

Health and Hygiene

Nutrition and Foster Children

(This information was taken from the spoon foundation, www.spoonfoundation.org)

What Every Parent Needs to Know

While foster and adopted children may appear healthy on the outside, they may very well be deficient in key nutrients that could impact future growth and brain development. These deficiencies develop because many vulnerable children do not receive proper nutrition in their early years. The most common culprits include:

- Insufficient prenatal nutrition
- Malnutrition in infancy
- Post-adoption growth spurts

The growth spurts children commonly experience during placements or the initial post-adoption period actually results in additional vulnerability to nutritional deficiencies. These periods of accelerated growth call heavily upon their bodies' already meager nutritional reserves, resulting in anemia or other conditions. Unfortunately, foster and adoptive parents can't go back in time and nourish their children starting from the time they were conceived. But parents can provide optimal nutrition once their children are home to boost their children's development and overall health.

Contributing Factors to Malnutrition

Children who have difficult beginnings, whether in an orphanage or in a home with inadequate care, often present with nutritional deficiencies for any of the following reasons:

- Inadequate maternal prenatal and perinatal health care; poor prenatal diet.
- Premature infant birth; low or very low birth weight resulting in underdeveloped infants.
- Inadequate breastfeeding.
- Animal milk or milk products offered instead of fortified infant formula.
- Diluted or improperly prepared infant formula, which decreases the nutritional adequacy of the formula or introduces food safety risks.
- Premature introduction of solid foods to the infant diet.
- Insufficient amounts of food and/or lack of essential nutrient-dense foods.
- Insufficient feedings and/or inappropriate feeding practices in the orphanage, particularly for those children with special needs.
- Inadequate exposure to sunlight, which inhibits vitamin D production — a crucial vitamin that facilitates calcium absorption for bone growth.
- Cultural food practices introduced too early. For example, tea is often served with meals in many countries. Though tea has many health benefits, when consumed in large quantities as part of a nutrient-poor diet, naturally-occurring substances in tea may inhibit the absorption of important vitamins and minerals.

- Lack of fortified foods, beverages, and vitamin supplements due to high cost or unavailability.
- The stress of transitioning from birth mother to secondary care provider and then to the new family can disrupt a child's natural feeding cycle, resulting in nutritional issues.
- Rapid placement moves and post-adoption growth places enormous demands on the young body's limited nutritional stores, often resulting in nutrient deficiencies.

Failure to Thrive

What is Failure to Thrive? Failure to thrive (also referred to as faltering growth) is a medical term that denotes poor weight gain and physical growth failure over an extended period of time in infancy. The term failure to thrive covers poor physical growth of any cause and does not imply abnormal intellectual, social, or emotional development. Infants or children that fail to thrive seem to be dramatically smaller or shorter than other children the same age. Teenagers may have short stature or appear to lack the usual changes that occur at puberty. However, there is a wide variation in normal growth and development.

Cause of Failure to Thrive

Failure to thrive can be caused by either an identified medical condition (organic) or environmental factors (nonorganic). Both types are due to inadequate nutrition. In general, the rate of change in weight and height may be more important than the actual measurements. It is important to determine whether failure to thrive results from medical problems or factors in the environment.

Organic: In organic causes of failure to thrive, growth failure is due to an acute or chronic disorder that interferes with nutrient intake, absorption, metabolism, or excretion, or that increases energy requirements. Illness of any organ system can be a cause.

Nonorganic: Up to 80% of children with growth failure do not have an apparent growth-inhibiting (organic) disorder. Growth failure occurs because of environmental neglect (eg. lack of food) or stimulus deprivation. Lack of food may be due to impoverishment, poor understanding of feeding techniques, improperly prepared formula, or an inadequate supply of breast milk.

Symptoms of Failure to Thrive

Failure to thrive generally means a weight consistently below the 3rd to the 5th percentile for age, a progressive decrease in weight to below the 3rd to the 5th percentile, or a decrease in the percentile rank of two major growth parameters (weight, height, head circumference) in a short period. Weight is the most sensitive indicator of nutritional status. Reduced linear growth usually indicates more severe, prolonged malnutrition. Because the brain is preferentially spared in protein-energy malnutrition, reduced growth in head circumference occurs late and indicates very severe or long-standing malnutrition.

Implications of Failure to Thrive

Prognosis with organic failure to thrive depends on the cause. With nonorganic failure to thrive, 50 to 75% of children older than one year achieve a stable weight above the 3rd percentile. Cognitive function, especially verbal skills, remains below the normal range in about 1/3 of children diagnosed with failure to thrive. Children who develop failure to thrive before one year of age are at high risk, and those diagnosed before age six months of age (when the rate of postnatal brain growth is maximal) are at highest risk. General behavioral problems occur in about 50% of children with previous diagnoses of failure to thrive.

Treatment of Failure to Thrive

Treatment of failure to thrive aims to restore proper nutrition. A nutritious diet containing adequate calories for catch-up growth (about 150% of normal caloric requirement) and individualized medical and social supports are usually necessary. Hospitalization is rarely required and is indicated for severe failure to thrive only and for those whose safety is a concern.

Possible Deficiencies:*Calcium*

Calcium is needed to build strong bones and teeth. It also plays a role in blood clotting, muscle contraction, and nerve-cell communication. In the long term, dietary intakes well below the recommended levels may impact bone development. Bones increase in size and mass during childhood and adolescence, therefore adequate calcium and vitamin D should be consumed throughout childhood into early adulthood.

Iron

Iron is necessary for oxygen delivery to cells and regulation of cell growth. Iron deficiency develops gradually and is commonly seen in women of childbearing age and children. A lack of iron results in an insufficient supply of oxygen to cells eventually causing anemia, fatigue, poor work performance, slow cognitive and social development in children, and decreased immunity.

Vitamin C

Vitamin C is a powerful antioxidant that helps produce collagen and aids in iron absorption. Vitamin C is important for a healthy immune system and plays a role in cardiovascular, neurological, and endocrine systems. Vitamin C deficiency sometimes causes a condition called scurvy, which results in a multitude of symptoms including bleeding gums, skin irritations, bruising, and poor wound healing.

Vitamin D

Globally, Vitamin D deficiency and insufficiency are still very common especially in risk groups such as young children, pregnant women, elderly and immigrants. In North America, vitamin D deficiency is uncommon but vitamin D insufficiency is still quite common. Vitamin D is needed for calcium absorption and maintenance of calcium levels to enable normal development of bones and prevent muscular spasms caused by low levels of calcium in the blood. A poor diet and lack of exposure to sunlight can result in

vitamin D deficiency. A deficiency in childhood can result in development of the disease Rickets in which bones become soft, thin, brittle, or misshapen.

Zinc

Zinc is involved in many important processes in the body. Symptoms of zinc deficiency include delayed growth, loss of appetite, impaired immune function, hair loss, diarrhea, delayed sexual maturation, eye and skin lesions, delayed wound healing, taste abnormalities, and mental fatigue.

Iron Deficiency Anemia

What is Iron Deficiency Anemia?

Iron deficiency leads to anemia when the body lacks sufficient iron to make adequate hemoglobin. Without enough hemoglobin, red blood cells are smaller and paler than normal, and they cannot transport adequate oxygen to tissues throughout the body. Iron-deficiency anemia is an advanced stage of iron deficiency. In iron deficiency, the amount of iron stored away for later use is reduced but has no effect on functional iron—the iron needed to meet the daily needs of an individual. If the body requires increased iron (due to a rapid growth spurt, for example), a person with inadequate stored iron has no reserves to use.

Cause of Iron Deficiency Anemia

Anemia can be caused by multiple factors, including blood loss, inability to absorb iron, and factors during the mother's pregnancy. A lack of iron in the diet can also cause anemia as the body regularly gets iron from food. If too little iron is consumed, the body can become iron deficient over time. Institutionalized children are at particular risk for iron-deficiency anemia due to the possibilities of poor maternal prenatal care, poor maternal health, low birth weight, bottle-feeding with formula that is not iron-fortified, tea drinking, a diet low in iron-containing foods, and intestinal parasites.

Symptoms of Iron Deficiency Anemia

- Extreme fatigue
- Pale skin
- Weakness
- Shortness of breath
- Headache
- Lightheadedness
- Cold hands and feet
- Inflammation or soreness of tongue
- Brittle or spoon-shaped nails
- Unusual cravings for non-nutritive substances such as ice, dirt, or pure starch (a condition known as "pica")
- Poor appetite (especially in infants and children)
- Irritability
- Difficulty thinking
- Rapid heartbeat

- Hair loss
- Diagnosis of Iron Deficiency Anemia

The diagnosis of iron-deficiency anemia will be suggested by appropriate history (e.g., recent growth spurt following adoption), and by such diagnostic tests as a hemoglobin, hematocrit, low serum ferritin, a low serum iron level, an elevated serum transferrin, and a high total iron binding capacity (TIBC).

Implications of Iron Deficiency Anemia

Iron deficiency anemia can impact neurological development by decreasing learning ability, lowering IQ, altering motor functions, causing lethargy that impacts learning, and stunting physical growth. It is also associated with a greater incidence of lead poisoning and an increased susceptibility to infections. Infants and young children who become severely iron deficient may not be able to recover to normal iron levels, even with iron supplementation.

Treatment of Iron Deficiency Anemia

Oral iron supplementation can be used for both prevention and treatment of iron deficiency anemia. The most common iron supplement is ferrous sulfate, which can be obtained over-the-counter. Oral iron supplements are usually best absorbed by an empty stomach. However, because iron can irritate your child's stomach, he may need to take the supplements with food. Your doctor may also recommend that your child take iron supplements with orange juice or with a vitamin C tablet, as vitamin C increases iron absorption. It usually takes several months of iron supplementation to correct the iron deficiency. Increasing dietary intake of iron can help prevent iron deficiency anemia. Food Sources of Iron Chicken liver, beef, turkey, chicken, pork loin, tuna, halibut, blue crab, oysters, clams, shrimp, fortified cereals, oatmeal, soybeans, lentils and other beans, molasses, tofu, spinach, chard, thyme, raisins, sesame seeds, pumpkin seeds. Pair with vitamin-c rich foods for optimal absorption.

Children Who Don't Want to Eat

There are several explanations for food aversions in post-institutionalized and fostered children: Following placement, they may experience a range of intense emotions like fear, anxiety, sadness, or grief, which can impact appetite. A history of bad feeding experiences (force feeding, too rapid feeding, bottle propping) that creates negative physiological reactions and/or negative associations with eating. Feelings of powerlessness. While living in a baby house or orphanage, they likely had little say over if they ate, what they ate, how much they ate, and who fed them. If living in a neglectful situation, they may have had little to no control over mealtimes. Limited variety of meal plans in institutions or families living in poverty may make a child resistant to new foods.

How do food aversions manifest?

Kids typically can't verbalize why they act as they do around food. Instead, their food aversions will be expressed through behavior: Refusing to eat, avoiding certain foods, wanting to eat the same food over and over again, gagging, throwing up, or developing rituals around food (e.g., only eating from a certain yellow bowl or drinking apple juice from a juice box but not from a cup).

What to do?

First, rule out motor, medical, and dental abnormalities that can contribute to poor eating such as decayed teeth, sore gums, reflux, cough, allergies, enlarged tonsils, digestive problems, and parasites. Do NOT force your child to eat under any circumstances. Though pumping good nutrition into your child should be a top priority, it should not come at the expense of reinforcing your child's negative relationship with food. No matter how pressured you feel to get those critical nutrients into her growing body, remember that what she eats is less important than how she'll feel about food for the rest of her life. "Don't force your child to eat everything in front of them. Also, give them lots of choices in small quantities." -Bruce, dad to Aida adopted from Kazakhstan

Developing a taste for food

A gradual approach to introducing textures and tastes allows kids space to process new foods, and is also the safest way to monitor possible allergic reactions. Try adding a small amount of a new texture to a preferred texture (for example, dip a favorite crunchy chip into some soft hummus). If the small amount is accepted, add slightly more each time the preferred food is offered. The same can be done with new flavors. It often takes as many as 10-15 introductions to a new food before a child will eat it. The standard advice of 10-15 introductions to a new food may need to be multiplied for a child with a difficult beginning. It's okay if the new food just sits on your child's plate. This will give your child a chance to touch and smell the food.

Helping with meal preparation will give your child further chances to explore new foods. Eating may come later. Sit at the table together for family mealtimes as often as possible. Kids are more likely to eat if they see others doing the same. That is especially true when they are fed in the presence of other kids who are eating, and is often how they acquire a liking for a new food. Use "taste plates" or "no thank you plates."

Try offering picky eaters a special "taste plate" next to their regular plate. Put the foods your child enjoys on her regular plate, and small amounts of new foods (like those others are eating at the table) on the "taste plate." But be sure to give her an out by placing a small, empty "no thank you" plate on the table so she can move non-desired items off her own plate. In this way, you can begin to gain a sense of your new child's preferred foods. Don't put expectations on your child for actually tasting foods on the "taste plate." Let her explore at her own pace. Increase your child's appetite. Generally, kids are more likely to eat if they are hungry.

Try these techniques to increase their appetite:

Encourage your child to be active before meal time – if possible, time outside in fresh air stimulates appetite. Offer several smaller meals throughout the day rather than three larger meals. Follow a routine for meal times and bedtime. If your child tends to fill up on fluids, offer drinks at the middle or end of a meal. Hold the praise. Lots of praise for trying new foods or finishing a meal can actually backfire. If your child realizes how important his eating is to you, he may use it to gain the upper hand at mealtimes. A nonchalant attitude from you may actually work best.

Children Who Hoard Food

Hoarding food is a common behavior in children who have been deprived of adequate sustenance early in life. It can manifest in many ways, including hiding food around the house, overeating to the point of throwing up, or becoming extremely anxious at having to wait for meals to be prepared. A child may also become very upset upon seeing someone else eating. Although hoarding may be directly related to the child's history with food, it can also signal difficulties with control and trust. Children communicate their needs through behavior. Hoarding may be a sign that your child does not yet trust that his needs will be met. It could also be an indication that he has micronutrient deficiencies and is craving foods that contain nutrients that his body is lacking.

Utilizing Ellyn Satter's "Division of Responsibility" can help your child feel more secure around food. Satter recommends that parents decide *what to eat*, *where to eat*, and *when to eat*. Children can decide if they want to eat and how much to eat. Battles around food may also be lessened by taking the time to discover a child's food preferences. Letting a child who tends to eat too much decide how much they want to eat can be hard for some parents. But keep in mind that children who are restricted from eating tend to eat more in the long run. Hoarding behaviors should be discussed with your child's treatment team and pediatrician.

In the meantime, the following suggestions may help the child feel more secure around food:

- Stick to a predictable routine for meals and snacks (roughly every 2-3 hours for toddlers and preschoolers and every 3-4 hours for older children)
- Don't yell, threaten, punish, withhold, or reward with food.
- Don't try to shame a child for the hoarding behavior. Threatening your child will never diminish or eliminate the urge to hoard food.
- Don't put locks on the kitchen cabinets.
- Consider giving your child her own accessible food cabinet to store snacks that are hers and hers alone. Let your child carry a snack in her backpack; it will give her security just to know it's there.
- Keep fruit out on the table during the day so your child knows food is always available.
- Don't eat off your child's plate, even if he appears to be finished. Remain calm and offer reassurances such as "there will always be enough."

Best Practice for Preparing Baby Formula and Food Safety

Infant formula: 7 steps to prepare it safely

Are you measuring your baby's infant formula correctly? Storing it properly? Keeping the utensils clean? To make sure, follow these seven steps.

By Mayo Clinic staff

You've chosen your baby's infant formula with care — but are you preparing it properly? Follow these steps to ensure proper nutrition and avoid food-related illness.

1. Check the expiration date and condition of the container

Look for an expiration or "use by" date on the formula container. If the expiration date has passed, you can't be sure of the formula's quality. Don't buy or use outdated infant formula.

While checking the expiration date, also inspect the condition of the formula container. Don't buy or use formula from containers with bulges, dents, leaks or rust spots. Formula in a damaged container might be unsafe.

2. Wash your hands

Before preparing formula, wash your hands thoroughly. Wet your hands with warm running water, then rub soap on your hands vigorously for at least 20 seconds. Wash all hand surfaces, including under your fingernails and in the spaces between your fingers.

3. Prepare your bottle

Sterilize bottles, nipples, caps and rings before using them for the first time:

- Boil the bottle and accessories in water for five minutes. Use a pot that's large enough to hold all of the pieces and cover them completely with water.
- Remove the pieces from the water using a clean set of tongs.
- Allow the pieces to air-dry.

After the first use, there's no need to sterilize your bottle and accessories. Simply wash these items with soap and water and allow them to air-dry. Bottle and nipple brushes can help you clean nooks and crannies. You can also use the dishwasher. If you do so, consider getting a dishwasher-safe basket to hold your utensils.

Also, during the cleaning process, make sure the nipples are open. Hold each nipple upside down and fill it with clean water, then look for the water to drip slowly out of the nipple.

Remember to clean formula containers, too. Before opening a new container, wash the top with soap and water, then rinse well.

If you plan to prepare formula in the bottle, confirm the measuring marks on each bottle. Simply use a liquid measuring cup and water to make sure the measurements on the bottle are accurate.

Add water to liquid-concentrate or powdered formula

If you're using liquid-concentrate or powdered formula, you'll need to add water to the bottle. Check to see if the manufacturer's instructions specify whether to add water or formula to the bottle first. Typically, you'll add water to the clean bottle first to ensure you're using the proper amount.

Follow the manufacturer's instructions for how much water to use. Adding too little water can put a burden on your baby's digestive system, and adding too much water might overly dilute the formula and deprive your baby of calories and nutrients.

You can use any type of clean water — tap or bottled — to prepare liquid-concentrate or powdered formula. If you'd like to use tap water but you're concerned about the safety of your water supply or you use private well water, consider sterilizing the water before adding it to the bottle:

- Use cold tap water.
- Let the cold water run for as long as it takes to get as cold as it gets — up to two minutes. This helps reduce the amount of lead and other contaminants in the water.
- Pour the cold water into a clean pan and boil it for one to two minutes.
- Let the water cool.
- Carefully pour the amount needed.

You might also have well water checked for lead, nitrates and bacteria.

It's also important to consider the amount of fluoride in the water you use to prepare your baby's liquid-concentrate or powdered formula. Exposure to fluoride during infancy helps prevent tooth decay during infancy. However, regularly mixing a baby's formula with fluoridated water might increase your child's risk of developing faint white markings or streaks on the teeth — a sign of mild enamel fluorosis.

If you're concerned about fluorosis, consider ways to minimize your baby's exposure to fluoride. For example, you might use ready-to-feed formula or alternate between tap water and low-fluoride bottled water — such as purified, demineralized, deionized or distilled bottled water — for formula preparation. However, if you feed your baby only ready-to-feed formula or concentrated formula mixed with low-fluoride water, your baby's doctor might recommend fluoride supplements beginning at 6 months.

5. Measure the formula

For ready-to-use formula:

- Shake the container of formula well before opening it.
- Pour enough formula for one feeding into a clean bottle.
- Use only formula — don't add water or any other liquid.
- Attach the nipple and cap and shake well.

For liquid-concentrate formula:

- Shake the container of formula well before opening it.
- Pour the amount of formula for one serving into the bottle, which already contains the appropriate amount of water.
- Attach the nipple and cap and shake well.

For powdered formula:

- Use the scoop that came with the formula container. Make sure the scoop is dry.
- Determine the amount of formula you want to prepare, following instructions on the package. Note the number of scoops you'll need.

- Fill the scoop with powdered formula, shaving off any excess formula from the top of the scoop with the flat side of a knife — not a spoon or other curved surface.
- Pour the scoop or scoops into the bottle, which already contains the appropriate amount of water.
- Attach the nipple and cap and shake well.

6. Warm the formula, if needed

It's fine to give your baby room temperature or even cold formula. If your baby prefers warm formula:

- Place a filled bottle in a bowl or pan of hot, but not boiling, water and let it stand for a few minutes — or warm the bottle under running water.
- Shake the bottle after warming it.
- Turn the bottle upside down and allow a drop or two of formula to fall on your wrist or the back of your hand.
- The formula should feel lukewarm — not hot.

Don't warm bottles in the microwave. The formula might heat unevenly, creating hot spots that could burn your baby's mouth.

Shake the bottle well and feed the formula to your baby immediately. Discard any formula that remains in the bottle after a feeding.

7. Store formula safely

Store unopened formula containers in a cool, dry place. Don't store formula containers outdoors or in a car or garage, where temperature extremes can affect the quality of the formula.

If you're using ready-to-use formula, cover and refrigerate any leftover formula from a freshly opened container. Discard any leftover formula that's been in the refrigerator more than 48 hours.

If you prepare and fill several bottles of liquid-concentrate or powdered formula at once:

- Label each bottle with the date that the formula was prepared.
- Refrigerate the extra bottles until you need them — don't freeze them.
- Put the bottles toward the back of the refrigerator, where it's coldest.
- Discard any prepared formula that's been in the refrigerator more than 24 to 48 hours.
- Any formula left outside the refrigerator, or a cold cooler, for more than 2 hours is spoiled and should be thrown out. Food-borne illness in infants can be fatal (Ohio State University).

If you're unsure whether a particular container or bottle of formula is safe, throw it out.

Safety Issues

- **Formula preparation.** In most cases, it's safe to mix formula using ordinary cold tap water that's brought to a boil and then boiled for one minute and cooled. According to the World Health Organization, recent studies suggest that mixing powdered formula with water at a temperature of at least 70 degree C—158 degrees F—creates a high probability that the formula will not contain the bacterium *Enterobacter sakazakii*—a rare cause of bloodstream and central nervous system infections. Remember that formula made with hot water needs to be cooled quickly to body temperature—about 98 degrees F—if it is being fed to the baby immediately. If the formula is not being fed immediately, refrigerate it right away and keep refrigerated until feeding.
- **Bottles and nipples.** The Mayo Clinic says you may want to consider sterilizing bottles and nipples before first use. After that, you can clean them in the dishwasher or wash them by hand with soapy water.
- **Water.** Use the exact amount of water recommended on the label. Under-diluted formula can cause problems related to dehydration. Over-diluted formula will not provide adequate nutrition, and, if fed for an extended period of time, may result in slower growth.
- **Bottled water.** If consumers use non-sterile bottled water for formula preparation, they should follow the same directions as described for tap water above. Some companies sell bottled water that is marketed for infants and for use in mixing with infant formula. This bottled water is required to meet general FDA quality

requirements for bottled water. If the bottled water is not sterile, the label must also indicate this. Water that is marketed by the manufacturer as sterile and for infants must meet FDA's general requirements for commercial sterility.

- Formula warming. This isn't necessary for proper nutrition. The best way to warm a bottle of formula is by placing the bottle in a pot of water and heating it on the stove until warm (at body temperature). Never use microwave ovens for heating infant formulas. Microwaving may cause the bottle to remain cool while hot spots develop in the formula. Overheated formula can cause serious burns to the baby.
- "Use by" date. This is the date after which a package or container of infant formula should not be fed to infants. It indicates that the manufacturer guarantees the nutrient content and the general acceptability of the quality of the formula up to that date. FDA regulations require this date on each container of infant formula.
- Freezing formula. This is not recommended, as it may cause a separation of the product's components.
- Formula changes. Always look for any changes in formula color, smell, or taste. If you buy formula by the case, make sure the lot numbers and "use by" dates on the containers and boxes match. Also, check containers for damage, and call the manufacturer's toll-free number with any concerns or questions. You may contact FDA (see below.)

Reporting Infant Formula Problems and Concerns

- For general complaints or concerns, contact FDA at 1-888-INFO-FDA (1-888-463-6332): or by the Internet at [MedWatch](#)³
- To report a serious harmful effect or illness, have your health care provider contact FDA's MedWatch hotline at 1-800-FDA-1088, or at [MedWatch](#)⁴
- Health care providers looking to report infectious diseases in infants associated with use of infant formula should call the Centers for Disease Control and Prevention's Division of Healthcare Quality Promotion at 1-800-893-0485.
- Consumers may report an illness, injury or other problem believed to be related to infant formula by calling FDA at 1-800-FDA-1088 or visiting [medwatch online voluntary reporting](#).⁵
- Notify manufacturers about problems, complaints, or injuries caused by their products by calling the toll-free telephone numbers listed on their product labels.

This article appears on [FDA's Consumer Update page](#)⁶, which features the latest on all FDA-regulated products.

Consumer Food Safety

(Taken from the International Food Information Council Foundation)

Consumers expect food that they buy in supermarkets to be as free as possible from bacteria. However, none of the control measures currently in use can completely remove one hundred percent of the microorganisms present in food. That's why good sanitation and careful food handling and preparation by everyone in the food system will always be necessary to prevent foodborne illness.

Attention surrounding outbreaks of *Escherichia coli* O157:H7, *Salmonella*, *Listeria monocytogenes* or other pathogenic bacteria has increased consumer awareness of the potential microbiological risks in food. Government regulators, public health authorities, health professionals, scientists, consumer groups and the food industry all agree that prevention of foodborne illness is a primary food safety goal.

What Can We Do To Keep From Getting Sick?

Most foodborne illness can be prevented through some simple food handling and storage steps. All it takes is a little know-how.

It is important for consumers to think about food safety at each step, from shopping, to cooking, to cleaning, to storing leftovers to help avoid foodborne illness. The following are general rules for handling food safely in your kitchen:

When you shop:

- Take food straight home to the refrigerator.
- Don't buy anything you won't use before the use-by or sell-by date.
- Buy perishable foods last and take them straight home to the refrigerator.



At home:

Chill: Refrigerate promptly.

- Refrigerate or freeze perishables, ready-to-eat foods and leftovers within two hours of purchasing or preparation. Make sure the refrigerator is set no higher than **40°F** and the freezer is set at **0°F**.
- Freeze fresh meat, poultry or fish immediately if you can't use it within a few days.

- Put packages of raw meat, poultry or fish in a shallow pan before refrigerating so their juices won't drip onto other food.
- If possible, leave a product in its store wrap; if a package is too large, divide the contents into smaller portions, and wrap and freeze what you don't plan to cook right away.

Clean: Wash hands and sanitize food-contact surfaces often.

- Wash your hands with hot soapy water before and after preparing food. Be sure to wash your hands after using the bathroom, changing diapers and playing with pets.
- Wash kitchen towels often in the hot-cycle of your washing machine; avoid sponges or put them in the dishwasher daily to kill bacteria.
- Wash your cutting boards, dishes, utensils and counter tops with hot soapy water after preparing each food item and before you go on to the next food item.
- To kill bacteria, sanitize food-contact surfaces and cooking utensils with a solution of 1-3 tablespoons of household chlorine bleach per gallon of water.

Separate: Avoid cross-contact.

- Cut vegetables or salad ingredients first, then raw meat and poultry.
- Wash cutting boards, utensils and counter tops with hot soapy water after cutting raw meat and poultry products and before slicing vegetables or salad ingredients.
- Keep raw meat, poultry, eggs and seafood and their juices away from ready-to-eat foods.
- Never place cooked food on a plate that previously held raw meat, poultry, eggs or seafood unless the plate has been thoroughly cleaned between uses.
- Do not use a sponge to soak up meat and poultry juices. Use disposable paper towels.

Cook to proper temperatures:

- Thaw food in the refrigerator or microwave, not on the kitchen counter; marinate in the refrigerator.
- Use a clean meat thermometer to measure the internal temperature of cooked foods to make sure meat, poultry, casseroles and other foods are cooked all the way through.
- Cook ground beef, including meatloaf, to at least **160°F**. At this temperature there is usually no pink left in the middle.
- Cook whole poultry and poultry parts to **165°F**.
- Cook beef, veal and lamb roasts and beef, veal and lamb steaks to an internal temperature of at least **145°F**, which is slightly pink in the center.
- Pork should also be cooked to an internal temperature of **145°F** and allowed to rest away from the heat source for at least three minutes before carving and eating.
- Cook fish until it is opaque and flakes easily with a fork.

- Cook eggs until both the yolk and white are firm.
- Reheat sauces, marinades, soups and gravy to a rolling boil. Heat other leftovers thoroughly to at least **165°F**.

Tips on Cooking in the Microwave

- Always follow the manufacturer's microwave instructions thoroughly.
- Cover the dish with a lid or plastic wrap to allow steam to build in the product. Use a food thermometer to read temperatures at different locations in the product.
- Follow the same temperature recommendations for conventional cooking such as **165°F** for chicken and chicken products.
- Arrange food evenly to ensure uniform cooking.
- Stir, rotate or turn foods midway during the process to eliminate any possible 'cold spots'.
- Observe the 'standing time' as cooking continues and is completed during this time.

Health and Hygiene
1 hour

Test for Nutrition and Foster Children

1. What does Failure to Thrive mean? _____

2. List three things that contribute to malnutrition.

- a. _____
- b. _____
- c. _____

3. List two nutritional deficiencies as a result of malnutrition.

- a. _____
- b. _____

4. What vitamin nutrient assists with the body's absorption of iron? _____

5. What are some ways you have handled food hoarding in the past? _____

After reading the above materials do you believe your methods were healing and what changes would you make in the future?

6. Giving a child the food they refused to eat the night before is not considered punishment? True / False

7. Using dessert as a reward is the best way to ensure a child will eat a balanced meal? True / False

8. Once a child learns they are open to have food whenever they want in the foster home their stress will be lessened? True / False

9. What is the purpose of a “taste plate” and “thank you plate”? _____

10. Force feeding is acceptable if a child is refusing to eat? True / False

Test for Best Practice for Preparing Baby Formula and Food Safety

1. It is recommended that brand new bottles, caps, rings, and nipples be sterilized with boiling water for five minutes before use.

True / False

2. The water used to make formula should be boiled for 1-2 minutes or 70 degrees Fahrenheit.

True / False

3. If using tap water it is best to let the water run for two minutes to help eliminate lead and other contaminants.

True / False

4. The best way to warm formula includes all of the following **except**:

A. Putting the bottle in the microwave for less than 30 seconds

B. Place the bottle under warm running water

C. Place the bottle in a bowl or pan of hot but not boiling water

5. It is recommended and best to do the following with formula after the baby has just finished the bottle;

A. Unscrew the lid wash the nipple and cap, recover and put in the refrigerator

B. Discard the remaining formula

C. Place the cap on the unfinished portion and place in the refrigerator

6. If you pre-make formula bottles with powdered formula they should be kept no longer than;

- A. 24 hours
- B. 36 hours
- C. 48 hours

7. Formula should not remain from under refrigeration or a cooled pack for more than the following;

- A. 5 hours
- B. 1 ½ hours
- C. 2 hours

8. The four rules in safe food handling and storage steps include;

- a) _____, refrigerate promptly;
- b) _____ wash hands and sanitize food-contact surfaces often;
- c) Separate, _____;
- d) _____, to proper temperatures.

9. Perishables, ready-to-eat foods and leftovers should be refrigerated or frozen within _____ hours of purchasing or preparation.

10. Sponges should be _____ or put in the dishwasher or microwave _____ to kill bacteria.

11. Do not use a _____ to soak up meat and poultry juices. Use disposable paper towels.

12. Use a clean _____ to measure the internal temperature of cooked foods to make sure meat, poultry, casseroles and other foods are cooked all the way through.

Primary Foster Parent Signature

Date

Health and Hygiene
1 hour

Test for Nutrition and Foster Children

11. What does Failure to Thrive mean? _____

12. List three things that contribute to malnutrition.

d. _____

e. _____

f. _____

13. List two nutritional deficiencies as a result of malnutrition.

a. _____

b. _____

14. What vitamin nutrient assists with the body's absorption of iron? _____

15. What are some ways you have handled food hoarding in the past? _____

After reading the above materials do you believe your methods were healing and what changes would you make in the future?

16. Giving a child the food they refused to eat the night before is not considered punishment? True / False

17. Using dessert as a reward is the best way to ensure a child will eat a balanced meal? True / False

18. Once a child learns they are open to have food whenever they want in the foster home their stress will be lessened? True / False

19. What is the purpose of a “taste plate” and “thank you plate”? _____

20. Force feeding is acceptable if a child is refusing to eat? True / False

Test for Best Practice for Preparing Baby Formula and Food Safety

13. It is recommended that brand new bottles, caps, rings, and nipples be sterilized with boiling water for five minutes before use.

True / False

14. The water used to make formula should be boiled for 1-2 minutes or 70 degrees Fahrenheit.

True / False

15. If using tap water it is best to let the water run for two minutes to help eliminate lead and other contaminants.

True / False

16. The best way to warm formula includes all of the following **except**:

- A. Putting the bottle in the microwave for less than 30 seconds
- B. Place the bottle under warm running water
- C. Place the bottle in a bowl or pan of hot but not boiling water

17. It is recommended and best to do the following with formula after the baby has just finished the bottle;

- A. Unscrew the lid wash the nipple and cap, recover and put in the refrigerator
- B. Discard the remaining formula
- C. Place the cap on the unfinished portion and place in the refrigerator

18. If you pre-make formula bottles with powdered formula they should be kept no longer than;

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19. Formula should not remain from under refrigeration or a cooled pack for more than the following;

- A. 5 hours
- B. 1 ½ hours
- C. 2 hours

20. The four rules in safe food handling and storage steps include;

- a) _____, refrigerate promptly;
- b) _____ wash hands and sanitize food-contact surfaces often;
- c) Separate, _____;
- d) _____, to proper temperatures.

21. Perishables, ready-to-eat foods and leftovers should be refrigerated or frozen within _____ hours of purchasing or preparation.

22. Sponges should be _____ or put in the dishwasher or microwave _____ to kill bacteria.

23. Do not use a _____ to soak up meat and poultry juices. Use disposable paper towels.

24. Use a clean _____ to measure the internal temperature of cooked foods to make sure meat, poultry, casseroles and other foods are cooked all the way through.

Secondary Foster Parent Signature

Date

