



# Behind the hype: ***Starting solids***

## Why is this an issue?

Introducing solids is an important milestone in the life of a child. It impacts on growth, development, and health. Eating habits and preferences are established early. 'Fashionable' or conflicting advice may make it difficult to discern what is recommended about when, what and how to start solids. It is vital to match the timing, how foods are introduced, and the types of first foods to infants' growth and development stage and nutrient needs.

## What is the recommended age?

At around six months of age, an infant's energy and nutrient needs are no longer met by breast milk (or manufactured infant formula) alone. Solid foods need to be introduced to meet extra nutritional requirements, especially iron, as a baby's iron stores run low by this age. Before six months of age, a baby's digestive system, kidneys, immune system, and chew and swallow ability, are immature. After this age, delayed introduction of solids may slow growth<sup>1</sup>. An infant is ready to start solids if they:

- are around six months of age
- can hold their head up and sit with less help
- open their mouth as food approaches
- can keep food in their mouth and then swallow it, instead of pushing the food out
- show signs of biting and chewing.

Breast milk (or manufactured infant formula) should continue to be the primary nutrient source for infants up until 12 months of age.

## How to start

Offer solids when the infant is most relaxed and happy. The infant can be held, or in an infant highchair, but must be sitting upright to eat.

Start solids in small amounts after the milk feed. Begin offering one to two teaspoons once a day. Build up the quantity, and then move to two, then three meals a day, and one or two snacks. Be guided by the infant's appetite.

It is important to move quickly from the soft purée stage to thicker purée, followed by mashed, finely chopped, and lumpier textures, so that the infant develops biting and chewing skills, and can eat the family diet (with texture modification for foods that pose a choking hazard) by 12 months of age. Research shows that children introduced to lumpier food before

## In a nutshell

- Solids should be introduced at around six months of age.
- Start soft (purée) but move quickly through to lumpier textures, and then family foods by 12 months.
- Offer vegetables and fruits every day, along with iron-rich foods.
- Gradually increase the variety, flavours, and quantity of first foods, including less-sweet vegetables.
- Continue with breastfeeding, or manufactured infant formula, as solids are introduced.
- Avoid offering foods and drinks high in salt and sugar eg, sweets/lollies, chocolate or iced biscuits, hot chips, potato crisps, tea and coffee, cordials, juice, and soft drinks.

nine months, compared to after nine months, eat a greater variety of food, and have fewer feeding problems<sup>2,3</sup>. At around eight to nine months of age, change to offering solids before milk feeds.

## Types of first foods

Vegetables, fruits, and iron-rich foods should be offered to infants every day from six months of age. Appropriate first foods and iron-rich foods are listed in Table 1<sup>4</sup>. Iron needs are high in the first 6-12 months of life to support brain development and growth. The body more readily absorbs iron from animal sources (meat, chicken, and fish). However, vitamin C in vegetables and fruits improves the absorption of plant-based iron sources, and these foods are also good for general health.

Growing babies need a variety of foods every day to provide all the essential nutrients and develop a broad acceptance of different tastes (Table 1). Infants have an innate preference for sweet foods, so it is crucial to introduce a wide range of flavours, including vegetables that are less sweet (eg, silver beet, broccoli, spinach, cauliflower) so that they learn to like other tastes. When trying new foods, infants may make a disgusted or surprised face, but this does not necessarily mean they dislike the food. Foods may need to be offered multiple times before a child accepts them.

Avoid adding salt, sugar, honey, soy sauce, butter, or margarine to any infant food. Inappropriate foods for infants also include cordial or juice, chippies, hot chips, sweets/lollies and biscuits, as they contain excessive amounts of sugar, salt or saturated fat.

**Table 1: Types of first foods and iron-rich foods**

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### Appropriate first foods

- Cooked fruit without skins, pips or seeds, eg, apple, pear, and mango.
- Cooked vegetables without skins, eg, kūmara, pumpkin, potato, cassava, and squash.
- Steamed and puréed less sweet-tasting vegetables eg, broccoli, cauliflower, spinach, pūha, watercress, taro leaves, bok choy (pak choi), kai-lan, and choy sum.
- Mashed avocado, banana or papaya.
- Cooked and puréed meats or mashed tofu, cooked peas, beans or lentils.
- Cooked oats or congee.
- Manufactured infant food that is recommended for the age of the infant.

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### Iron-rich foods

- Cooked and puréed or minced meat (especially red meat like beef).
- Small amounts of cooked liver.
- Cooked and puréed chicken.
- Cooked and puréed fish or seafood.
- Cooked and mashed tofu, beans, and lentils (served with vitamin C rich vegetables or fruit).
- Iron-fortified infant cereal.

## Baby-led weaning

Baby-led weaning is a way of introducing infants to solid foods by providing foods as soft finger foods rather than purées. Instead of being fed by someone else with a spoon, infants feed themselves by choosing and

picking up foods from what is offered. The timing of introduction is similar, around six months, when infants can sit unassisted and bring food to their mouth. More research is needed before baby-led weaning can be recommended for all infants<sup>5</sup>.

## Manufactured baby foods

Manufactured foods are developed to meet the needs of specific ages, therefore, it is important to check that the age specified on the packaging is appropriate for the infant's age. Around 52% of manufactured infant foods in supermarkets are in squeeze pouches<sup>6</sup>. While this makes food very convenient, food in pouches is not suitable for regular use, and infants should not suck directly from the pouch because this does not allow them to see, smell or touch the food. If using a pouch, empty it into a bowl and spoon feed. Food in pouches may be sweeter<sup>7</sup>. It has been suggested that foods in pouches may adversely affect teeth<sup>8</sup>, lack texture needed to promote chewing<sup>6</sup>, and are easy to overeat<sup>7</sup>, although no research has directly looked at these questions as yet.

More information on feeding infants and toddlers can be found in the fact sheet *Behind the Hype: Supporting young children to eat well*.

## References

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