



let your baby  
**guide**  
**you**

what, when and how to  
**introduce solid foods**

**Advice for health providers**

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These talk-cards for health providers are designed to accompany the parent guide and fridge magnets.

The talk-cards contain additional information to support the advice in the parent guide. Health providers are encouraged to use these cards to build their knowledge and have confident conversations with parents.

what does the  
**research**  
show?

**Weight gain in the first two years of life is a significant risk factor for being overweight in later childhood, independent of birth weight.**

Mothers (especially first-time mothers) are often apprehensive about their baby's growth, and consider a 'chubby' baby to be healthy, despite the extra weight being a risk factor for overweight and obesity (Cameron et al, 2012).

## **Research indicates that children are born with an innate ability to regulate their food and energy intake.**

When parents recognise their children's hunger and satiety (fullness) cues and respond appropriately, children retain their in-built ability to determine how much food they need. The longer this self-regulated behaviour is preserved, the more likely children will maintain a healthy weight in later childhood and as adults. When parents do not recognise their baby's satiety or fullness cues, then increased feeding can occur either through increased frequency or increased amount of food. Children's ability to determine when they are full can be lost. This increases the risk of being overweight or obese in later life.

A review (Schwartz et al, 2011) found that responsive feeding (where the caregiver responds to the child's cues for hunger) was one of the most important practices for encouraging healthy eating habits early in life and should be encouraged in parents to reduce risk of child obesity. On the other hand, non-responsive feeding can override the baby's internal hunger and satiety cues, causing the baby to lose the ability to respond to their own hunger signs (Black and Aboud, 2011).



## when to introduce solid foods

### **At around 6 months, a baby will be ready to try solid foods**

Babies should be exclusively breast fed until around six months of age (Ministry of Health, 2008).

This recommendation takes into account the Global Strategy for Infant and Young Child Feeding (WHO, 2003). This strategy states that infants should be exclusively breastfed until six months of age at which time suitable solid foods can be introduced, with breastfeeding continuing until the child reaches at least two years of age or beyond (Ministry of Health, 2008).

## **From six months of age it becomes increasingly difficult for children to receive their full nutrient requirements from breast milk alone.**

Stores of iron and zinc are likely to be depleted by six months, so iron and zinc must be supplied by solid food. However, before solid foods are introduced the infant must be physically and physiologically able to cope with such foods.

Once an infant is about five to six months of age, their teeth begin to erupt and feeding behaviour changes from sucking to biting and chewing. Until an infant is four to six months of age they may not have the sufficient co-ordination of their swallowing reflexes to deal with foods (Ministry of Health, 2008).

Several developmental stages and skills of the infant signal they are ready for solid foods. The timing of these developmental stages and skills vary from infant to infant. The ideal is to wait until the infant is around six months of age.

## **A baby is ready to start solids when they:**



**Can hold their head up and sit with less help.**



**Show an interest in food.**



**Make chewing movements with their mouth.**



**Open their mouth when the spoon touches their lip or gets near their mouth.**



**Can keep food in their mouth and swallow, instead of spitting out.**

Breast milk or infant formula remains the most important food for the first year of a baby's life.

Solid foods must not be given in amounts that will dramatically reduce milk intake. Babies up until eight to nine months of age should receive milk before being offered other foods. From eight to nine months of age, foods can be offered before the milk feed.

# The importance of iron

## Healthy full-term infants have adequate iron stores until about six months of age.

Iron is present in breast milk in a low concentration, but it is highly bio-available so is a good source of iron for babies. About 50% of the iron in breast milk is absorbed by infants, compared with 10% from cows' milk-based infant formula. The gradual depletion of iron stores from birth and increased demands of growth mean that after six months of age infants are dependent on iron supplied from foods, even with continued breastfeeding (Faldella et al, 2003; Male et al, 2001).

Feeding an infant can play a major role in preventing iron deficiency. The iron in breast milk is highly bio-available. Therefore, infants should be fed exclusively on breast milk to around six months of age, then be introduced to solid foods containing iron at around six months. Iron-fortified infant cereals and meat or chicken purées are good sources of iron.

# what to feed a baby

## **First solid foods should be thin, smooth purées diluted with expressed breast milk or infant formula.**

This will help ensure the food is moist and at the right consistency for the baby to easily swallow. As a guide, these first solid foods should be introduced in small amounts starting with half to two teaspoons after breast or formula feeding. Examples of suitable first solid foods are provided in the parent guide.

Solid foods do not need to be bland in order for babies to enjoy them. Research suggests infants will like the flavours they were exposed to in the womb and in breast milk via the mothers diet (for example curry and other flavours). However, fat, salt, sugar, honey and other sweeteners should not be added to babies' foods. These supply minimal nutrient benefit and infants can get accustomed to these tastes.

A variety of foods and flavours can be gradually introduced as the infant gets used to solid foods. New foods should be introduced one at a time, allowing two to four days between each new food to establish the infant does not have an allergy to that food.



the  
**feeding**  
environment

**It is best to sit an infant in a high chair or similar when eating, and away from distractions such as the television or toys.**

Caregivers must always supervise an infant or toddler when they are eating, and be familiar with first aid for dealing with choking (Ministry of Health, 2008).

Family meals have an important impact on a child's dietary intake, psychological health and learning. Family meals can provide an opportunity to communicate, learn, transmit cultural and ethnic heritage, and develop family rituals. They are also an opportunity for positive role modelling by caregivers and other family members. Traditions and routines are important to young children because they help to provide a sense of security (Story and Neumark-Sztainer, 2005).



## how much food to give a baby

### **Babies have an inbuilt satiety (fullness) mechanism so they are very good at knowing if they need more or have had enough.**

Some babies will eat more than others – every baby is different. Although intake at individual meals can vary a lot, a baby's overall 24-hour energy (food) intake is relatively well regulated by the baby (Birch and Fisher, 1998).

Babies and infants have inbuilt mechanisms that allow them to detect their energy requirements and feed until those are met. However, these innate hunger and satiety mechanisms can be over-ridden by social and emotional cues or behaviours from adults. Research suggests most mothers encourage their child to continue to eat even when showing signs of fullness, and most are more concerned their child is underweight rather than overweight (Daniels et al, 2009).

Parents' practices when introducing foods determines the type and quantity of foods children are exposed to. This influences children's eating behaviours and lays the foundation for their eating patterns as adults. The extent of parental control over early feeding has been associated with child eating behaviour and weight status. There is increasing evidence that coercive feeding practices that fail to respond appropriately to infant hunger and satiety cues are associated with increased risk of overweight and obesity in children (Daniels et al, 2009).

### Signs a baby has had enough to eat:



**Turns their head away.**



**Refuses food by pushing away the food.**



**Spits out food.**



**Crying or general unhappiness.**



**Closes their mouth.**

## tips for whānau

- 1 Offer milk before solids.** Breast milk or infant formula is still the most important food for babies. After the infant is 8 to 9 months of age, solid foods can be offered before the milk feed.
- 2 Thin, smooth purées can be prepared at home using a food processor, mouli or sieve.** Many foods, such as peeled banana or cooked apple, can be made into a purée by pushing them through a sieve with a wooden spoon.
- 3 Start by offering a small amount.** Try half a teaspoon to 2 teaspoons. Slowly increase the amount offered.
- 4 Start by offering solids once a day.**
- 5 Start with one food and then slowly introduce new foods.** Try a new food every 2 to 4 days to help establish that the baby does not have an allergy to that food.

6

**Let the baby develop their own tastes.**

Babies like some foods or tastes more than others.

7

**If baby refuses a food, try mixing it with a food they like or wait a few days and try again.**

The introduction of solid foods involves the infant learning about and enjoying different tastes and textures. Gradually introducing new foods can help to overcome an infant's potential aversion to new foods. Aversion to new foods is a common reaction in most infants. Research has shown a new food may need to be offered up to 15 times before it is accepted.

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**As a baby becomes more active, offer food more often.**

# Where to get more information

## **Infant feeding website for parents and caregivers –**

Health Promotion Agency: [www.infantfeeding.nz](http://www.infantfeeding.nz)

This website has been created to complement the information in this resource and contains baby food recipes, tips and articles for parents.

## **Starting solids – HealthEd**

<https://www.healthed.govt.nz/resource/starting-solids>

## **Eating for healthy babies and toddlers – HealthEd**

<https://www.healthed.govt.nz/he-code/HE1521>

## **Food and nutrition guidelines for healthy infants and toddlers (aged 0–2) – Ministry of Health**

[www.health.govt.nz/our-work/preventative-health-wellness/nutrition/food-and-nutrition-guidelines](http://www.health.govt.nz/our-work/preventative-health-wellness/nutrition/food-and-nutrition-guidelines)

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