



Home-prepared baby foods can be equally nutritious and more economical than commercially prepared baby foods. With home-prepared baby foods, the parent or caregiver has more control over the variety and texture of food than with commercial baby foods. Babies 8 months and older who are on commercial baby foods can be shifted to home-prepared baby foods with a thicker texture. When preparing food for the older baby, some similar foods can be used as those prepared for children over 1 year of age as long as the texture is modified for the baby's stage of development. However, some foods for children are not appropriate for babies, such as mixed foods like casseroles, pizza, etc. These mixed foods contain ingredients that a baby may not have tried before, may be allergic to, and could possibly choke on. See Figure 12 on using home-prepared baby foods.

When preparing baby food at home, care must be taken to ensure that the food is:

- prepared and stored safely;
- appropriate in texture;
- cooked using methods that conserve nutrients; and
- prepared without adding unnecessary ingredients such as sugar and salt.

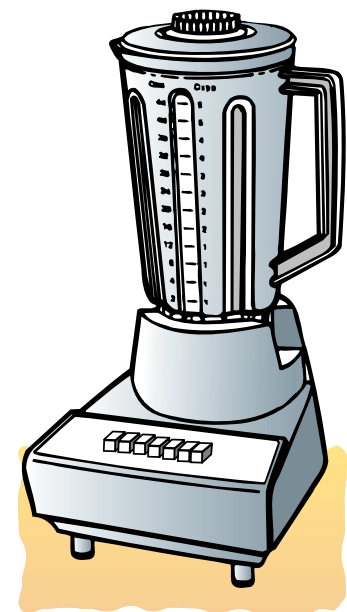
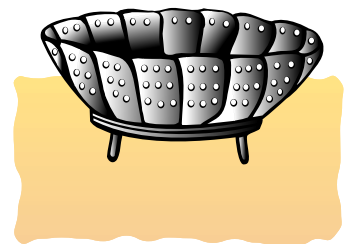
Take extra care when handling a baby's food, bottles, and utensils. To better assure that baby food is safe and sanitary, it is critical to follow handwashing guidelines and to wash and sanitize all equipment used to prepare and serve food before and after food preparation. See Figure 10 on handwashing guidelines. See page 73 on washing and sanitizing all equipment and appliances, dishes and utensils, and food preparation and serving surfaces.

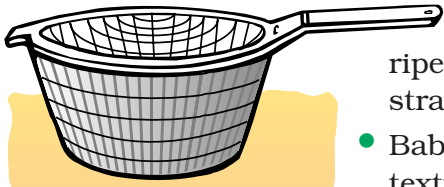
Equipment for Preparing Baby Food

Common kitchen equipment is all that is needed for cooking food. A simple metal steamer, found in supermarkets, can be used to cook vegetables and fruit and will reduce the loss of vitamins in cooking.

Equipment for making food into appropriate textures for babies include:

- Blender or food processor (purees foods, including meats, vegetables, and fruit, to a very smooth texture);





- Fine mesh strainer (use to puree soft cooked or very ripe fruits and some vegetables—push the food through the strainer with the back of a spoon);
- Baby food grinder or food mill (purees most foods to a smooth texture and purees meats to a coarser texture); or
- A kitchen fork and/or knife (for older infants, foods can be mashed with a fork or chopped finely with a knife—cubes of food should be no larger than 1/4 inch to reduce the chances of choking).



Wash the above equipment with soap and hot water, rinse thoroughly with hot water, and sanitize. Allow to air dry. Use separate cutting boards for animal foods (i.e., meat, poultry, fish) and non-animal foods (i.e., vegetables, fruits, breads). Do not use boards with crevices and cuts. Wash and sanitize boards after each use. Non-porous plastic or glass cutting boards are best as they are easiest to clean.

Preparing Food

Some general tips to remember when making baby food include these:

- Begin with good quality food. Use fresh food. Ideally, prepare foods for a baby immediately before use and avoid using leftover food.
- Cook foods until soft and tender.
- After pureeing food, liquid (cooking liquid, water, or fruit juice) can be added for a thinner texture. As a baby gets older and develops better eating skills, the texture of foods can be changed.
- It is not necessary to add sugar, syrups, salt, seasonings, oil, butter, lard, cream, gravy, sauces, or fat drippings to the baby's food. When cooking foods for a group of children, separate out the baby's portion before adding those ingredients.
- **Never** add honey to a baby's foods because of the risk of getting a very serious illness, called infant botulism.
- Do **not** use:
 - home-canned food (if canned improperly, harmful bacteria could be in the food),
 - outdated cans (if dated),
 - food from dented, rusted, bulging, or leaking cans or jars, or
 - food from cans or jars without labels.

Some tips to remember when preparing, using, and storing different foods include these:

VEGETABLES AND FRUITS

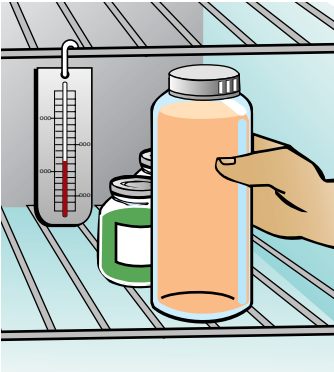
- Do not feed home-prepared spinach, beets, turnips, carrots, or collard greens to babies **under 6 months old**. These types of home-prepared vegetables may contain large amounts of nitrates or nitrites which could make babies under 6 months of age sick.
- Select high quality fresh vegetables and fruits or plain frozen vegetables and fruits (without added salt or sauces). Canned fruits without added sugar or canned vegetables without added salt can be used. If frozen or canned foods are used, make sure to check the ingredient list.
- Wash fresh vegetables and fruits very well with clean cold running water to remove dirt. Remove pits, seeds, skins, and inedible peels from fruits and some vegetables. Edible skins and peels can be removed either before or after cooking.
- When cooking is needed to soften a food's texture, cook the vegetables or fruits either by boiling in a covered saucepan with a small amount of water or steaming in a saucepan until just tender enough to be pureed or mashed or eaten as a finger food. A microwave oven can be used to cook vegetables until soft.
- After cooking, puree or mash food with liquid until it reaches the desired smoothness. Vegetables puree easier in large quantities in a blender or food processor.
- Keep produce separate from meat, poultry, and fish in both your shopping cart and your refrigerator. The meat, poultry, and fish could drip juices and contaminate the other foods. When shopping, ask the cashier to bag meat, poultry, and fish separately from other foods.



MEATS, POULTRY, FISH, AND MILK PRODUCTS

Food Purchasing

- Obtain all food from an approved source, such as a grocery store or food wholesaler. Check with your State agency for approved sources.
- Purchase only USDA government-inspected meats.
- Select cheese made from pasteurized milk. Never feed babies dairy products made from raw, unpasteurized milk. Unpasteurized milk products may contain harmful bacteria that can cause serious illnesses.
- If fish is purchased, only purchase finfish (e.g., flounder, haddock, cod, salmon) not shellfish.



Food Storage

- Immediately after purchasing meats, poultry, finfish, and dairy products such as cheese, store them in a refrigerator (not in the door section) and remove them right before use. Make sure these foods are wrapped securely so that any juices do not drip and contaminate other foods. Do not allow these foods to sit out at room temperature.
- Store these uncooked foods in the coldest part of the refrigerator, on a bottom shelf or drawer, and prepare them quickly (within 1 day for fish, and 1 to 2 days for meat and poultry).

Thawing Foods

- Thaw frozen foods either in a refrigerator, during cooking, or in a microwave oven set at the defrost setting. If thawed in a microwave oven, cook immediately since parts of the food will be warm.
- Do not thaw frozen meat, poultry, or fish on a kitchen counter or in standing water at room temperature. Germs grow rapidly as food thaws at room temperature.

Avoid Spreading Harmful Bacteria to Other Foods

- To avoid spreading harmful bacteria to other foods, do not allow raw or partially cooked meat, poultry, fish, or their juices, to touch other foods or the surfaces, serving plates, or utensils used to serve or prepare other foods. For example, do not use a fork to test a piece of meat, poultry, or fish while cooking and then use the same fork to mix a cold vegetable dish.
- Use separate utensils and cutting boards for meat, poultry, fish and non-animal foods (i.e., vegetables, fruits, breads). Do not use boards with crevices and cuts. Wash and sanitize utensils and boards after each use. Non-porous plastic or glass cutting boards are best as they are easiest to clean.
- In the refrigerator, store raw or cooked meat, poultry, and fish **below** cooked or ready-to-eat foods so that no juices from those foods drip on other foods.

Preparation Before and After Cooking

- Remove all fat, gristle, skin, and bones from meat, poultry, and fish **before** cooking. Take care in removing all the bones, including small ones, from fish and poultry. Heat from cooking destroys any bacteria that may be added to food when bones are removed.
- After cooking, remove tough parts and visible fat.

Cooking Guidelines

- Always use a meat thermometer when cooking meat, poultry, or fish to ensure that the foods are safely cooked. Brochures on how to use kitchen and meat thermometers are available from USDA's Food Safety and Inspection Service, toll-free phone 1-800-535-4555, or web site: <http://www.fsis.usda.gov>.
- Cook meat, poultry, and fish thoroughly to kill any bacteria that might be present in the food:
 - Cook all red meats to an internal temperature of at least 160° Fahrenheit. Check the temperature with a meat thermometer.
 - Cook white meat poultry to an internal temperature of at least 170° Fahrenheit and dark meat poultry to an internal temperature of at least 180° Fahrenheit for doneness. Check the temperature with a meat thermometer.
 - Cook fish to an internal temperature of 160° Fahrenheit. Check the temperature with a meat thermometer.
- Try these cooking methods: broiling, baking or roasting, pan broiling, braising, pot roasting, stewing, or poaching (for fish).
- Do not cook food in an oven set at a temperature below 325° Fahrenheit because low temperatures may not heat the food hot enough to kill bacteria.

Never Feed Partially Cooked or Raw Meat, Poultry, Fish, or Eggs

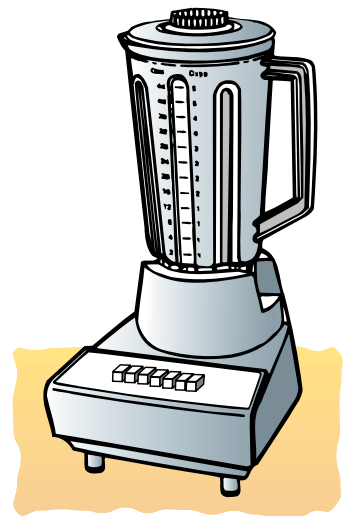
- Never feed infants partially cooked or raw meat, poultry, fish, or eggs. Uncooked meat, poultry, fish, and eggs can contain harmful bacteria, parasites, or viruses that could cause very serious food poisoning.


Preparation After Cooking

- After cooking, separate any remaining bone, skin, and visible fat. Cut the meat, poultry, or fish into small pieces and puree, using some sterile water or cooked broth if needed for moisture, to the desired texture. Warm meat is easier to blend than cold meat; chicken, turkey, lamb, and fish are the easiest to puree. Also, meats are easier to puree in a blender or food processor in small quantities.
- As a baby's feeding skills mature, meats, poultry, and fish can be served ground or finely chopped instead of pureed.

Storage After Cooking

- After cooking, immediately serve these foods or store them in the refrigerator (for no longer than 24 hours) or freezer (use within 1 month). If stored, label the container with the date





and time the food was prepared. Cool foods immediately in the refrigerator after cooking.

- Throw out cooked meat, poultry, or fish if kept at room temperature out of the refrigerator for more than 2 hours, including serving time.

Home-Prepared Eggs

- Buy grade AA or A eggs with clean, uncracked shells. Do not buy unrefrigerated eggs.
- As soon as possible after purchasing, refrigerate eggs in the original carton, in the main section of the refrigerator which is colder than refrigerator door sections.
- Cook eggs well—boil them until the yolk and white are firm and not runny, and then separate the yolk from the white. Do not serve soft, runny eggs—these are undercooked and might contain bacteria that can make a baby sick.
- Only feed babies the yolk of the egg—the white is not recommended for babies less than 1 year of age. The hard yolk can be mashed with some liquid, such as sterile water or infant formula, to the desired texture.
- Refrigerate eggs immediately after cooking or keep them hot. Throw out eggs if kept at room temperature out of the refrigerator for more than 2 hours, including serving time.
- Do not feed babies raw or partially cooked eggs or foods that contain them, such as homemade ice cream, mayonnaise, or eggnog (do not feed commercial foods containing eggs to babies either because they would contain egg whites).
- Before using commercially prepared foods, check the list of ingredients to check if they contain whole eggs.
- Wash hands, utensils, equipment, and work areas with warm soapy water before and after contact with eggs and dishes containing eggs.
- Serve cooked eggs and dishes containing eggs immediately after cooking or place in shallow containers for quick cooling and refrigerate immediately.

Dry Beans or Dry Peas

- To cook dry beans or dry peas, follow cooking instructions found on the package label or in many basic cookbooks. It is not necessary to add seasonings, salt, or fat to the beans or peas. Make sure to cook the beans or peas until soft enough to puree or mash easily.
- If canned beans are used, drain the salty water and rinse the beans with clean water before pureeing or mashing.

Grain Products

- Cook noodles, macaroni, and spaghetti until soft, then mash or finely chop, depending on the baby's development.
- Cook rice, barley, or other grain kernels until very soft and then puree or finely mash before serving to a baby. Babies can choke on cooked grain kernels that are not mashed or ground.

Serving, Storing, and Reheating Home-Prepared Baby Foods

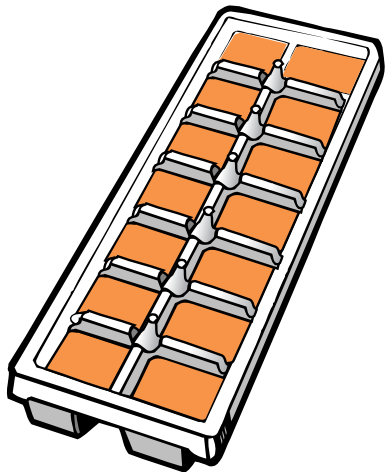
Recommended guidelines for serving and storing home-prepared baby foods after cooking and pureeing include:

If Serving Immediately:

- Serve freshly cooked food to a baby shortly after preparation is completed. Allow the food to cool for a short period (10-15 minutes) so that it does not burn the baby's mouth. Test the temperature of the food, using a clean spoon, before feeding it to the baby.
- Do not allow freshly cooked foods to stand at room temperature or between 40° and 140° Fahrenheit for more than 2 hours. Between those temperatures, bacteria can grow that can cause a baby to become ill.

If Refrigerating Foods:

- Keep the refrigerator maintained in a clean and sanitary condition. See page 74 on maintaining the proper temperature in a refrigerator.
- Refrigerate or freeze home-prepared foods, which will not be eaten, immediately after cooking. All foods to be stored should be covered, wrapped, or otherwise protected and labeled with the date and time they were prepared.
- Refrigerate hot foods in shallow containers with the food less than 3 inches deep and cover the container only after the food is cold.
- Store raw or partially cooked foods below cooked or ready-to-eat foods so that the raw juices cannot drip onto the other foods.
- Use freshly prepared refrigerated foods within 2 days (except meats, poultry, fish, and egg yolks which should be used within 24 hours).
- Throw out any foods if left unrefrigerated for more than 2 hours. It is not wise to taste the food to see if it is safe because a food can contain harmful bacteria but still taste normal.



If Freezing Foods:

- Keep the freezer clean and sanitary.
- Try these methods of freezing baby food in serving-size quantities:
 - **Ice cube tray method**—Pour cooked pureed food into sections of a clean ice cube tray; cover with plastic wrap, a lid, or aluminum foil; and place into the freezer. When frozen solid, the cubes can be stored in a freezer container or plastic freezer bags in the freezer.
 - **Cookie sheet method**—Place 1-2 tablespoons of cooked pureed food in separate spots on a clean cookie sheet, cover with plastic wrap or aluminum foil, and place into the freezer. When frozen solid, the frozen food pieces can be stored in a freezer container or plastic freezer bags in the freezer.
- Label and date the bags or containers of frozen food and use them within 1 month. When ready to use the frozen baby food, remove the desired number of cubes or pieces from the bag or container with clean hands and thoroughly reheat them.
- See page 74 on checking the temperature of the freezer.

When Reheating Foods:

- Thoroughly reheat refrigerated or frozen home-prepared baby foods to 165° F before feeding them to a baby. Reheating kills bacteria which can grow slowly while a food is in the refrigerator or during thawing. Stir the food and test its temperature before feeding it to the baby.
- Defrost frozen foods in the refrigerator, under cold running water, or as part of the reheating process. **Never** defrost baby foods by leaving them at room temperature or in standing water, as in a pan or bowl.
- Throw out any uneaten leftover food in the baby's dish or the serving dish.

Do not refreeze baby food that has been removed from the freezer and allowed to thaw in the refrigerator. Use thawed food within 48 hours from the time it was removed from the freezer (label the food with the date and time you removed it). Throw it out if it has been stored longer than 48 hours. Meats, poultry, or fish should be thrown out if stored longer than 24 hours.

Figure 12

Using Home-Prepared Baby Foods

Keep the baby's food clean to keep it safe. Remember to wash your hands before handling any food (See Figure 10 on Hand Washing Tips).

Before preparing food:

- Wash all bowls, utensils, pots and pans, equipment (such as a blender, food mill, food processor, baby food grinder, cutting board), the sink, and counters in hot, soapy water, rinse, and sanitize. Allow to air dry.

When you prepare baby food:

- Begin with good quality food. Use fresh food if possible. Check ingredients on the ingredient label of commercially canned or frozen foods. Prepare foods for a baby immediately before use and avoid using leftover food.
- Wash fruits and vegetables well and remove parts not to be eaten (peels, seeds, pits) before cooking.
- **Do not feed home-prepared spinach, beets, turnips, carrots, or collard greens to babies under 6 months old.**
- Remove bones, fat, and gristle from meats, poultry, and fish. Meats, poultry, fish, dried beans or peas, and egg yolks should be well cooked. Baking, boiling, broiling, poaching, and steaming are good cooking methods. Call USDA's Meat and Poultry Hotline at 1-800-535-4555 for information on safe food handling, including what temperatures to bring meat, poultry, and fish to during cooking.
- Cook foods until they are soft and tender. Food can be pureed to the right texture using a blender or food processor, a fine mesh strainer, baby food grinder, or food mill. For older babies, foods can be mashed with a fork or chopped finely. Water can be added to give pureed food a thinner consistency.
- Do not add salt, butter, margarine, lard, oil, cream, sugar, syrups, gravy, sauces, or fat drippings to the baby's food. **Never add honey to the baby's food.**
- **Do not use home-canned food, food from dented, rusted, bulging or leaking cans or jars, or from cans or jars without labels.**

When you store home-prepared baby food:

- Immediately after cooking, refrigerate or freeze freshly cooked food to be stored. Label the food with the date and time it was prepared. Do not let the food sit at room temperature—harmful germs can grow in the food at that temperature. Throw out foods left at room temperature for 2 hours or more including serving time.

- Make sure to place foods to be stored in the refrigerator in a clean container with a tightly fitting lid. Regularly check to make sure that the refrigerator temperature is cold enough (40° Fahrenheit or below) to keep food safe.
- Use refrigerated foods within 2 days (except for meats, poultry, fish, and egg yolks—use them within 24 hours). Throw out foods not used within those times.
- To freeze baby food, either pour cooked food into sections of a clean ice cube tray or place 1 to 2 tablespoons of pureed food in spots on a clean cookie sheet. Cover the food with plastic wrap or foil. When frozen, place the food pieces into a covered freezer container or tightly closed plastic bag in the freezer. Label and date the containers or bags. Use frozen foods within 1 month.
- Regularly check to make sure that the freezer temperature is cold enough (0° Fahrenheit or below) to keep food safe.

When you serve home-prepared baby food:

- Serve freshly cooked food to a baby right after preparing it. Allow the food to cool to lukewarm. Stir the food and test its temperature before feeding.
- Throw away any leftover food in the baby's dish. Do not put it back in the refrigerator or freezer.

When you reheat home-prepared baby food:

- Completely reheat refrigerated or frozen home-prepared baby food to at least 165° Fahrenheit before feeding. Allow food to cool to lukewarm. Stir the food and test its temperature to make sure it is not too hot or cold before serving to baby.
- Thaw frozen foods in the refrigerator, under cold running water, or when reheating the food. Never defrost baby foods by setting them out at room temperature or in a bowl of standing water. Germs can grow in food sitting at room temperature.
- Throw out leftover food remaining in the dish that the baby does not eat.
- Do not refreeze baby food that has thawed. Label food with the date and time it was removed from the freezer. Store thawed food in the refrigerator and use it within 2 days or throw it out (except for meats, poultry, or fish which should be thrown out after 24 hours).