

Greig Guide: Nutrition for babies and toddlers

	4 to 6 months	6 to 9 months	9 to 12 months	12 to 18 months	18 months and up
Milk Products	breast milk or formula	breast milk or formula try a cup	breast milk or formula, pasteurized soft cheese, yogurt, grated hard cheese, cottage cheese	homo milk pasteurized soft cheese, yogurt, grated hard cheese	Homo or 2% milk <i>1% or skim at 2 years</i>
Cereal	infant cereals	infant cereals	infant cereals Rice Krispies, Cheerios	infant cereals adult cereals with no added sugar	regular cereals avoid sugary cereals
Vegetables	green beans♣, peas, carrots♣, sweet potato, squash♣, yellow beans, avocado homemade baby food♥ or baby food jars <u>avoid beets, spinach, parsnips, turnips</u>	green beans♣, peas, carrots♣, sweet potato, squash, yellow beans, avocado homemade baby food♥ or baby food jars	green beans, peas, carrots♣, sweet potato, squash♣, yellow beans, avocado, broccoli, cauliflower, potatoes, parsnips♣, spinach♣, beets♣, turnips♣, tomatoes cook until soft, mash well	All vegetables, dice finely or cook well to reduce risk of choking	all vegetables
Fruits	apples, apricots, pears, peaches, pineapple, bananas, plums/prunes	apples, apricots, pears, peaches, pineapple, bananas, plums/prunes	apples, apricots, pears, peaches, pineapple, bananas, plums/prunes, berries	all fruits cut berries and grapes to reduce risk of choking	all fruits
Breads and Grains	x	rusks, dry toast, crackers	rusks, dry toast, crackers, rice	rusks, dry toast, pasta crackers, rice, rice cakes	all, avoid excess sugar
Meats Eggs Other Proteins	well-cooked, puréed chicken, turkey, beef and lamb	Well-cooked puréed chicken, turkey, beef and lamb <i>fish***</i>	finely diced, well-cooked chicken, turkey, beef and lamb <i>fish***</i>	diced, well-cooked chicken, turkey, beef and lamb <i>fish***</i>	all avoid prepared and highly salted foods
	egg (cooked well)	egg (cooked well)	egg (cooked well)	egg (cooked well)	egg (cooked well)
	tofu	tofu, mashed rinsed kidney beans, lentils.	mashed rinsed kidney beans, lentils. tofu, tahini, almond paste**	beans, lentils. tofu, tahini, almond paste, peanut butter☼	all
Fruit Juice	x	x	x	avoid or limit	avoid or limit

Start iron-rich foods first at 4 to 6 months – fortified infant cereals, tofu, eggs, meat

♥ for details on homemade baby food – see next page

♣ some vegetables are high in nitrates and should be avoided before 3 months and excessive amounts should be avoided before 6 months

* for babies with eczema or food allergies in the family, there is some evidence to support early introduction of allergenic foods such as eggs, peanut butter, tofu, cow's milk, wheat, fish and shellfish between 4 and 6 months; discuss with your doctor how to safely introduce these foods

** spread pastes and nut butters thinly on toast or mix with vegetables, start with a very small amount

*** fish may be given if carefully checked for small bones, avoid albacore tuna and large predatory fish

- ◆ no honey until 12 months, it may contain botulism spores
- ◆ do not add salt or sugar to baby's food
- ◆ speak to your doctor about special modifications that should be made if baby is on a special diet eg. vegetarian, vegan, lactose free

This is a guide to assist in the introduction of solid foods. For simplicity, not all possible foods are included on this list.

Breast Milk or Formula

Exclusive breastfeeding is recommended for infants in the first 6 months of life, according to a joint statement from Health Canada, Canadian Paediatric Society, Dietitians of Canada, and Breastfeeding Committee for Canada, and the Public Health Agency of Canada. The WHO and AAP recommend exclusive breastfeeding followed by introduction of complementary foods at around 6 months. However, the appropriate time to introduce complementary foods should be at the parent or clinician's judgement led by signs of infant's readiness, which may be few weeks before or after 6 months of age. While breast milk is preferred, infant formula may also be given in replacement of breastmilk. Cow milk-based formula is preferred over specialty soy or modified (hydrolysed) formulas. Soy-based formula is recommended only for infants with galactosemia or those who cannot consume dairy-based products. Breastfed babies should receive a daily vitamin D supplementation of 400 IU (10ug).

Formula preparation: Proper preparation and storage of infant formula is very important in preventing food-borne illnesses in young infants. Health Canada recommends sterilization of all infant formula and feeding equipment. Liquid formula is heat-treated to be sterile, and ready-to-feed formula is the safest choice, especially for high-risk infants with immunocompromised state or low birth weight. Follow the manufacturer's directions for preparation instructions and storage. Powdered formula is not sterile but implementing proper preparation can minimize the risk of contamination. If feeding immediately, it is safe to mix powdered formula with previously boiled water. When preparing powdered formula for storage, powder should be mixed with previously boiled and still hot water (> 70 °C). Once mixed the formula can be stored in the refrigerator for up to 24 hours. <https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/infant-feeding/nutrition-healthy-term-infants-recommendations-birth-six-months.html#a5.4>

First Foods

- As a baby's first food, single-ingredient foods should be introduced first, one at a time, every 3 to 4 days, to determine if a child develops an allergic reaction. *[Uptodate]*.
- First foods should be an iron rich food starting at 4 to 6 months. Iron is critical in adequate infant growth and brain development. Foods rich in iron include meats, eggs, tofu, and legumes. Single-grained, iron-fortified infant cereal (i.e. rice cereal) is can also be a good place to start.
- All utensils should be clean and dry. Infant cereals can be mixed with breast milk, formula or water. Cereal preparations that have premixed formula should be mixed with water only.
- The very first foods should have a thinner somewhat runny consistency. Breast milk, formula or water can be used to thin foods. Start with spoon-feeding in small amounts at the end of or between breast or bottle feeding. Then gradually,

the amount can be increased according to your baby's appetite. As baby gets better at swallowing, less liquid can be added.

- Do not give cereals with fruit, vegetables or other flavourings until baby has had these ingredients separately at the appropriate age.
- It's okay if your baby doesn't eat as much on some days! A baby's appetite may vary from day to day. Throw out any food left in your baby's dish. Don't keep it for the next meal as it may contain germs.
- Sterilizing of bottles etc is not necessary after 4 months. Do ensure dishes and utensils are clean and dry before use.

Introducing New Foods

- **Vegetables and fruits** are introduced next after iron rich foods. Usually babies start vegetables first and then fruits but you can start with either.
- It is important to watch for reactions to new foods. Choose a meal early in the day so you can see if the food causes cramps or rashes. Introduce only one new food at a time. Wait at least three to four days, or longer, before introducing another food. Signs and symptoms of an allergic reaction you can watch out for include hives, other skin rash, facial swelling, vomiting, diarrhea, coughing, wheezing, difficulty breathing, weakness, or pale skin.
- The chunkiness of the food should be increased as baby grows and is able to tolerate more texture. As first foods, start with finely pureed single-ingredient foods, including fruits, vegetables, or meats. For instance, give applesauce rather than a mix of apples and pears *[Uptodate, Kidshealth]*. At about 9 months of age, more lumpy, coarser textures can be given *[Kidshealth, joint recommendation]*. Meats should be cooked until tender and be given mashed or minced finely.
- **Finger Foods** Safe finger foods, for babies over 9 months, include bread crusts, dry toast, pieces of soft cooked vegetables and fruits, soft ripe fruit such as banana, finely minced, ground or mashed cooked meat and poultry, and small cheese cubes.
- Do not add **salt, seasoning or sweeteners** to baby's food or drinks.

Homemade Baby Foods♥

- Baby foods can be easily prepared at home. A blender, a food grinder or a mixer is the only extra equipment you will need. Don't forget to always wash your hands before handling food and work with clean dry utensils and equipment.
- **Vegetables and fruits:** Use fresh or frozen vegetables and fruit. Wash fresh produce well under cold, running water, with a scrub brush. Avoid canned foods, which are often high in salt and sugar. Steam or boil vegetables in small amounts

of water until soft. Steaming, baking or broiling retains the most nutrients. Blend or process with a small amount of the cooking water.

- **Nitrates**♦: Don't offer home-prepared carrots, spinach, cabbage, beets, green beans, and squash to babies under 4 months because these may contain high levels of nitrates♦, which can cause anemia. *[Uptodate, Kidshealth]* To minimize nitrates in food boil vegetables in water, discard water in which they are initially boiled. Use fresh boiled water to blend and refrigerate as soon as done. Some vegetables such as carrots, squash, green beans, beets, spinach, parsnips and turnips can be high in nitrates. Well-water may contain high levels, >10 ppm. Water can be tested to make sure it is safe.
- For **Fruits**, remove any peel, core or seeds. Stew the fruit just until soft. Blend or process adding a small amount of boiled water if necessary. Foods should not be over processed; babies benefit from some texture in their foods.
- **Meat**: Use lean **meat** and cook thoroughly. Meat may be stewed, boiled, braised, roasted or broiled - not fried. Do not add salt or seasoning to the meat until baby's portion has been removed. Do not use prepared meats until age two or older..
- **Meat alternatives** may also be prepared for baby. Healthy options include black beans, chickpeas, kidney beans, lentils, split peas, eggs, and tofu. Dried peas, beans and lentils are soaked, cooked and blended. Eggs should be thoroughly cooked and mashed. Cottage cheese is mashed. Tofu may be cooked, mashed and added to other foods.
- **Nuts**: Babies over 4 months *[Canada.ca]* may be given small amounts of peanut butter, almond paste and tahini. Mix thoroughly in liquidy foods. For older infants, spread these pastes and nut butters very thinly on toast or to avoid the risk of choking. It is important to try very small amounts of these foods initially to ensure baby is not allergic to them. Talk to your doctor before introducing.
- Serve in a dish, not from the storage jar in order to avoid accumulation of germs in the stored food. Refrigerate freshly cooked food within 2 hours.
- Don't be afraid to try foods that you don't normally eat. Baby's tastes may be quite different from your own.

Food storage

- Small amounts can be placed in an airtight container and stored in the refrigerator. Fruits and vegetables can be stored in the refrigerator for up to 2 days, and 1 day for meats. Larger quantities of foods should be stored in the freezer. They can be divided up in ice cube trays and frozen for up to one month in airtight plastic freezer bags and used as needed.

- Defrost frozen foods in the fridge the evening before, then heat foods in the microwave or in a double boiler. Foods should not be thawed at room temperature as thorough heating is required. Make sure all thawed foods are used within 48 hours, and 24 hours for meats, fish, or egg. Stir thoroughly and test the food temperature before serving. Always throw away any leftover reheated food.

Fruit Juices and other fluids

Babies and children do not need fruit juices. Preferred beverages are milk and water. Fruit juices lack the fibre and vitamin C of whole fruits, and reduce the appetite for more nutritious foods. Too much fruit juice can lead to dental caries, excessive weight gain, diaper rash, and diarrhea *[Healthychildren, Medline/KidsHealth]*. Avoid fruit juices until 12 months *[Uptodate, HealthyChildren/AAP]*. After 12 months, if juice must be given, use only 100% fruit juice and limit to 4 oz. (120mL) per day. Sweetened beverages (pop, fruit juices, sports drinks, etc.) have a high sugar content and should be avoided altogether. Unsweetened homogenized (3.25% M.F.) milk is recommended over sweetened milk, such as chocolate milk, or flavoured soy-based beverages, such as chocolate and vanilla *[joint statement]*. Caffeine-containing beverages such as coffee, tea, some carbonated drinks, hot chocolate, etc., should not be given to children as they can interfere with appropriate growth.

How Much Milk? Soy and other 'milks'

At 6 months, baby should receive breast milk or formula 4 to 5 times a day. Usually baby will drink 5 to 8 oz. each feeding. By 9 or 10 months 3 to 4 feedings per day are often enough in addition to solids. Cow milk can be introduced around 12 months of age, and pasteurized, homogenized (3.25% M.F.) milk is appropriate. Skimmed, partly-skimmed, or 1% or 2% milk is not recommended for children younger than 2 years. Limit cow milk to 25 oz. (750 mL) per day. For infants who cannot take dairy-based products, soy formula should be used and should be continued until age 2 years. Other soy beverages and rice milks do not contain the right balance of nutrients.

How Much Should Baby Eat?

Each baby is different and baby's appetite may vary from meal to meal and day to day. Babies tend to eat more during periods of rapid growth and less at other times. If baby dislikes a particular food, try it again after a few weeks. As a general principle, we recommend that by 8 months of age, the baby eats

approximately ½ cup (four oz.) of vegetables and ½ cup of fruit per day. Some babies do not eat enough because they regularly drink too much milk or juice. An amount greater than 25 oz. of milk and/or juice per day may be a problem as the baby will be too full for other, more nutrient-dense foods. Try encouraging baby to drink water between meals and having beverages at the end of the meal. From 12 to 24 month of age, aim to offer the amounts and types of foods recommended for 2 to 3-year-old children in Canada's Food Guide.

Meal planning

[This is a general guide only.]

	6 to 7 months	8 to 9 months	10 to 11 months	12 months and older
Pre Breakfast	milk*	milk*		
Breakfast	cereal fruit milk* at the end of meal	cereal fruit milk* at the end of meal	Cereal fruit milk* at the end of meal	cereal fruit milk at the end of meal
Lunch	vegetable fruit milk* at end of meal	vegetable fruit	Vegetable fruit cheese/yogurt	vegetable fruit cheese/yogurt meat or protein
Snack	milk*	milk*	milk*	milk bread or grain
Supper		vegetables cereal, bread or grain meat or protein milk*at end of meal	Vegetables cereal, bread or grain meat or protein milk *at end of meal	vegetables cereal, bread or grain meat or protein milk at end of meal
Evening	milk*	milk*	milk*	(milk)

*milk should be breast milk or formula; (homogenized (3%) milk may be started at 12 months if desired)

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RESOURCES

<https://www.dietitians.ca/Dietitians-Views/Prenatal-and-Infant/Infant-Feeding.aspx>

<https://www.uptodate.com/contents/starting-solid-foods-during-infancy-beyond-the-basics>

<https://medlineplus.gov/infantandnewbornnutrition.html>

<https://patient.info/doctor/infant-feeding>

<https://www.nutrition.gov/subject/life-stages/infants>

https://www.caringforkids.cps.ca/handouts/feeding_your_baby_in_the_first_year

https://www.foodsafety.gov/blog/homemade_babyfood.html

<https://www.webmd.com/parenting/baby/features/making-baby-food#1>

<https://www.ag.ndsu.edu/publications/food-nutrition/safe-food-for-babies-and-children-making-homemade-baby-food-for-babies-6-months-and-older>

<https://homemade-baby-food-recipes.com/baby-food-storage-and-preparation-tips/>

<https://homemade-baby-food-recipes.com/is-it-dangerous-to-reheat-rice/>

https://ocfp.on.ca/docs/default-source/health-child-development-resources/2014_pediatric_nutrition_guidelines_for_health_professionals_english.pdf

<https://www.canada.ca/en/health-canada/services/infant-care/infant-nutrition.html>

Snacks

We recommend a regular schedule of 2-3 snacks per day, starting from about 9 months of age. Snacks should be healthy and nutrient-dense. Good options include applesauce, yogurt, diced fruit, ripe bananas, avocados, and cheese cubes [NDSU]. Limit or avoid snacks that have high sugar or salt content.