongside spoon feeding as described above but for others it means giving only finger foods and avoiding all spoon feeding.[97,98] There is no evidence to support an only finger foods approach for all infants.[97] Recent research suggests that whether an infant is fed via baby-led weaning or spoon feeding does not have an impact on an infant's BMI.[99]

Varying sensitivity to the taste and texture of foods

Some infants are more sensitive to the taste and texture of new foods and take longer to accept them.[100,101] This is dependent on infants' temperament, which is inherited, as well as previous experience of solid foods and the manner in which mothers present new foods.[102] More sensitive infants tend to continue to be more sensitive to touch as young children.[100,103]

Learning to drink from a cup

Drinking from a cup requires a change from sucking to sipping with controlled lip, jaw and tongue-tip movements. Infants will begin to bite on the cup from around six months but carers need to control the cup so that only small, manageable amounts of liquid are taken in. Offering water in a lidded cup without a valve encourages an infant to learn to sip rather than suck as they do when drinking milk from a nipple or teat.

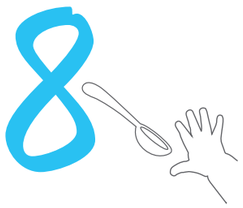
Table 5: Percentage of children with parent-reported drinking skills in infancy[87]

Age	7-8 months	9-11 months
Drinks from a sippy cup without help	42%	70%
Drinks from a regular cup without help	-	10%

Infants should always be supervised when feeding and fed with the family at mealtimes as often as possible

Further links

- https://www.infantandtoddlerforum.org/media/upload/pdf-downloads/2.1_why_Toddlers_refuse_food.pdf
- https://www.infantandtoddlerforum.org/media/upload/pdf-downloads/3.5_Developmental_Stages_in_Infant_and_Toddler_Feeding_NEW.pdf
- https://www.gov.uk/government/publications/feeding-in-the-first-year-of-life-sacn-report
- https://www.bda.uk.com/foodfacts/complementary_feeding_weaning



Stop feeding when your baby shows you he or she has had enough

by keeping his mouth closed or turning away from food or milk

For caregivers, responsive feeding includes:

- ensuring that the feeding context is pleasant with few distractions; that the child is seated comfortably, ideally facing others; that expectations are communicated clearly; and that the food is healthy, tasty, developmentally appropriate, and offered on a predictable schedule so the child is likely to be hungry
- encouraging and attending to the child's signals of hunger and satiety
- responding to the child in a prompt, emotionally supportive, contingent, and developmentally appropriate manner[43]

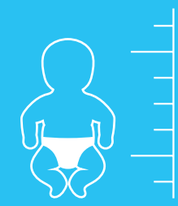
Table 6: Example of the progression of feeding behaviour and responsivity for infants and caregivers*[43]

	Caregiver proactive preparation	Child skills and signals	Caregiver responsivity	What child learns
Birth to 6 months	Prepare to feed when infant signals hunger	Signal hunger/satiety through voice, facial expression, and actions	Responds to infant's signals: feeds when hungry, stop with satiety	Caregiver will respond and meet her needs
6–12 months	Ensure child is comfortably positioned; establish family mealtimes/ routines	Sit; chew and swallow semisolid foods; self-feed with fingers	Respond to child's signals; increase variety, texture, and tastes Respond positively to child's attempts to self-feed	To begin to self-feed; to experience new tastes and textures; that eating and mealtimes are fun

*Represents a non-exhaustive example of caregiver preparation and responsivity.

Feeding responsively is vital to allow infants to move from a milk-based diet to food-based diet with less milk, as food provides more energy and nutrients, especially iron, in a smaller volume.

There are no set food or milk feed portion sizes for infants (under 12 months of age) because infants develop their feeding skills at different ages and grow at different rates. Most infants will continue to accurately regulate their energy intake and will drink the volume of milk they need depending on how much energy they have ingested through food. Infants who develop their feeding skills more slowly will remain more milk dependent for longer and eat smaller portions of food than those who progress more quickly.



Infants develop their feeding skills at different ages and grow at different rates

Hunger signals

Table 7: Hunger cues

Approximate age	Hunger cues
4-6 months	• Cries or fusses • Smiles, gazes at caregiver, or coos during feeding to indicate wanting more • Moves head toward spoon or tries to swipe food towards mouth
5-11 months	• Reaches for food • Points to food • Gets excited when food is presented
10-12 months	• Expresses desire for specific food with words or sounds

Adapted from the USDA Infant Nutrition and Feeding Guide[104]

Satiation signals

Infants clearly signal to parents that they no longer want food or milk. They do this when tired from practising a new feeding skill or later when their hunger and thirst are satisfied.

Infants show that they have had enough food by:

- turning their head away from the spoon
- keeping their mouth shut
- blocking their mouth with their hand or pushing away the spoon or food
- holding food in their mouth
- crying

Older infants will:

- throw food
- signal 'no' in response to unwanted food given to them
- vomit

Overriding these signals and forcing infants to take more food or milk than they need can cause excess weight gain, increasing the risk of childhood obesity.[59,60,61] It also makes the mealtime a negative experience for the infant.

Allowing milk intake to decrease as more food is eaten

Once an infant is managing to eat food well, food should be offered before the milk feed and the volume of milk consumed at each feed or the number of feeds each day can gradually decrease.

From six months onwards 500-600mLs of breast milk or formula milk is considered adequate although some will continue to drink more than this for some time.[105] As food intake increases parents should aim to reduce milk intake to this amount around 11 to 12 months.

Around seven months a second course of fruit with full fat yogurt or a milk pudding can be offered after the savoury course in place of a milk feed.

From nine months onwards parents can consider cutting out the early morning milk feed so that the infant eats more food at breakfast and a smaller milk feed can be offered after breakfast.

Changing from bottles to cups

Infants can begin learning to drink water from a non-valved lidded cup or beaker with their meals from around six months. Parents can be encouraged to discontinue bottle feeding by 11 to 12 months and use lidded beakers or cups without a valve for expressed breast milk or formula milk drinks. If bottle feeding is continued into the toddler years, toddlers can use it as a comfort. Some toddlers then stubbornly insist on continuing to drink milk from a bottle which can be difficult to resolve.

Bottles should not be left with unsupervised infants, for instance when the infant is put down to sleep.

Only milk and water are suitable as drinks for infants. All sweet drinks including fruit juices and baby juices are not suitable and should never be given in a bottle.

Dental care

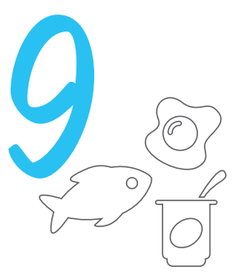
Teeth should be cleaned twice daily with a soft brush and fluoride toothpaste from when the first tooth erupts.

95%

of healthcare professionals believed that parents worry more about their baby not eating enough than eating too much[1]

Further Links

- http://www.who.int/nutrition/topics/complementary_feeding/en/



Introduce allergenic foods one at a time, from four to six months

dairy foods (cow's milk, yogurt, cheese), egg, nut butters, fish, wheat-based foods and foods with soya or sesame

The reasons why some infants develop food allergies remains unclear. There is some evidence that the deliberate exclusion or delayed introduction of specific allergenic foods may increase the risk of developing a food allergy to the same foods.[70] Research indicates that eczema in early childhood increases the risk of food allergy.[75,106,107] Proteins circulating in the environment e.g. in dust particles, entering the infants blood stream via the broken skin of eczema may play a crucial role in development of allergy, whereas eating foods may induce tolerance of the allergenic proteins.[108]

Prevalence of food allergies

Although many parents suspect their infant has a food allergy, the majority of infants will not be allergic. In the UK, data indicates that between 2.2 and 5.5 per cent of infants have an IgE-mediated allergy.[109] Currently prevalence data on non-IgE mediated allergies is only known for cow's milk allergy, which is thought to be 0.72 per cent in the UK.[110] The trend worldwide indicates that food allergies are rising and in some developed countries almost 10 per cent of pre-school children have allergies to various foods.[111,112]

Allergenic foods

The foods most likely to cause an allergic reaction need to be introduced one at a time for infants at high risk of developing an allergy so that it is easy to identify if a certain food has caused a reaction. These foods are listed in the box below. One allergenic food can be given every day for about three to five days and if there are no reactions, then another allergenic food can be introduced in the same way.[113] Parents of infants with eczema and/or egg allergy should discuss the introduction of peanut containing foods with their doctor before giving their infant foods containing peanut.[114]

Table 8: Allergenic foods

The highly allergenic foods which may cause an allergic reaction in infants are:[115]
• milk and milk products: milk, cheese, yogurt and foods based on these such as formula milks • eggs – from hens and all other birds • peanuts and tree nuts • fish • wheat e.g. bread and pasta • soya • sesame seed e.g. tahini

Preventing food allergies through early introduction of allergenic foods

Avoiding any allergenic foods before six months will not prevent food allergy and research now indicates that giving egg or peanut, as peanut butter/ground peanuts, early in complementary feeding, significantly reduces the development of these allergies.[72,73] Evidence is lacking on the early introduction of other foods for allergy prevention but it is safe to introduce them early in weaning period as they will not cause the development of further food allergies.[73] Once introduced they should be regularly included in the infant's diet (ideally twice a week).[70]

Guidelines on complementary feeding for the prevention of food allergy vary between countries: the USA now recommends early introduction of peanuts around six months of age and between four and six months for those at higher risk.[116] Australia recommends introducing all allergenic foods around six months but not before four months for all children.[117] UK guidance for the general population, updated by SACN and Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT) in 2018, is that allergenic foods such as peanut, hen's egg, gluten or fish can be introduced from around 6 months of age and need not be differentiated from other solid foods.[23]

In addition, SACN concluded that:

- there is insufficient evidence to demonstrate that the introduction of peanut or hen's egg into the infant diet before six months of age reduces the risk of developing food allergy to any greater extent than introduction from around six months[23]
- the deliberate exclusion or delayed introduction of peanut or hen's egg beyond six to 12 months of age may increase the risk of allergy to the same foods[23]
- there is high quality evidence that the timing of introduction of gluten is not associated with the risk of developing coeliac disease[23]
- there is low to very low quality evidence that early fish introduction (before six to 12 months of age) was associated with reduced allergic rhinitis and sensitisation[23]
- there is insufficient evidence for conclusions to be drawn on the effect of the timing of introduction of other allergenic foods in relation to developing an allergy to that food[23]

Note. Other government health bodies will consider whether the advice on infant feeding from 0-12 months now requires updating, in light of SACN's recommendations.

In the UK, between 2.2 and 5.5 per cent of infants have an IgE-mediated allergy

Targeted advice on complementary feeding for infants at high risk of developing food allergy

Infants with a history of early-onset eczema, moderate to severe eczema or suspected food allergy are at higher risk of developing food allergy and could already be allergic to one or more allergenic foods before they are introduced. Parents of these infants may wish to seek medical advice before introducing allergenic foods.

Guidance for UK Healthcare Professionals on preventing food allergy in higher risk infants is available from the British Society for Allergy & Clinical Immunology's (BSACI) Paediatric Allergy Group (PAG) and the Food Allergy Specialist Group (FASG) of the British Dietetic Association (BDA). According to these guidelines, in children at high risk of developing allergies parents may wish to start solids from four months of age and once the baby is eating foods like vegetables and fruit, they can introduce egg and then peanut (followed by other allergens).[70]

Table 9: Food allergy and intolerance definitions

Food allergy: an infant reacts to the protein in a food. This includes:
• IgE-mediated food allergy - the reaction involves the infant's immune system, includes reactions that occur immediately up to two hours after ingestion of the allergen. Skin prick tests or blood tests along with the clinical history and an exclusion diet contribute to the diagnosis • Non IgE-mediated food allergy – the reaction also involves the infant's immune system, but reactions are delayed and can take hours to days to develop. Only the clinical history and an exclusion diet are used in the diagnosis
Food intolerance: is individual and non-immune mediated and is triggered by:
• substances other than protein that naturally occur in food, e.g. histamines in tomatoes, salicylates in apples • enzyme deficiencies e.g. lactose intolerance where an infant lacks the enzyme to break down lactose – this can be either permanent which is rare in the UK or temporary during and following gastroenteritis The symptoms of food intolerances are not life threatening.[118,119]

Table 10: Symptoms of food allergy[120]

Symptoms of food allergies are individual and can involve:
• skin: rashes, urticaria (hives), eczema, itching • digestive system: vomiting, diarrhoea, constipation, gastroesophageal reflux disease, blood and or mucus in stools • respiratory system: wheezing, exacerbation of asthma • anaphylaxis which is rare: swelling of the mouth and throat, difficulty breathing and a fall in blood pressure leading to collapse • other: feeding difficulties and or faltering growth in conjunction with above symptoms

Further links

- http://www.bsaci.org/about/early-feeding-guidance
- https://www.gov.uk/government/publications/feeding-in-the-first-year-of-life-sacn-report

Move onto thick mash with soft lumps between six and eight months

and onto minced and chopped family foods and firm finger foods between nine and 12 months

It is important to keep offering infants more and more complex food textures during the second half of infancy so that they continue to develop their feeding skills. They should be able to join in family meals eating minced and chopped family foods and self-feeding firmer finger foods by 12 months of age.

Many parents progress very slowly for fear of their infant choking. But this is unlikely when an infant is fed in a sitting position, as lumps that are too large to swallow will easily be ejected by a strong gag or cough reflex and pushed forward or out of the mouth by the tongue.[88,91] See step 7 for further information.

Table 11: Average progression of complementary feeding skills

Timing	Skills to learn	New food textures to introduce
First few weeks of complementary feeding	• taking food from a spoon • moving food from the front of the mouth to the back for swallowing • managing thicker purées and mashed food	Smooth foods Mashed foods Soft finger foods for playing and sucking
Around 6–9 months	• moving lumps around the mouth • chewing lumps • self-feeding using hands with palmar grasp • sipping from a cup	Mashed food with soft lumps Soft finger foods Liquids in a lidded beaker or cup
Around 9–12 months	• chewing minced and chopped food • self-feeding using pincer grasp • self-feeding attempts with a spoon	Firmer finger foods Minced and chopped family foods

Some infants are more sensitive to textures and need more practice to accept them. Infants who spit out lumps can continue to be offered lumpy food and soft finger foods so that they learn to manage lumps in their mouth rather than reverting back to only smooth foods.[121]

It is important to continue to promote sucking and chewing of non-foods (such as toys, whether soft or hard). This will help to desensitise the infant to different textures and improve their eating skills.

Learning to chew

Teeth are not required for chewing in infancy as the gums already contain the unerupted teeth and are hard enough to cope with lumps, minced and chopped food.[90]

Early chewing is merely an up and down 'munching' movement and develops at about five to nine months. The tongue tip is used to control food in the mouth. If infants try to swallow lumps that are too large they will cough or gag to clear the lumps from the back of the tongue. This is a normal part of learning to manage lumps. Infants who are not introduced to lumpy food by about nine months are more likely to be fussy faddy eaters as toddlers and in later childhood.[96,122]

With practice, and experience of lumpier foods, tongue control progresses and infants then learn the side to side tongue movement that allows them to move food to the sides of the mouth. Harder and larger lumps can then be moved to between the hard gums for chewing.[89,91]

With experience, the infant becomes more adept at chewing and the system becomes more refined and efficient. The gag reflex also diminishes allowing larger boluses to be swallowed.[91]

Managing finger foods

To be able to use hand and arm movements to self-feed an infant needs to be able to control the head and neck and balance the trunk. They can do this if supported well in a baby chair.

Soft finger foods can be introduced from early on in the weaning process. They give the opportunity for the infant to be involved in the meal and become more familiar with different foods through touch, sight and smell.

The palmar grasp will be first used to pick up soft finger foods, such as toast crusts and cooked carrots. The infant will first suck them and pieces to chew will be broken off.

From about nine months the pincer grasp will develop allowing the infant to take more control over feeding a wider range of foods.

It is important to keep offering infants more and more complex food textures during the second half of infancy so that they continue to develop their feeding skills

Table 12: Fine motor development for feeding[123]

Age range	Skill
5-6 months	Two handed reach is replaced by single handed reach
About 6 months	Palmar grasp
8-9 months	Exploration with index finger
9-10 months	Pincer grasp with thumb and fingers
About 12 months	Pincer grasp with thumb and finger tips

Table 13: Soft finger foods

Soft finger foods Offer from the beginning of weaning
Soft roasted, steamed or boiled vegetable sticks, e.g. carrot, courgette, parsnip, pepper, potato and sweet potato
Cooked vegetable pieces, e.g. cauliflower and broccoli florets
Soft fruit pieces. e.g. mango, melon, banana, soft ripe pear, peach, papaya and kiwi
Cooked pasta pieces
Soft toast crusts
Soft cheese sticks
Pieces of fish or fish and potato cake - remove any bones

Table 14: Firmer finger foods

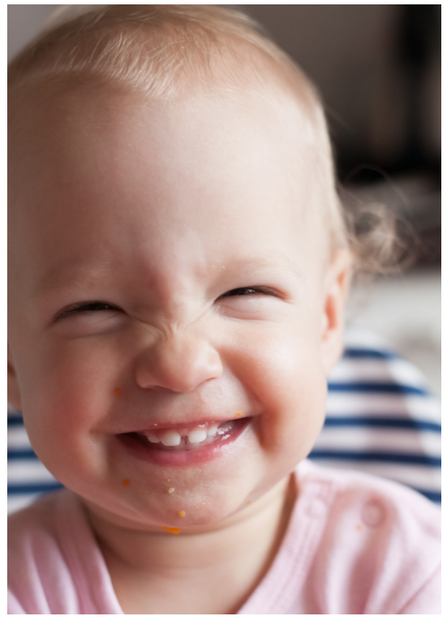
Firmer finger foods - begin offering from around 9 months
Pieces of raw ripe fruit e.g. plums, apricots, strawberry pieces, apples
Fruits with the pips or stones removed e.g. halved cherries, halved grapes, and segments of oranges, satsumas and clementines
Raw vegetables: sticks of cucumber, peppers, courgette, carrot
Crusts of bread or toast, rice cakes, oatcakes, crackers, bread sticks
Pitta bread strips with hummus or peanut butter
Sandwiches with soft fillings
Cheddar cheese pieces
Soft cooked pieces of meat loaf, burger, chicken, falafel, bhaji and other very soft, slow cooked meat

Drinking and sipping

From around nine months, infants will close their lips around a spout. With practice and by using non-valved cups, they will learn to sip, and control the cup tipping themselves.

Parents and carers should aim to:

- have introduced thick mashed textures with lumps and soft finger foods any time from beginning complementary feeding but by about eight months
- introduce a lidded non-valved cup of water with meals from around six months
- move onto minced and chopped foods by 10 months
- introduce firmer finger foods by 12 months
- change to offering milk drinks in cups in place of bottles by around 12 months



68%

of health visitors, GPs and pharmacists noted levels of anxiety in their day-to-day contact with parents[1]

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The Infant & Toddler Forum CIC is committed to a world where every child has the healthiest start in life

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