



By age 4 to 6 months, most babies reach a point in their development when they can benefit from having foods other than breastmilk or infant formula added to their diets. This chapter reviews information on readiness for solid foods, communication with parents, food allergies and intolerances, and when and what foods to introduce.

Readiness for Solid Foods

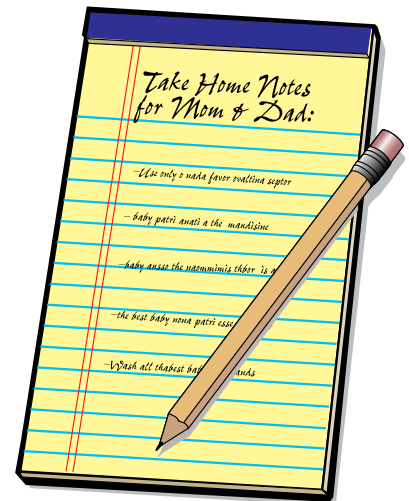
During the first 4 to 6 months, a baby requires only breastmilk or iron-fortified infant formula. Babies' swallowing and digestive systems are not developmentally ready to handle solid foods until they are between 4 to 6 months of age. During this period the baby's tongue no longer pushes most solid objects out of the mouth. A baby's weight or age alone does not determine his or her readiness for solid foods. Each baby develops at a different rate. Babies begin to show their desire for food by opening their mouths and leaning forward.

Babies are mature enough to begin learning to eat from a spoon when they can:

- hold their necks steady and sit with support,
- draw in their lower lips as a spoon is removed from their mouths, and
- keep food in their mouths and swallow it rather than push it back out on their chins.


Babies show disinterest or fullness by:

- leaning back,
- turning away,
- pushing the food out of their mouths,
- sealing their lips together,
- playing with the food, and
- pushing the bottle or spoon away.



Solid Foods and the Infant Meal Pattern

When a baby is developmentally ready to accept them, solid foods must be served to make a reimbursable meal in the Child Nutrition Programs. Figure 8 shows how the Infant Meal Pattern corresponds with changes in food texture and feeding style during a baby's first year. Young babies, under 6 months of age, do not follow rigid schedules and may need to eat every 1½ to 3 hours. Some older babies also will need to eat more frequently



and larger quantities than the specified feedings. **Babies should be fed when they are hungry and not restricted to a rigid schedule.** Meals in the Infant Meal Pattern are specified as a guideline only. It is important to avoid feeding solid foods before a baby is developmentally ready for them and before the parent, in consultation with the baby's doctor, has indicated to begin serving them. A caregiver can be reimbursed for a meal offered to a baby as long as he/she offers the baby the minimum serving size of the required meal components in the meal. The food offered does not have to be totally consumed by the baby for the meal to be reimbursable. Also, a meal is reimbursable as long as the required meal components in the respective meal are offered to the baby during the course of the day while the baby is in child care. Thus, for example, if a baby is not hungry for a meal component required at lunch, it can be offered as a snack when baby is hungry. Babies younger than 4 months of age should not be fed solid foods unless the baby's doctor authorizes them.

Communication With Parents About Baby's Eating

Good communication between the caregiver and the parents is essential for successful feeding in general, including when introducing solid foods. The decision to feed specific foods should be made in consultation with the parents. It is recommended that the caregiver be given written instructions on the introduction and feeding of foods from the parents and baby's doctor. Caregivers can use or develop a take home sheet for parents in which the caregiver records the food consumed, bowel movements and number of wet diapers, sleep patterns, and other important notes on the baby, each day. Continue to consult with each baby's parents concerning which foods they have introduced and are feeding. Then, the caregiver can follow that schedule of introducing new foods and more easily identify possible food allergies or intolerances. Let parents know what and how much their babies eat each day. Consistency between home and the child care setting is essential during the period of rapid change when babies are learning to eat solid foods.

In order to accommodate the needs of babies of parents from different cultures, it is important to learn about those cultures, including the foods they usually feed their babies. Thus, gather information from the parents on how and what they feed their babies and families. Resource publications on this subject include:

- "Cross-Cultural Counseling: A Guide for Nutrition and Health Counselors," FNS-250, 1986; available for loan from the Food and Nutrition Information Center, National Agricultural Library, USDA, phone: (301) 504-5719; e-mail address: fnic@nal.usda.gov.

- “Celebrating Diversity: Approaching Families Through Their Food,” 1998; available for purchase from the National Maternal Child Health Clearinghouse, toll free phone 1-888-434-4MCH, web site: <http://www.nmchc.org>.

Food Allergy or Intolerance

Ask parents for a list of foods, if any, that each baby has reactions to or which should not be fed to the baby. To make it easier to identify a possible food allergy or intolerance when introducing new foods, it is recommended to follow and coordinate these steps with the parents:

- Introduce foods to a baby that have been previously introduced, with no problems, by the baby’s parents;
- Introduce new foods one at a time;
- Introduce new foods gradually, for example, wait at least 1 week (7 days) between each new food;
- Introduce a small amount (e.g., about 1 to 2 teaspoons) of a new food at first (this allows a baby to adapt to a food’s flavor and texture);
- Use single-ingredient foods at first to easily see how the baby reacts to each new food. Caregivers who are preparing foods at home for a baby and older children should separate the baby’s portion before adding other ingredients; and
- Observe the baby closely for reactions after feeding a new food (see below on the types of reactions that babies can have). If there is a reaction, stop feeding the food and discuss this with the parents. Consult with the parents, who should contact their baby’s doctor, before introducing that food in the future.


By following the above steps, a baby will have time to become acquainted with each new food. Also, it will be easier to identify foods that a baby has a reaction to, has trouble digesting, or refuses to eat.

A baby having an allergic or other reaction to food may have any one of these symptoms: diarrhea, vomiting, coughing and wheezing, congestion or stuffiness, ear infection, stomach pain, hives, skin rash, extreme irritability; or more severe reactions, like shock or difficulty breathing. If a baby has a severe reaction to a food, contact the rescue squad or Emergency Medical Service and his or her parents immediately.

Babies with Delayed Development

Babies’ development does not always match their actual age. Babies may be developmentally delayed in their feeding skills due to:

- prematurity,

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- multiple hospitalizations,
 - low birth weight,
 - failure to thrive,
 - cleft lip or cleft palate,
 - a medical condition, like Down's syndrome or cerebral palsy,
 - neuromuscular delay,
 - abuse or neglect, or
 - not having eaten by mouth (i.e., fed only from a tube in the stomach or inserted in a vein) for a long time.

Parents of babies who are developmentally delayed due to prematurity or any one of the above conditions should have instructions from their baby's doctor concerning proper feeding. For such babies, it is vital that the caregiver follow the feeding instructions from the baby's doctor. If any portion of the instructions is unclear, it is the caregiver's responsibility to seek clarification. For more information about the special dietary needs or developmental delay of a baby, ask the parents to obtain additional information for you from the baby's doctor.

Babies with Special Dietary Needs

USDA regulations require school food authorities and institutions to make substitutions or modifications for babies whose disabilities restrict their diets, at no additional charge to the baby's household. For more information, see FNS-Instruction 783-2, Meal Substitutions for Medical or Other Special Dietary Reasons, and the publication, "Accommodating Children With Special Dietary Needs in the School Nutrition Programs: Guidance for School Food Service Staff." Your State agency can also provide you with guidance on accommodating babies with special dietary needs.

Feeding Solid Foods Too Early

Feeding solid foods too early may increase the risk that babies will:

- choke on the food,
- develop food allergies or intolerances, or
- consume less breastmilk or formula and not get enough calories and other nutrients for proper growth and development.

Feeding solid foods before babies are ready will not help them sleep through the night or make them eat fewer times in a day.

Feeding Solid Foods Too Late

Delaying the introduction of solid foods beyond the time when a baby is developmentally ready for them increases the risk that babies will:

- not learn to eat solid foods properly,
- become malnourished,
- develop iron-deficiency anemia, and
- not grow normally.

Most babies are ready to eat solid foods between 4 to 6 months of age.

Introducing New Foods

This section reviews the different types of food that are commonly fed to babies. Babies can be fed commercially or home-prepared baby foods. See Chapter 11, Commercially Prepared Baby Food, and Chapter 12, Home-Prepared Baby Food. Depending on the cultural preferences of families, there may be some different foods eaten than those discussed below (see page 44 on meeting the needs of families from different cultures).

Iron-fortified Infant Cereal

Iron-fortified infant cereal is a good first solid food because it is easy to digest. To meet the Infant Meal Pattern, the cereal in meals must be iron-fortified dry infant cereal, as iron is an important nutrient for babies. Iron-fortified dry infant cereal is usually found in the baby food section of grocery stores labeled “Cereal for Baby.” These cereals are enriched with a form of iron that may be easier for infants to absorb than other forms of iron found in other cereal products.

Type of Cereal to Feed

Consult with parents about which cereals are being introduced at home so that you can serve the same food at the same time. Iron-fortified infant rice cereal is usually the best choice for baby’s first cereal because it:

- is easily digested,
- is least likely to cause an allergic reaction,
- contains important nutrients, and
- can be altered in consistency to meet a baby’s developmental needs.

Dry infant cereal can be prepared with expressed breastmilk or infant formula to produce a smooth cereal that is not too thick and is easy for a young baby to swallow and digest. Water or fruit juice (for babies 6 months or older who have tried juice and had no reaction to it) can also be mixed with cereal. The consistency of all cereals can be thickened by adding less liquid as the baby matures. Measure the dry cereal before adding the liquid.



Remember these points about other cereals:

- **Oat and barley** infant cereal can be added at 1-week intervals after rice cereal.
- **Wait to serve wheat cereal** until babies are 8 months old because wheat is the grain most likely to cause a reaction in babies. The risk of intolerance decreases by age 8 to 9 months.
- Serve **mixed-grain** cereals only after the baby has been introduced to each grain separately.
- **These cereals are not reimbursable in the Infant Meal Pattern:**
 - **Jarred “wet” infant cereals,**
 - Iron-fortified dry **infant cereals containing fruit,**
 - **Cereals designed for older children and adults.** These cereals are not recommended for babies because they:
 - often contain mixed grains,
 - are usually higher in salt and sugar than infant cereals,
 - may contain vitamins and minerals in forms or amounts not ideal for babies, and
 - may contain small hard pieces of food that could cause a baby to choke (e.g., raisins, dates, nuts, or uncooked whole grain flakes).
 - Enriched farina, regular oatmeal, and corn grits; although these are not reimbursable as a substitute for infant cereal, they can be fed as additional foods.



Vegetables and Fruits

Vegetables and fruits may be introduced when the baby readily accepts 2 to 3 tablespoons of infant cereal at each meal. Consult with the parents about which vegetables and fruits are being introduced at home so that you can serve the same food at the same time. Babies often start on vegetables and fruits around 6 months of age.

Types of Vegetables and Fruits to Feed

Commercially or home-prepared vegetables or fruits can be fed to babies. Examples of vegetables and fruits to feed include:

- Commercially prepared baby food such as: green beans, green peas, squash, sweet potatoes, carrots, beets, spinach, applesauce, apricots, bananas, peaches, pears, and plums.
- Home-prepared vegetables (cooked and processed to the appropriate texture), such as: asparagus, broccoli, cabbage, cauliflower, green beans, green peas, kohlrabi, plantain,

potatoes, summer or winter squash, and sweet potatoes.

Home-prepared collard greens, carrots, spinach, turnips and beets should only be fed to babies **6 months of age and older**.

(See page 50 for more information.)

- Home-prepared fruits (which can be mashed after peeling if ripe and soft) such as: apricots, avocado, bananas, cantaloupe, mango, melon, nectarines, papaya, peaches, pears, and plums. Stewed pitted dried fruits can be pureed or mashed. Apples, pears, and dried fruits usually need to be cooked in order to be pureed or mashed easily.

Commercially prepared baby food vegetables and fruits are reimbursable in the Infant Meal Pattern if they:

- list vegetable or fruit as the **first** ingredient in the ingredient listing on the label, or
- list vegetable or fruit as the **first** ingredient and contain multiple vegetables or multiple fruits. Check with the parent that an infant has tried, and had no reaction to, all the vegetables or fruits in these mixed products before serving them.

These commercially prepared baby foods are **not** reimbursable in the Infant Meal Pattern (but can be served as additional foods):

- jarred cereals, desserts, or puddings that list a fruit as the first ingredient in their ingredient listing.
- commercially prepared baby food vegetable or fruit with a label stating that the first ingredient is water.

Make sure to carefully read the ingredient listing of commercially prepared baby food fruits and vegetables.


Plain commercial baby food vegetables and fruits generally:

- contain more nutrients ounce for ounce,
- do not usually contain concentrated sweeteners (e.g., sugar) or salt, and
- may contain fewer ingredients that could possibly cause an allergic reaction.

Babies who cannot consume milk products because of milk allergies, lactose intolerance, or galactosemia should not be fed commercial baby food dinners, vegetables, or other products containing milk products such as milk, cheese, whole milk solids, yogurt, or nonfat dry milk (e.g., some creamed corn products, creamed spinach). Read food labels to check ingredients.

Watching for Reactions

A wide variety of vegetables and fruits can be introduced over time. However, the recommendations to introduce one new food at a time still apply. Wait at least 1 week between each new food



and watch the baby closely for reactions. Observe babies closely for reactions when introducing citrus fruits (e.g., orange, tangerine, grapefruit) because these foods may cause allergic reactions; these foods should not be introduced before 6 months of age.

Preparation of Vegetables and Fruits

Babies between 6 and 12 months of age may be served a **soft-cooked** vegetable or fruit as long as the texture of the food is appropriately modified. As a baby's mouth skills progress, gradually increase the thickness and lumpiness of vegetables and fruit. Use cooked, fresh, or frozen vegetables or fruits, and progress from pureed to ground to fork mashed and eventually to diced. Or you may purchase commercial baby foods that progress in texture. Ripe bananas do not need cooking but need to be mashed to the proper consistency. Avoid canned or frozen vegetables or fruit that are high in added sugar or salt. Also, do not add salt, sugar, fat, and other seasonings to vegetables and fruits. Remove baby's portion before preparing and seasoning vegetables and fruits for others.

Warning About Home-Prepared Vegetables High in Nitrates

The following **home-prepared** vegetables should only be fed to babies 6 months of age and older: beets, carrots, collard greens, spinach, and turnips. Those vegetables, when prepared at home, are high in nitrates. The naturally occurring nitrates in these vegetables can be converted to nitrites in very young babies. The nitrites bind the iron in the blood and make it difficult to carry oxygen. If the nitrites are high enough in a very young baby, this can result in a condition called methemoglobinemia in which a baby has blue skin and difficulty breathing. Commercially prepared baby food spinach, beets, and carrots contain only traces of nitrate and are not considered a risk to babies less than 6 months of age.

Warning About Vegetables and Fruits That May Cause Choking

Due to the risk of choking, do not feed babies the following vegetables and fruits:

- Raw vegetables (including green peas, string beans, celery, carrot, etc.);
- Cooked or raw whole corn kernels;
- Whole pieces of canned fruit;
- Hard pieces of raw fruit such as apple, pear, melon;
- Whole grapes, berries, cherries, melon balls, or cherry and grape tomatoes (cut these foods into quarters, with pits removed, before feeding to older babies); and
- Uncooked dried fruit (including raisins).

Meat and Meat Alternates

Meat and meat alternates include meat, poultry, fin fish, cheese, yogurt, cooked dry beans and peas, and eggs. Meat and meat alternates are generally introduced by 8 months of age, but some doctors recommend introducing them between 6 and 8 months of age. By 8 months, babies will have already been introduced to cereal, vegetables, and fruits and will be ready for new foods and other sources of iron. Consult with the parent about which meats and meat alternates are being introduced at home so that you can serve the same food at the same time. It is not necessary to add oil, butter, margarine, lard, cream, salt, or seasonings to these foods.

Peanut butter, other nut or seed butters, nuts, and seeds should not be fed to babies and are not reimbursable as meal components in the Infant Meal Pattern. These foods cause choking and may cause an allergic reaction in some babies.

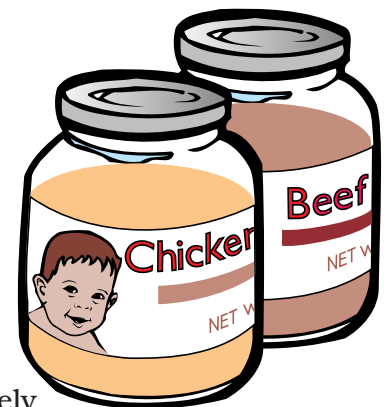
Meats, Poultry, and Fish


Lean meat and poultry are preferable. Examples include: strained or pureed well-cooked lean beef, pork, lamb, veal, chicken, turkey, liver, and boneless fin fish. As the baby's feeding skills mature, meat and poultry can be served ground or finely chopped.

Do not serve fin fish to a baby until the parents have introduced this type of fish to the baby first with no problems. Observe a baby closely when introducing fish because some babies can have allergic reactions to fish. Any fish must be closely examined for bones, and any bones removed, before serving to a baby. Check with the State agency to see if fresh water sport fish is reimbursable as a meat/meat alternate in the Infant Meal Pattern. Before feeding babies any fresh water sport fish, consult your State department of health or natural resources for information on the safety of these fish. **Do not feed any shellfish (includes shrimp, lobster, crab, crawfish, scallops, oysters, clams) to babies less than 1 year of age—these types of seafood can cause severe allergic reactions in some babies. Do not feed any of the following fish (which may contain high levels of harmful mercury) to babies or young children: shark, swordfish, king mackerel, or tilefish.**

Avoid feeding babies these foods (they are higher in fat, lower in protein): hot dogs, sausage, bacon, bologna, salami, luncheon meats, other cured meats, fried meats, and the fat and skin trimmed from meats.

Commercial baby food meats with meat or poultry as the first ingredient in the ingredient listing are reimbursable as a





meat/meat alternate in the Infant Meal Pattern. Such products contain primarily meat or poultry. If commercial baby food is used, plain meat or poultry generally contains more meat or poultry (and more protein and iron) ounce for ounce than combination baby food dinners. Plain meats can be mixed with plain vegetables or fruits to serve to a baby as some babies will accept meat better when mixed.

These foods are **not** reimbursable as meat/meat alternates in the Infant Meal Pattern:

- Commercial fish sticks, other commercial breaded fish products, canned fish with bones, hot dogs, and sausages—these are not reimbursable because they are not designed by their manufacturers for consumption by infants (less than 12 months of age). Infants may choke on these foods and fish sticks and other breaded fish products may have an accidental bone.
- “Baby food” meat sticks (which look like miniature hot dogs)—these are not reimbursable because, by the manufacturer’s declaration, they are designed to match the skills of children over 12 months of age. Hot dogs or similarly shaped products are not recommended for babies because they can cause choking, even when cut into round slices.
- Home-canned meats—these meats should not be served at all because they may contain harmful bacteria if improperly canned.
- Commercially prepared baby food combination dinners—the amounts of the various food components in the dinners are difficult to determine. Information on the exact percentage of ingredients is proprietary and thus not available to the public. Given the small percentage of meat required to be in these foods, these dinners may not be a primary source of meat/meat alternate for a baby. These dinners generally have less nutritional value by weight than single-ingredient meats and vegetables or fruit mixed together. If a parent requests, these dinners can be served as additional foods within a reimbursable meal. The parent can provide the dinner if they desire to do so.

Eggs

Egg yolk may be introduced to infants at or after 8 months of age. Do not introduce egg whites and whole egg (it contains egg white) to children younger than 1 year. Egg whites contain substances that may cause allergic reactions in babies. All eggs should be carefully handled, properly refrigerated, and properly cooked to reduce the possibility of contamination with harmful bacteria. Before cooking, wash eggs with water. Cook eggs thoroughly and hard cook the yolk to kill bacteria (no runny soft eggs). **Never** feed raw uncooked or undercooked eggs (including in beverages) to babies or anyone else

because they may contain bacteria (*Salmonella*) that can cause illness. See page 88 for more information on proper handling of home-prepared eggs.

Cheese and Yogurt

Cheese may be introduced to infants 8 months or older. Small thin slices or strips of cheese are easier and safer. Do not feed chunks of cheese, which can cause choking. If serving cheese, regular cheese (such as natural cheddar, colby, or mozzarella) and cottage cheese are the best choices. Cheese food, cheese spread, and pasteurized process cheese are generally higher in salt than regular cheeses or cottage cheese. Commercially prepared plain yogurt, made from low-fat or whole milk, may be introduced and served in small amounts to infants 8 months and older. Since cheeses and yogurt are made from cow's milk, observe babies closely for reactions if fed these foods.

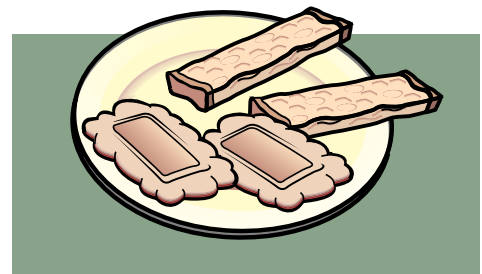
Dried Beans or Peas


Any cooked dry beans and dry peas, such as kidney beans, lima beans, pinto beans, or chick peas, may be served to babies 8 months or older. Serve small quantities (1 to 2 teaspoons) of mashed or pureed cooked beans or peas at first. Modify the texture of cooked dry beans and dry peas for a baby (cooked whole beans or peas could cause choking). Home-prepared dry beans or dry peas are more economical and lower in sodium than commercially canned beans. However, if canned beans are used, drain the salty water and rinse the beans with clean water before using. As with any food, if a baby does not like beans or appears to have difficulty digesting them, do not serve them. To prepare dry beans and peas, follow cooking instructions found on the package label or in many basic cookbooks.

Bread and Crackers

Bread or crackers may be served at the snack or with meals throughout the course of the day. Consult with each baby's parent about bread and crackers being introduced at home so that you can serve the same food at the same time. At 8 or 9 months of age, babies enjoy having finger foods so they can practice picking up the foods. Also, at that age a baby's risk of having a reaction to wheat decreases. Examples of foods to serve babies include:

- Strips or small pieces of dry bread or toast or crackers,
- Plain crackers preferably low in salt such as low salt soda crackers (avoid crackers with seeds, nuts, or whole grain kernels),
- Small pieces of soft tortilla or soft pita bread, or
- Teething biscuits.





Check the food label to make sure the crackers or bread are made from whole-grain or enriched meal or flour.

The types of bread and crackers that are reimbursable on the Infant Meal Pattern include:

Bread

- Breads (white, wheat, whole wheat, French, Italian, and similar breads, all without nuts, seeds, or hard pieces of whole grain kernels),
- Biscuits,
- Bagels (made without nuts, seeds, or hard pieces of whole grain kernels),
- English muffins,
- Pita bread (white, wheat, whole wheat),
- Rolls (white, wheat, whole wheat, potato),
- Soft tortillas (wheat or corn).

Crackers

- Crackers—saltines, low salt crackers, or snack crackers made without nuts, seeds, or hard pieces of whole grain kernels;
- Graham crackers made without honey.

Only serve bread or crackers if the parent, in consultation with the baby's doctor, agrees for them to be served and after they have previously been introduced to the baby with no problems. If any of the above foods are served, prepare them in a form that a baby can eat without choking. That is, serve small thin strips of bread rather than a whole or half of an uncut hard bagel, English muffin, wheat roll, or soft tortilla, or bread with a hard crust.

AVOID

Do not feed babies these foods, which present a choking risk:

- Snack potato or corn chips, pretzels, or cheese twists,
- Cookies or granola bars,
- Crackers or breads with seeds, nut pieces, or whole grain kernels such as wheat berries, and
- Whole kernels of cooked rice, barley, or wheat; these should be finely ground or mashed before feeding to babies.

Other Foods

Other foods that are not listed in the Infant Meal Pattern chart may be served. They are in addition to all the foods listed in the meal pattern requirements and may not substitute for any of the required food. Some examples are bread at meals other than the snack, and rice, pasta, noodles, or macaroni at any meal—these foods are usually introduced to infants 8 months or older. Check with the

parents regarding what type of pasta the baby can eat (e.g., plain, protein-fortified, whole wheat, etc.). Remember to serve foods that are appropriate for a baby's developmental age. Also, pieces of soft cooked fruit or vegetable may be appropriate as a finger food or snack for babies 8 months or older.

Do not provide family-style meal service to babies because it is important to feed them food that is appropriate for their development. Some foods often fed to older children are not appropriate for babies, such as pizza, hot dogs, french fried potatoes, or dishes made from a mixture of foods and condiments such as casseroles. These foods tend to be high in salt and contain a mixture of ingredients that a baby may not have tried before and, thus, may have a reaction to.

Use of Sweeteners and Sweetened Foods

Sweeteners (e.g., sugar, syrups), eaten alone, added to foods, or in prepared foods, add calories to the diet and promote the development of tooth decay in babies. Sweetened foods may fill up the baby without providing essential nutrients. Therefore, avoid feeding babies:

- Commercially prepared baby food desserts,
- Commercial cakes, cookies, candies, and sweet pastries,
- Chocolate—some babies have allergic reactions to this food, and
- Added sugar, glucose, molasses, maple syrup, and corn syrup or other syrups in the baby's food, beverages, or water.

Honey

Honey should never be fed to babies less than 1 year of age. Honey may contain substances that can cause "infant botulism," a serious type of food-related illness that can make a baby very sick. Do not feed babies honey alone or in cooking or baking or as found in prepared foods (e.g., yogurt with honey, peanut butter with honey, honey graham crackers). Even the honey in prepared foods could cause this illness in babies.



Artificial Sweeteners

Do not feed artificially sweetened foods or beverages to babies. Babies, who are growing rapidly have no need for low calorie foods and drinks. Also, artificial sweeteners have not been proven safe for consumption by babies.

Figure 6 summarizes how to introduce semisolid foods, how to feed solid foods, and which foods to avoid. Figure 7 covers general tips on starting good eating habits early.

Figure 6

Basic Principles for Feeding Solid Foods

Introducing Solid Foods: Starting out

- Talk with the parents before introducing solid foods. Only introduce solid foods when babies are developmentally ready for them.
- Coordinate with each baby's parents so that the same new foods and textures are introduced at the same time as at home.
- Do not serve solid foods to a baby younger than 4 months of age without a doctor's written instructions.

How to Feed When Baby is Ready for Solid Foods

- Sit directly in front of the baby to encourage the baby. Offer the spoon. Wait for the baby's mouth to open before attempting to feed. If babies are not ready to eat from a spoon they are not ready to eat solid foods.
- In feeding solid foods, use a small spoon and place a tiny amount of food between a young baby's lips. At first much of it may slide out of the mouth, but gradually the baby will learn to move the food to the back of the mouth for swallowing.
- Do not force the baby to finish the serving. Babies are the best judge of how much food they need. Let them decide how much they eat. Feed until the baby indicates fullness by:
 - not opening the mouth,
 - pulling away from the spoon,
 - turning away,
 - pushing food or spoon back out of the mouth, or
 - throwing the food on the floor.
- Be calm and friendly but not overwhelming. Follow the baby's lead on when to feed, what to feed, and how much to feed.
- Do not put cereal or any other solid food in a bottle or infant feeder. Use a spoon for feeding instead. An infant feeder is a hard plastic container with a spout at one end and a plunger at the other end which is used to push a liquid mixture of solid food



into a baby's mouth. Babies fed food in a bottle or infant feeder are forced to eat the food, can choke, and may not learn to eat foods properly.

- **Any special equipment needed for feeding children with disabilities should be used. Consult with the parents on how to feed babies with special needs.**
- Make the texture of the food appropriate for the baby's stage of development. Providing new textures encourages the baby's further development.

Feeding Safety

- Test the temperature of foods before feeding them to make sure they are not too hot.
- When feeding solid foods, seat babies in high-chairs appropriate for their age and development. Fasten the baby into the highchair with safety straps before feeding. Keep the highchair away from a table, counter, wall, or other surface so that the baby cannot push off from it.
- Babies being fed and older babies learning to feed themselves should be closely supervised by an adult seated at the same table or next to the baby's highchair. Make sure that the baby does not eat while talking, crying, or laughing. Also, the adult can watch for "squirreling" (keeping several pieces of food in the mouth without swallowing) which can cause choking.
- To prevent choking, make sure that babies (and children) are not eating while they are talking, crying, laughing, crawling, walking, running, playing, lying down, or riding in a vehicle.
- Use a small spoon, made of unbreakable material that will not splinter, that easily fits into the mouth (do not use plastic utensils). Place food in a clean small plastic unbreakable bowl or dish with edges that are not sharp.
- Keep hot liquids or foods out of reach of babies and children, not on the edge of a counter or table, or on a tablecloth that could be pulled

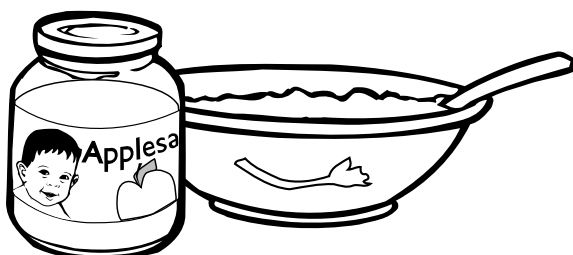
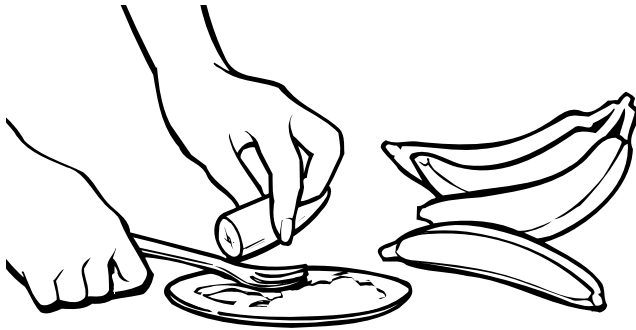


Figure 6 (continued)

Basic Principles for Feeding Solid Foods



down. Make sure that staff do not consume hot liquids near babies or children. Babies and children can be burned from hot liquids or foods tipped over.

Watching for Reactions

- Reinforce the introduction of new foods by serving the same foods as the parents are feeding. Wait at least 1 week between introducing new foods to watch for reactions (diarrhea, rashes, vomiting, coughing, wheezing, general irritability, hives, stomach pain).
- If a baby seems to be having a severe reaction to a food (e.g., hives, difficulty breathing, or shock), contact the rescue squad or Emergency Medical Service and the baby's parents immediately.
- If a baby does not like the taste of a new food at first, you can try offering it again 3 or 4 weeks later after discussing this with the parents.

Drinking Water

- A baby's doctor may recommend feeding a small amount of sterile water in a cup when solid foods are introduced. Consult with the baby's parents about the feeding of water. Sterile water is water that is brought to a very bubbly boil, boiled for 1 to 2 minutes, and then allowed to cool.

Do Not Feed Babies These Foods:

- Cow's Milk—it is not as nutritious and may cause anemia in babies. Breastmilk or infant formula are best for the first year of life.
- Hard pieces of raw vegetable or raw fruit—they can cause choking and be difficult to digest.
- Egg white, whole eggs, shellfish (shrimp, lobster, crab, oysters, clams, scallops, crawfish), and chocolate and cocoa. These foods may cause allergic reactions in babies.

- Shark, swordfish, king mackerel, or tilefish—these fish may contain high levels of harmful mercury.
- Citrus (e.g., orange, tangerine, grapefruit), pineapple, or tomato juices or foods before 6 months of age. These foods may cause allergic reactions in babies.
- Home-prepared beets, carrots, collard greens, spinach, and turnips before 6 months of age.
- Peanut butter and other nut and seed butters (e.g., soy nut, almond, cashew, or sunflower seed butter) and nuts and seeds. These foods can cause choking and may cause allergic reactions in some babies.
- Commercially prepared baby food desserts or commercial cakes, cookies, candies, and sweet pastries. These foods tend to be high in sugar and may contain less of the key nutrients that babies need.
- Sugar, maple syrup, corn syrup, molasses, glucose, or other syrups added to food or beverages.
- Foods, beverages, or powders containing artificial sweeteners. Babies should not be fed low-calorie foods or drinks.
- Foods that could cause choking, see page 66.

Never Feed Babies These Foods:

- Honey—Honey and products containing honey, including sources used in cooking or baking (such as in honey graham crackers), should never be fed to babies. Honey is sometimes contaminated with *Clostridium botulinum* spores which may cause a type of illness called infant botulism.
- Raw milk—Raw cow's or goat's milk could be contaminated with harmful substances which can make a baby very sick. Only pasteurized milk products should be used once milk is introduced at 12 months of age.
- Raw or undercooked eggs, meat, poultry, or fish—These foods when raw or undercooked can contain harmful bacteria, parasites, and other harmful substances that can make a baby very sick.
- Home-canned foods—These foods may contain harmful bacteria if improperly canned.



Figure 7

Good Habits Start Early

During a baby's first year, good nutrition and good eating habits will help the baby to grow up happy and healthy.

When You Bottle Feed a Baby:

DO	WHY
<p>Burp the baby at natural pauses during the feeding and at the end of each feeding.</p>	<p>To reduce spitting up from swallowed air.</p>
<p>Put only breastmilk or formula in the bottle. Do not put cereal, other food, juices, or other drinks in the bottle.</p>	<p>To prevent overfeeding, choking, tooth decay, and to allow the baby to develop good eating habits.</p>
<p>Give the bottle to the baby at feeding time, not nap time, and do not let the baby go to sleep with the bottle.</p>	<p>To prevent choking, ear infections, and tooth decay from the milk which remains on the teeth.</p>
<p>Hold the baby while feeding instead of propping the bottle in the baby's mouth. Do not let the baby walk or crawl around with the bottle.</p>	<p>To prevent choking, to provide cuddling for the baby, and to prevent babies from sharing their bottles with others.</p>





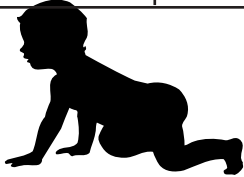
When You Feed a Baby Solid Foods:

DO	WHY
<p>Wash the baby's hands before feeding.</p>	<p>To clean any dirt or germs off the hands to keep the baby's food clean.</p>
<p>Use a small spoon or let the baby use his or her fingers.</p>	<p>To help the baby learn proper eating habits.</p>
<p>Place food on the tip of the spoon and put food on the middle of the baby's tongue.</p>	<p>To make it easy for the baby to swallow.</p>
<p>Remove food from the jar before feeding. Do not feed the baby food from the jar.</p>	<p>To prevent the saliva from the baby's mouth from spoiling the remainder of the food in the jar.</p>
<p>Give only one new food at a time, and wait at least 1 week before giving another new food.</p>	<p>To give the baby time to get used to each new flavor and texture, and to see if the baby is allergic to the new food.</p>



Figure 8

How the Infant Meal Pattern Corresponds with Food Textures and Feeding Styles

Age of Baby by Month	Birth	1	2	3	4	5	6	7	8	9	10	11	12
Age grouping in Infant Meal Pattern	 Birth through 3 months				 4 months through 7 months				 8 months through 11 months				
Sequence of Introducing Foods in Infant Meal Pattern	Breastmilk or Formula				Infant Cereal Vegetables and/or Fruit				Meat or Meat Alternates Crackers and/or Bread Fruit Juice (only in a cup)				
Texture of Solid Food					Strained/Pureed (thin consistency for cereal)								
									Mashed				
									Ground/Finely Chopped				
									Chopped				
Feeding Style	Breastfeeding or Bottle Feeding												
					Spoon Feeding								
					Cup Feeding				Self Feeding/Finger Foods				