

# Infant Diet

## MILK

The most important food for all babies in the first year of life is milk – breast milk or formula, 24 – 32 ounces per day. Breast milk is the most easily digestible milk for babies, with formula not far behind. Both of these are far better for newborns and infants, under a year of age, than cow's milk. Formula contains less salt, cholesterol, and total protein, but more digestible protein and carbohydrates than cow's milk. Breast milk has infection-fighting properties not found in cow's milk or formula.

The protein in whole (3% fat) cow's milk is harder to digest and is more irritating to the intestines than formula or breast milk. Some infants fed even small amounts of whole cow's milk may steadily lose blood in their stools without it being noticed. These infants may become anemic in the first year of life. Even after the anemia is corrected, anemia in infancy has been linked to poor school performance later. It is for these reasons that formula or breast milk is recommended until 12 months of age. In general, whole milk may be substituted after 12 months: 2%, ½%, or skim milk should not be fed until after 2 years of age. Babies need a higher fat diet to insulate their developing nervous systems. Infants need about 24 to 32 ounces of formula with iron or breast milk each day in their first year and 16 to 24 ounces per day of whole milk (or breast milk) after their first year.

## SOLIDS

The idea of solid foods is to supplement the milk, not to replace the milk calories. The other purpose of solid foods is to teach the baby to accept tastes and textures that are not milk and of course to supply calories and nutrition.

There are many ways of starting infants on solid foods. Physicians differ with one another on the timing and order of introducing the various foods. The reason for these differences is that there is little scientific proof that one system of feeding is better than any other.

General guidelines are:

- 0 to 2 meals per day at 4 to 6 months
- 2 to 3 meals per day at 6 to 8 months
- 3 meals per day at 7 to 8 months

Some parents are convinced a bedtime feeding of cereal will help their baby sleep better. Actually, when a large group of babies fed cereal at night was compared to another large group of babies fed no solids, there was no difference in the ages at which they first slept through the night.

Solids given too early are difficult for the young infant to digest and may be associated with later allergies. Babies don't seem to develop the enzymes necessary to digest cereal until 2 months of age. Generally, solids are not to be given until the baby is at least 4 months old and they should be spoon fed. Giving solids at a younger age has been associated with aspiration (choking), eczema (rashes), and excessive weight gain.

Rice cereal may be less likely to cause allergies than oatmeal, barley or mixed cereals, so it is started first. Fruit or fruit juice mixed with the cereal aids in the absorption of iron from the cereal. Non-citrus fruits and vegetables may be less likely to cause allergies than meat, and so are started after cereal.

A variety of fruits, vegetables, and meats will ensure that your baby receives adequate trace minerals and vitamins. New foods are introduced one at a time every four to seven days so that if your baby has a food reaction, it is easier to pinpoint the offending food. Food reactions may include vomiting, diarrhea, or rash. Strained foods are suitable for infants four to eight months old. Junior foods are for infants seven to twelve months. Soft, mushy table foods that do not contain added salt, sugar, or preservatives may be added any time after six to seven months. Table foods should be mashed to a consistency that the infant can't choke on.

There is nothing special about commercial baby food bought in the store. Fresh or frozen vegetables or fruit may be steamed, then ground up to the consistency of strained or junior foods. Some parents make a large amount at one time in a blender, then freeze this in an ice cube tray, pop the cubes out, and store the cubes in freezer bags for later convenient use. Do not use canned vegetables for this; they contain too much salt. Canned fruits may contain a lot of sugar. Use the canned fruits packed in fruit juice rather than in heavy syrup. Do not refrigerate fruits in the original can. Put them in a glass or plastic container before refrigerating.

Egg yolk has iron in it, but the iron is poorly absorbed. Therefore, egg yolk has no particular nutritional value.

Avoid beets, broccoli, spinach, and kale until the baby is 8-9 months old. These foods contain a lot of nitrites, which are difficult for the young infant's kidneys to eliminate. Feeding the infant a large quantity of yellow vegetables can turn the child's skin an orange-yellow. This is temporary and harmless.

Teething biscuits (rather than sweet teething cookies) or Zwieback toast may be started when your baby is able to sit up well in a high chair and not choke on a large piece bitten off (usually 7 to 9 months).

Finger foods (Cheerios, cheese, cottage cheese, soft fruit pieces, chopped tender meats, tofu, toast squares, macaroni, crackers, Jello) may be given when the infant can pick them up and gum them without choking. Teeth are not required, but sitting up well is (usually 8 to 10 months).

### JUICE

Juice is not necessary if fruits are eaten. Juice is not a substitute for milk, so do not allow your baby to fill up on it. Excessive juice intake can be a cause of diarrhea and dental cavities, so limit juice consumption to 0-4 ounces daily. Weaning from the bottle to the cup for giving either juice or milk helps protect the developing teeth from cavities.

Large cans of fruit juice sold for adult consumption may contain too much lead for infants. Buy fruit juice in glass bottles or frozen, but do not store either for longer than 2 to 3 days after opening.

## IRON

Breast-fed babies need an iron supplement after 4 to 6 months of age. This can be in the form of drops or twice a day infant cereal feedings.

According to the studies of large groups of infants, formulas with iron do NOT cause more constipation, gas, abdominal pain, or diarrhea than formulas with low iron. Again, iron deficiency anemia has been implicated in later learning disadvantages even after the anemia has been corrected. Therefore, low-iron formulas have NO role in the infant's diet.

## WATER

In hot weather, the infant (6 months and older) may be offered 4 to 6 ounces of water each day. Usually, extra water is not necessary for either breast or formula fed babies unless the baby is constipated. Water contains no calories and relatively more calories are needed during early infancy than at any other stage of life.

## FLUORIDE

Ready-to-feed formulas do not contain fluoride. In areas with a fluoridated water supply, a concentrated or powdered formula mixed with tap water should be used to protect the infant's developing teeth against dental caries (cavities).

## HONEY

Honey can contain botulism spores. If honey is ingested by the infant under a year of age, a serious disease can result. While this is rare, honey should not be fed to an infant or placed on a nipple or pacifier until the age of one.

## ARTIFICIAL SWEETENERS AND ADDITIVES

Saccharin may cause bladder cancer if used in huge amounts. Aspartame (NutraSweet) has been extensively tested and is safe in most adults. There are no long term studies on its effects in children but it appears to be safe in moderate amounts. Some individuals develop headaches, mood changes, or rashes after ingesting aspartame. People with PKU (phenylketonuria) should not use this product. Monosodium glutamate (MSG) is often added to convenience foods. This substance caused damage to baby monkeys' brain cells and was eliminated from human baby food several years ago. MSG occasionally causes headaches in adults. Avoid MSG for young children.

## CHOKING

Meat sticks, hot dogs, and grapes fit neatly and, too often, tragically into the infant's airway. Cut foods into non-round pieces. Do not give large pieces of raw vegetables or fruit, popcorn, whole nuts, or hard candy to children under 4 or 5 years old. Be very careful with apples and peanut butter.

## OTHER TIPS

Avoid the temptation to make your child finish every bite of food on the plate or every last drop in the bottle. Encouraging babies to eat after they are full may establish a habit of overeating.

Putting babies down with a bottle at nap or bedtime allows milk to pool in their mouths as they go to sleep. This can cause tooth decay, contribute to ear infections, and lead to poor sleep habits.

Try to wean from the bottle between 12 and 14 months. Babies at that age are so involved in learning to walk, talk, and explore that they won't miss it. Once your infant can drink well from a cup, you might offer milk only from the cup and only give the bottle with water. The baby will soon wean from the bottle.

Offer a variety of foods and encourage, but don't force, the child to sample them. Between meal snacks are OK and often necessary for the busy toddler, but snacks should be healthy – such as cheese, fruits, thin slices of lean meats. There is nothing wrong with a little sugar in the diet, but children do not have to think all food must be made sweet.

Establish certain “eating places” so that the child doesn't get in the habit of eating and drinking all over the house.

## SOLID FOOD INTRODUCTION GUIDELINES

At **4 MONTHS** you may start:

ONE NEW FOOD EVERY 5 DAYS if the formula fed baby is on more than 32 ounces of formula per day or the well-grown breast fed baby doesn't seem to be satisfied enough with breast milk. Start with one meal per day. The allowable foods before 6 months are:

Rice cereal	Green beans
Applesauce	Peas
Bananas	Carrots
Peaches	Sweet Potatoes
Pears	Squash

At **6 MONTHS** you may start:

Oatmeal  
Plums and apricots (Try to find these without tapioca. No "desserts" because they might contain sugar)

At **7 MONTHS** you may start:

Meats – any kind (look for the single ingredient or two ingredient meats. (No "dinners" as they may have too many fillers, noodles, wheat flour, soy flour, etc.)

At **7-8 MONTHS** you may start:

Zwieback toast or teething crackers if the child is sitting well. No cookies (too much sugar).

At **8 MONTHS** you may start:

Citrus fruits	Beets
Broccoli	Spinach

The vegetables listed above are high in nitrites and can be difficult for an infant's kidneys to excrete. Serve only three times per week until 12 months of age.

At **8-10 MONTHS** you may start:

Banana pieces	Fruit cocktail cut smaller
Cheerios	Cottage Cheese
Yogurt	Gerber Veggie Puffs, Fruits Puffs, & Wagon Wheels

Start finger foods with very mushy foods and move slowly to more chewy foods such as toast and noodles.

At **10 MONTHS** you may start:

Strawberries	Tomato sauce
Spaghetti	Citrus juices in a cup, not bottle (limit)

If no family history of food allergies:

Shellfish	Chocolate
Eggs	Ice Cream

At **12 MONTHS** you may start:

16 – 24 ounces of whole milk per day  
Honey allowed  
Peanut Butter

At **10 – 15 MONTHS** you may start:

Drinking from a cup. Discontinue the bottle when the baby can drink enough milk from the cup. Babies are driven to become independent in their feeding somewhere between 9-11 months. Your job is to encourage this. It's messy but very important for eye-hand coordination and a sense of competence and mastery. The caretakers gradually drop out of the feeding process so that your baby is off the bottle, drinking 16-24 ounces of whole milk per day from a cup and entirely feeding her/himself with his hands or a spoon (mostly hand), by 15 months.

Remember that you are teaching your child healthy eating habits that will last for life. Healthy snacks ("everyday foods") include fruits, vegetables, low fat dairy products, and proteins. Giving your child fast foods and overly sweetened foods ("sometimes foods") often can lead to obesity and poor eating habits that are difficult to break.

Peanuts are the most common serious food allergy in America and some experts suggest waiting until 24 months before introducing them to your child. If there is a family history of peanut allergy, they you should wait until 36 months before offering them. This is very hard to do since peanut products are everywhere.

Catering to a finicky eater perpetuates a finicky eater – present a healthy meal for the family and the child will eat. Healthy children won't starve.