



Feeding in the first year

HOW MUCH MILK TO FEED?

Age (corrected if premature)	No. of feeds per day	Total volume (ml/kg/day)
Term – 1 month	8 or more	150 – 180
2 – 3 months	7 – 8	130 – 160
4 – 6 months	6 – 8	120 – 150

It is important to practise **responsive feeding**, i.e. respond according to your baby's hunger and fullness cues. Breastfeeding on-demand may happen more frequently. If bottle-feeding, the table above shows an estimated volume based on your baby's body weight.



As baby grows older, start having a regular feeding schedule to allow your baby to be hungry at mealtimes.



No additional water is needed when your baby is on milk only.

After starting solids, start to offer small sips of water during mealtimes through a cup, straw cup or spoon. Limit to 60-120ml per day, not exceeding 1 cup (240ml) per day.



Do not offer fruit juices or other sweetened beverages before 1 year old.



RESPONSIVE FEEDING

Learn and respond to signs that your baby is hungry or full when breastfeeding or bottle feeding.

Hunger

- Sucking motions or noises
- Rooting (turns head, opens mouth to anything that touches face)
- Bends arms and legs
- Moves hands towards mouth or puts things into mouth

Fullness

- Starts, then stops feeding often
- Slows down feeding
- Spits out nipple or teat or unlatches often while breastfeeding
- Closes mouth or turns head away when offered
- Fidgets or gets distracted easily

From 6 months: Starting solids

Most babies can start solid foods between 4 and 6 months of age, provided developmental milestones are met. Most nutrition will still be coming from milk at this stage.

Your baby may be ready for solid foods when s/he...



Has good head and neck control

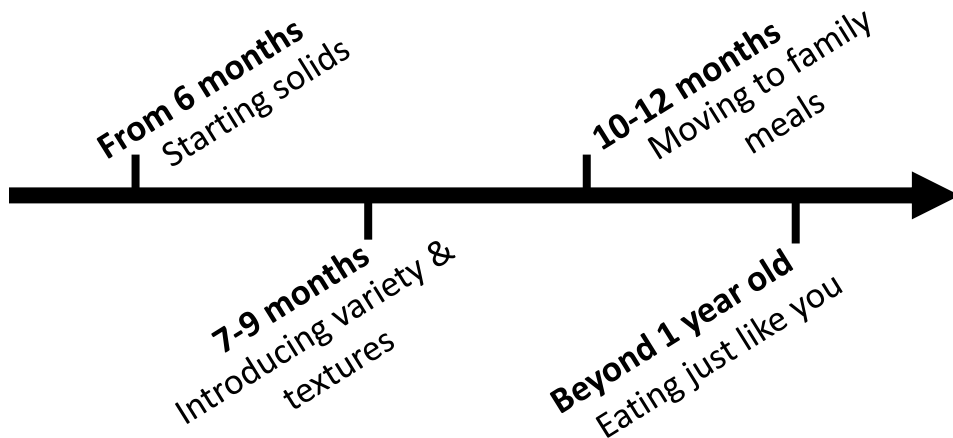
Sits well with minimal support

Shows interest in food, watches you eat, tries to reach out to grab your food



Typically, your baby should have doubled his/her birth weight by now.

AGES & STAGES OF FEEDING PROGRESSION



Baby-led approach

Ways to start solids

Caregiver-directed approach

Baby ...

- Has the independence to eat
- Has similar foods as everyone else
- Self-feeds with opportunities to reach and touch the food
- Is introduced to a range of textures; progress is gradual and self-directed
- Pace of the meal directed by the baby
- Mealtimes may be messy with food wastage

Baby...

- Is often fed by caregivers
- Has foods that look different (even though may have same ingredients)
- May have limited opportunities to reach and touch food
- Is introduced new textures in stages; progress is directed by caregivers
- Pace of the meal is directed by the feeder/caregivers
- Mealtime mess may be controlled with less food wastage

**There is no one right way to start solids for your child.
You may choose either approach or a mixture of both.
Each child and family is different.
You get to decide what suits your child and your family!**



Watch the following SingHealth videos for more information:

Part 1: Weaning

<http://www.youtube.com/watch?v=Zu-0WnjRzA8>

Part 2: Expand eating skills

<http://www.youtube.com/watch?v=E4LKX3VV8jQ>

Part 1



Part 2



RESPONSIVE FEEDING

Learn and respond to your baby's feeding cues during meals.

Hunger

- Leans towards food, opens mouth
- Gets excited when seeing food
- Focuses, follows food with eyes

Fullness

- Turns head away from food
- Closes mouth when offered food
- Spits or pushes food out
- Loses interest with food
- Fidgets, gets distracted easily

Responsive feeding



Find out more about responsive feeding, by the American Academy of Pediatrics

<https://www.youtube.com/watch?v=o6dO3W-SJK0>



POSITIVE MEALTIME EXPERIENCE

Enjoying the mealtime experience with your baby is just as important as the type of foods given.

- Start with a **mealtime routine**.
- Be **safe and supported with seating**
- Keep your baby focused and interact with your baby; **avoid distractions** like screen time and toys.
- Role-modeling – **eat together** with your baby where possible.
- Meal duration lasts as long as your baby can keep her attention, or up to 30 min.

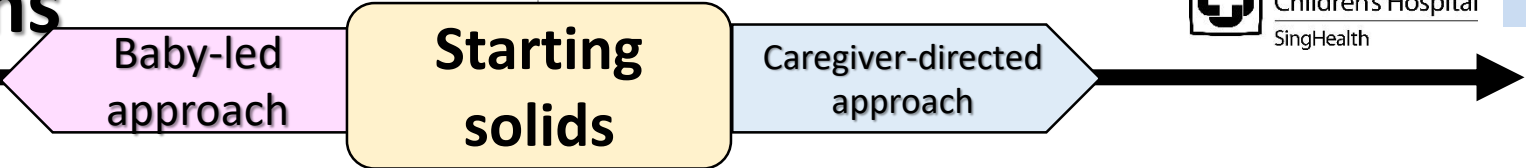
Sharing the responsibilities of the meal with your baby can also ensure that meals are a positive experience for you and your baby:

Adult's responsibility at the meal:

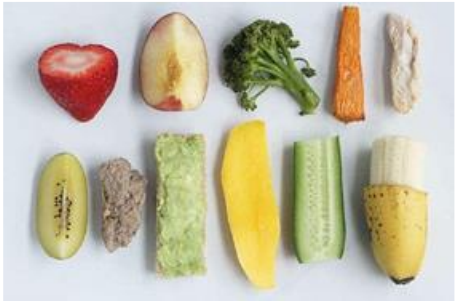
Determine **what, where and when** to offer the meal.

Baby's responsibility at the meal:

Determine **what to eat** and **how much** to eat.



What baby will likely do (skills expected)	Starts to reach and grasp food using whole hand i.e. palmar grip Unable to open fist to get at what is inside it, but will gum or gnaw at anything poking out of the top Will get food to mouth with increasing accuracy
What foods to offer	Large finger-shaped pieces (≈ 5cm long, 1-2cm wide) or wedges of food. The size should be big enough so that it is difficult for baby to put the entire piece into her mouth. Avoid sticky, slippery foods that would be hard to hold; and hard, crunchy foods which have increased risk of choking. Other than meats, the foods should generally be soft enough to squish between your fingers Purees by a pre-loaded spoon Always supervise your baby when allowing self-feeding.
Frequency	Start with 1 meal a day , but if you and your baby enjoy the feeding experience, you can offer up to twice a day. Need to “top up” with milk or puree when signs of hunger (as practice at this stage and unlikely to consume enough).



What baby will likely do (skills expected)	Begins up-down munching movement Reach towards and/or opens mouth for the spoon Closes the lip around the spoon Moves food to the back of the tongue Digestive system matures
What foods to offer	Food textures: Runny smooth puree (slips off spoon) → thick puree (stays on spoon) → lumpy mashed Rice & grains: rice/ baby oat cereal, sweet potatoes, potatoes, pumpkin, rice porridge Meat & others: steamed eggs, blended meat or fish or beans, mashed tofu Vegetables: carrots, broccoli, spinach, etc. Fruits: avocado, apple, pear, banana, etc.
Frequency	Start with 1 meal a day , but if you and your baby enjoy the feeding experience, you can offer up to twice a day. Continue with same milk feeds as your baby is still learning to eat. Replace a milk feed when able to finish a small bowl of food (120ml).

Regardless of how you do it,
Enjoy the mealtime experience with your baby.
Learn & respond to your baby’s feeding cues



7-9 months

Baby-led approach

Introducing variety & textures

Caregiver-directed approach

What baby will likely do (skills expected)	Able to open and close fist and hold on to slippery or soft foods more easily Use one hand to guide the other to get food to mouth May push or squeeze soft food into mouth Able to bite and chew more effectively Start using fingers to pick food up, rather than whole hand May enjoy trying to spear small chunks of food with a fork Becoming more skilled at using a utensil
What foods to offer	Meltables (hard but melts/ mashes easily in the mouth), e.g. baby biscuits or baby puffs Soft food in clumps , e.g. well-cooked scrambled eggs or omelette strips, flaked fish, soft tofu cubes, minced meat patties, rice balls, noodles Slippery foods and smaller soft foods , e.g. overcooked pasta shapes (penne or fusilli), cheese cubes Crunchy foods , e.g. raw apple slices, toasted breadsticks Always supervise your baby when allowing self-feeding.
Frequency	At least 2 meals per day, increasing to 3 times per day if you and your baby are happy with this. Continue with 4-6 milk feeds.

What baby will likely do (skills expected)	Uses the tongue to move food from side to side in the mouth Begins to close lips around rim of the cup Begins to chew in rotary pattern Sits alone easily Transfers objects from hand to mouth Swallows with mouth closed
What foods to offer	Food textures: Mashed → minced and finely chopped Rice & grains: lumpy rice porridge, millet, soft noodles, baby pasta, bread Meat & others: Minced meat or chicken, flaked fish, scrambled eggs, tofu cubes Vegetables: variety of chopped veg Fruits: cubes of soft fruits, squished blueberries or halved grapes.
Frequency	At least 2 meals per day, increasing to 3 times per day if you and your baby are happy with it. Continue with 4-6 milk feeds.

Snacks can be a useful way to provide **additional nutrition**, as well as **opportunities for your baby to practice** her feeding skills. Suitable snacks include:



- Baby biscuits or rice crackers
- Baby biscotti or cookies
- Baby puffs
- Fresh or freeze-dried fruits
- Cheese cube
- Bread (white or wholemeal) or toast
- Baby yogurt, plain or with fresh fruits added
- Homemade roasted veg sticks (e.g. sweet potato, potato, zucchini)
- Homemade pancakes
- Well-cooked scrambled eggs

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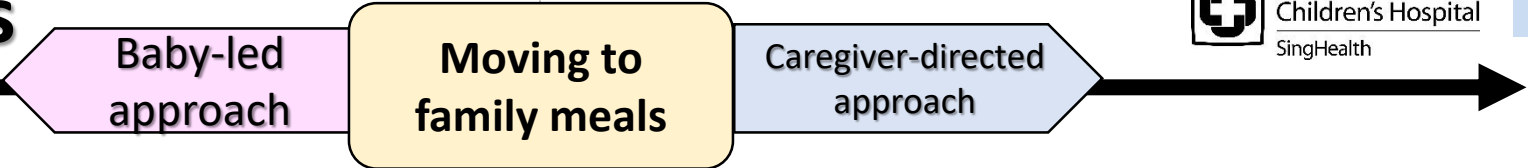


It is important to introduce a variety of foods to prevent fussy eating.
https://www.youtube.com/watch?v=W0YK1dNw_QQ


Food variety



10-12 months



What baby will likely do (skills expected)	Begins to use a refined pincer grip to pick up very small pieces of food between thumb and forefinger Starts to eat more purposefully , less experimenting Prefers to use fingers and keen to self-feed May be keen to practice with forks and spoons
What foods to offer	A variety of healthy food with mixed texture and flavours. It can be the same food the family eats, before any additional salt or seasonings are added.
Frequency	Aim for 3 meals per day , with 1-2 snacks between meal with 3-5 milk feeds. Avoid “topping up” with milk or purees, as your baby should progress towards foods that is close to family meals.

What baby will likely do (skills expected)	Picks up foods with a refined pincer grasp (thumb and forefinger) Picks up and drinks from a cup (expect spills) Start to want to self-feed (can help by putting food on the spoon, i.e. pre-loading) 
Types of food	Food textures: Minced and chopped, soft textures similar to family meals
	Rice & grains: soft rice, noodles, pasta
	Meat & others: Minced, chopped or shredded pieces meat, chicken, fish, omelette, tofu chunks
	Vegetables: variety of cut-up veg Fruits: variety of sliced fruits
Frequency	Aim for 3 main meals , with 1-2 snacks between meals with 3-5 milk feeds.

References:
Gill Rapley and Tracey Murkett. Baby-led Weaning. Vermillion 2019
Academy of Nutrition & Dietetics, Pediatric Nutrition Care Manual, 2012

Beyond 1 year old: Eating just like you!

- Your baby should be able to cope with most textures offered. She will transition from soft textured foods to an adult family meal (may still require **some help to cut up into smaller pieces**).
 - As your baby starts to develop food preferences, **offering family meals** (i.e. same food as the rest of the family) is one way to keep her interested.
- Your baby can be given foods with seasoning or added salt, although the **taste preferences today will prime for future habits**.
 - You may want to consider lowering your own salt intake by choosing wisely if you are going to start sharing your foods with your baby.
 - Eating together has a positive impact on your baby’s development.

Additional information



A NOTE ABOUT FOOD ALLERGY

The top 8 food allergens are **dairy, eggs, wheat, fish, seafood, soy, peanut, tree nuts**.

There is **NO evidence** to support avoiding these allergenic foods.

Instead, you could introduce foods containing the allergen between 4 and 6 months, paying attention to the following:

- Introduce one new food at a time and you can wait up to 3 days to observe for any reactions. Most allergy symptoms happen within 2 hours of consumption.
- Once the allergen is tolerated, you should continue to include regularly in your baby's diet.
- For eggs, make sure it is given in well-cooked form, e.g. hard boiled, not half-boiled or steamed.

Common Allergy symptoms

- Swelling of lips, eyes or face
- Rashes
- Vomiting
- Breathing difficulties



SOME CHANGES TO EXPECT

When your baby moves from an all-milk diet to a varied diet, the poop may change in the following ways:

Consistency: Become thicker and more formed.

Frequency: May be less often than usual. Consider still normal if not upset while pooing, and not having small, hard, pellet-like poop. Make sure she has enough milk and water intake.

Colour: Changes to be more brown, can be dark or light, may also change depending on food eaten. Some food may appear in the poop, especially high fibre fruits and vegetables.

Smell: May be a lot stronger in smell.

YOUR BABY'S EATING EXPERIENCE

- It may be normal to try a single food for **8-10 or more times** (up to 20 even), before your baby will learn to accept a new food. This is particularly for fruits and veg.
- Remember **to go back to an unaccepted food from time to time** for further exposure.
- It is **common for babies to make a face** when tasting new foods as she may be reacting to the novelty of both the new taste and the experience. The facial expression does not mean she does not like the food.