

An Integrative Approach to Feeding Your Baby: Starting Solids and Baby-Led Weaning (Baby-Led Solids)

This handout will give you information about 1) the benefits of breast-feeding and the best time to introduce solid food and 2) baby-led weaning.

Benefits of Breast-Feeding and the Best Time to Introduce Solid Food

Why should I delay feeding my baby solid food?

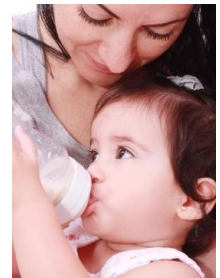
Health experts agree that it is best to wait until your baby is around six months old before offering solid food. The major reason for this recommendation is that breast milk—or formula—is the perfect food for babies. It contains all the nutrients they need. If babies eat other foods too early, they will miss out on vital nutrients. Most babies will become ready to eat solids by six to nine months of age. The following organizations recommend that all babies be breastfed or bottle fed only (no cereal, juice or any other foods) for the first six months of life (**not** the first four to six months):



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- **American Academy of Family Physicians**
<http://www.aafp.org/online/en/home/policy/policies/b/breastfeedingpolicy.html>
- **American Academy of Pediatrics (section on breastfeeding)**
<http://pediatrics.aappublications.org/content/100/6/1035.full>
- **Australian National Health and Medical Research Council**
<http://www.nhmrc.gov.au/guidelines/publications/n29-n30-n31-n32-n33-n34>
- **UNICEF** (http://www.unicef.org/nutrition/index_breastfeeding.html)
- **World Health Organization** (http://www.who.int/topics/infant_nutrition/en/)

Some reasons to delay solid foods are listed below. The evidence for some of the reasons assumes that your baby is breastfed or fed breast milk only. **Experts recommend that solids be delayed for babies that are fed formula also.**



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- **Delaying solids may give your baby greater protection from illness.**
Babies continue to receive many protections from breast milk for as long as they nurse. The *greatest* protection occurs while a baby is breastfed only (i.e., eats no solid food). Breast milk protects babies from disease in over 50 ways. Probably many more ways are still unknown. One study has shown that babies who were breastfed only for over four months had 40% fewer ear infections than breastfed babies who also ate other foods.¹ Children who receive breast milk only (no solid food) for at least 15 weeks are less likely to develop an illness in their lungs at any time during their childhood.¹ Many other studies have also linked breastfeeding only to increased health benefits.



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- **Delaying solids will give your baby's digestive system time to mature.**
A baby's digestive system develops as the baby grows. Babies' stomachs and intestines are not ready to digest food more complicated than breast milk or formula until they are almost six months old. If solids are started before a baby's system is ready to handle them, they are poorly digested. This may cause upset stomach, gas, and constipation. Stomach acid and enzymes needed to digest food do not reach adequate levels until at least six months of age.
- **Delaying solids may decrease the risk of food allergies for your baby.**
Experts do not agree on this. From birth until somewhere between four and six months of age, babies have an "open gut." This means that the spaces between the cells of the small intestines allow proteins, fats and carbohydrates to pass directly into the bloodstream. This is great for your breastfed baby. It allows helpful antibodies in breast milk to pass more directly into the baby's bloodstream. Antibodies (sIgA) from breast milk coat the baby's digestive tract. This can reduce the likelihood of illness and food allergies before the gut closes. Babies start making these antibodies on their own around six months of age. By this time, the spaces in the gut will usually close as well.

The "open gut" also means that large proteins from foods other than breast milk and formula, as well as organisms that cause diseases, can pass directly into your baby's bloodstream too. In this way your baby could be introduced to allergies and diseases at a young age. Some studies show that feeding small amounts of food at a very early age reduces the risk for a child to develop a food allergy.^{2,3} At this time, we do not have enough evidence to recommend one approach over the other--i.e., either early or delayed feeding of solids--to prevent food allergies.

- **Delaying solids helps to protect babies from iron-deficiency anemia.**
Anemia is a condition in which the body has too few red blood cells. (Red blood cells carry oxygen to all parts of the body.) Giving babies iron supplements or foods fortified with iron, especially during their first six months, reduces their ability to absorb the iron they need. Healthy, full-term infants who are breastfed only for six to nine months are able to maintain normal levels of iron in their blood. In one study, researchers found that babies who were breastfed only for seven months (and were not given iron supplements or iron-fortified cereals) had higher iron levels in their blood at one year than breastfed babies who received solid foods earlier than seven months.⁴ The researchers found *no* cases of anemia within the first year in babies who were breastfed only for seven months. They concluded that breastfeeding, without adding other foods, for seven months reduces the risk of anemia.
- **Delaying solids helps to protect babies from future obesity and diabetes.**
Introducing solids early appears to increase body fat and weight in childhood.^{1,5,6} Increased weight can lead to diabetes.
- **Delaying solids makes eating easier for your baby.**
Babies who start solids later can grab food and get it to their mouths, sit up well, and have more coordinated tongue movements.



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When should my baby start eating solid foods?

There comes a time when breast milk and formula no longer supply all your baby's nutritional needs. A full term baby will start requiring iron from other sources by six to nine months of age. The calories supplied by breast milk or formula may become inadequate by eight to nine months of age. A baby may grow well on breastfeeding alone. This is not a reason to delay feeding solids when the baby is obviously ready for them. Usually your baby will want to eat solids just as you do. Baby is growing up!

The best time to start solids is when your baby is showing interest in starting. Some babies will become very interested in the food on their parents' plates as early as four months of age. By five or six months of age, most babies will be reaching and trying to grab food that parents have on their plates. A reasonable time to start letting your baby eat is when the baby is starting to reach for food, grabs it, and tries to put it into her/his mouth. Go by the baby's cues.

A breastfed baby digests solid foods better and earlier than a baby who is fed formula. This is because breast milk contains enzymes that help digest fats, proteins, and starch. Also, breastfed babies have already tasted a wide variety of food, since the flavors of many foods the mother eats pass into her milk. Breastfed babies thus accept solids more readily than babies who have been on formula. Breastfeeding is amazing!

How should I introduce solids to my baby?

Following are some suggestions for introducing solids to your baby. (Also see page 8 for a summary that you can post in your kitchen.)

- It does not matter what foods you start with or the order you introduce foods. Avoid highly spiced or high fat foods at first. If your baby reaches for food on your plate, such as a potato, make sure it is not too hot, and then let your baby have the potato. There is no need to introduce foods in any specific order. There is also no need for your baby to eat only one food for a certain period of time.

NOTE: There is nothing magic or necessary about infant cereal. It has little nutritional value. Your baby is better off eating fruits, vegetables, and meats. Offer the foods that interest your baby.

- Allow your baby to enjoy food. Do not worry exactly how much your baby actually takes at first. Much of it may end up in baby's hair and on the floor anyhow. Why limit the amount to one teaspoon if your baby wants more?
- There is no need to puree foods if your baby is six months of age or older. You also do not need to waste your money on commercial baby foods. Simple mashing with a fork is all that is necessary at first. Mash the foods the rest of your family will eat prior to seasoning and offer those to your baby.
- Be relaxed. Feed the baby at your mealtimes. As your baby becomes better at eating solid foods, offer a greater variety of foods at any one time. Do not make mealtimes a battle. If your baby refuses, or shows signs of disinterest, do not push. Simply offer.



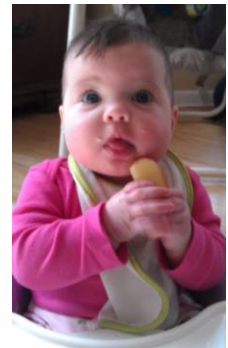
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- The easiest way to get extra iron for your baby five or six months of age is by offering meat or apricots. You can simmer dried apricots in water and then use a blender to make them easier to eat. Infant cereal has iron, but it is poorly absorbed and may cause the baby to be constipated.

If you wish your baby to be vegetarian, the following books offer some good guidelines:

- ***Raising Vegetarian Children: A Guide to Good Health and Family Harmony*** by Joanne Stepaniak and Vesanto Melina. Published by McGraw-Hill in 2002.
- ***New Vegetarian Baby*** by Sharon Yntema and Christine Beard. Published by McBooks Press in 1999.

- There is no need to introduce vegetables before fruit. Breast milk is far sweeter than fruit, so there is no reason to believe that your baby will eat vegetables better if you hold off on fruit.
- Respect your baby's likes and dislikes. There is no essential food. If your baby does not like a certain food, do not push it. If you think it is an important food, wait a few weeks and offer it again.
- At about eight months of age, babies start asserting their individuality. Your baby may not want you to put a spoon into her/his mouth. He/she may want to take the spoon out of your hand and put it into the mouth her/himself, often upside down, so that the food falls on the lap. Respect your baby's attempts at self-sufficiency and encourage learning.



Baby-Led Weaning

Interest has increased recently in a movement called “baby-led weaning.” (“Weaning,” in this case, does not mean stopping breastfeeding or formula feeding, it means starting solids.) Baby-led weaning is a way to introduce solids to your baby while skipping the puree/cereal stage of foods altogether. This method allows babies to control what they eat by feeding themselves. There is no spoon-feeding in baby-led weaning! Your baby moves gradually from getting most nutrition from breast milk or formula to getting most nutrition from solid foods, like older children and adults do. It is up to the baby to decide how much to eat and what to eat.

At first, your baby may not eat anything at all. He/she may just pick food up. The first foods a baby eats will add to the nutrients already coming from breast milk or formula. In the beginning, curiosity motivates babies to try solids, not hunger. Babies do not think to themselves, “Boy, I could use some vegetables, I think I should eat some asparagus.” No way. They say, “Mom’s doing it, my sister’s doing it, and I want to be like them! It looks like fun.” Eating for a baby is about a desire to explore the world around her/him and mimic the activities of others.



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Foods to start with:

- Start with whatever you are eating, minus the seasoning. Fruit, vegetables, cheese, meat, well cooked eggs, bread/toast, rice, pasta are all good options. If vegetables are very hard, they may need to be lightly cooked so that they are soft enough to chew. Chicken leg bones can be gnawed on, with a little meat left on. Just be sure to remove any small bones and gristle before offering it to baby.
- To start out, choose foods that are easy to cut into sticks or large strips. At the beginning, your baby knows how to grasp, but not release, so small finger foods will be too tough to handle. Babies do best with food that has a built-in handle, like broccoli. The ideal size will be a piece about the size of her fist.

NEVER leave your baby alone with food.

Foods to avoid:

- Nuts
- Honey until age one
- Foods with added salt and sugar
- Fast food
- Under-cooked eggs



Foods to modify:

- Grapes or small tomatoes should be cut up.
- Cherries or olives should be cut up with pits removed.

Common questions people ask:

- **Won't my baby choke?** Lots of parents worry about choking. Doctors do too. There is good reason to believe that babies are at less risk of choking with baby-led weaning than with conventional feeding. That is because babies are in control of what goes into their mouths and at what pace. It is also important to know the difference between gagging and choking. Gagging occurs when a morsel of food is too large, and your baby pushes it out of his mouth, away from his airway, with his tongue. Usually with babies, there is a lot of coughing and spluttering. The baby spits out the food, possibly with some vomit, and continues as before. It does not bother the baby much. As adults, if we want to gag, we have to put our finger in the back of our throats. A baby's gag reflex is more to the middle of his tongue, and it moves back as the baby ages. A baby's gag reflex is also much more sensitive than an adult's. When this reflex is activated, it occurs when the food is even farther away from the airway. When a baby has triggered this reflex a few times, either by putting too much food into the mouth or pushing it too far back, he/she learns not to do those things. By allowing your baby to put food into her/his own mouth, you are letting your baby learn how to manage food safely.
- **Why are there foods marketed as "stage 1 foods, age 4-6 months" when I'm not supposed to be giving my baby any foods at this age?** GREAT question! In some countries there is a voluntary code of conduct to not promote any food or drink to an infant younger than six months. Other countries have made this a law. The U.S. has done neither, so manufacturers can label food as "suitable from four months" even though the official view is to wait until six months to start solids.

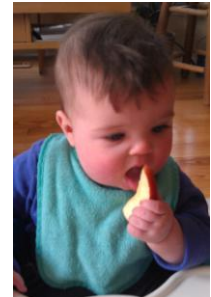
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- I have a nut allergy. Should I wait until my baby is a year old, or maybe even longer, before I offer anything with nuts?** That's a complicated question, and one that interests many researchers. There is a theory called the hygiene hypothesis that may explain why there has been such a dramatic rise in food allergies in the past 20 years. Simply put, the hygiene hypothesis says that when an immune system does not have enough germs (parasites, bacteria or viruses) to fight off from the outside world, it gets bored. It then turns against itself and causes problems such as allergies and autoimmune disease. This, some researchers say, is one reason why children raised on farms have less asthma and food allergies than city kids. Some research suggests that if you introduce an allergen early (at six to nine months of age), a child may have a decreased risk of forming an allergy to that food.⁷ Other studies suggest that it is best to wait until a child is beyond a year, when the immune system is more mature, to introduce a food that may cause an allergic reaction.⁸ As you can see, there is a lot we still do not know about food allergies and how to prevent them. This is a topic to discuss with your doctor before making any final decisions.
- My baby doesn't have any teeth. Should we wait before introducing solids?** If you have ever been bitten by your toothless baby, you know that those jaws are pretty powerful, even without teeth! Babies don't need teeth to bite and chew.
- Won't my baby just eat the sweet stuff all the time?** Now is the perfect time to set the stage for good food choices, by offering your baby a variety of delicious, healthy options. Avoid offering fast foods or foods with artificial sweeteners or salt. In a study done in the 1930s on orphan babies who were offered a variety of foods and non-food objects (including paper!), none of the babies developed any nutritional deficiencies or inappropriate weight loss.⁹ Babies give their bodies what they need. As your baby's development continues, you can also offer dips, like yogurt or hummus, so even more flavors can be tried.



FOR MORE INFORMATION ON BABY-LED WEANING	
Book	<i>Baby-Led Weaning: The Essential Guide to Introducing Solid Foods and Helping Your Baby to Grow Up a Happy and Confident Eater.</i> by Gill Rapley & Tracey Murkett, published in 2010 by The Experiment.
Website	Baby-Led Weaning: The fuss-free way to introduce solid foods. www.rapleyweaning.com/
YouTube	Baby led weaning feature on BBC London. http://www.bing.com/videos/search?q=baby+led+weaning+BBC+London&view=detail&mid=07121B41ADA7D0F9880307121B41ADA7D0F98803&first=0&FORM=NPVFVR
YouTube	Baby knows best! Study shows baby-led weaning promotes healthy food preferences. http://www.bing.com/videos/search?q=you+tube+baby+knows+best&mid=375C3EAD1FD2D734E53E375C3EAD1FD2D734E53E&view=detail&FORM=VIRE8

See page 8 for a summary of successful baby-led weaning.

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The information in this handout is for general education. It is not meant to be used by a patient alone. Please work with your health care practitioner to use this information in the best way possible to promote the health and happiness of your baby and yourself.

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Notes:



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Summary **Secrets from Successful Baby-Led Weaning¹⁰**

(You may want to post this in your kitchen as a reminder.)

- **Sit your baby upright** either in a high chair or on your lap. Make sure your baby is steady and can use her/his hands and arms freely.
- **Offer your baby food, rather than feeding.** Put it in front of your baby. Let your baby decide whether or not to try it.
- **Think of meal times as play times in the beginning.** Babies are learning and experimenting-not necessarily eating. That is okay.
- **Start with foods that are easy to pick up.** Thick sticks or long strips are best at first. Gradually introduce new shapes and textures, so that your baby can work out how to handle them.
- **Do not expect your baby to eat much food at first.** Your baby is still getting most nutrition from the breast or bottle until age one. Many babies eat very little the first few months.
- **Expect some mess.** Put a plastic sheet under your baby, so that dropped food can be handed back. Consider a long-sleeve bib or a long-sleeve button down shirt that can be worn backward to keep your baby clean.
- **Continue to breastfeed or formula feed as before,** so that your baby's food adds to the milk, rather than replaces it. Your baby will reduce feedings gradually when ready.
- **Offer your baby water** to drink with meals.
- **Try to eat with your baby and include her/him in meal times whenever possible.** Your baby will then have plenty of opportunities to copy you and practice new skills.
- **Choose times when your baby is not tired or hungry.** Your baby can then concentrate on learning this new skill.
- **Keep it enjoyable, for everyone!** We all know that a relaxed atmosphere is important for learning. By making sure that mealtimes are relaxed and enjoyable, your baby will be excited to try new foods and look forward to meal time.
- **NEVER leave your baby alone with food.**



¹⁰ From Rapley G, Murkett T. *Baby-Led Weaning: The Essential Guide to Introducing Solid Foods and Helping Your Baby to Grow Up a Happy and Confident Eater*. New York: The Experiment, 2010.