

TAKE ACTION!

Nutrition for Infants >



INFANT FEEDING PRACTICES

Infants must be guided through many feeding transitions and foods should be introduced when developmentally appropriate. While there are many different approaches to feeding infants, this guide details recommendations from the American Academy of Pediatrics (AAP), the Institute of Medicine (IOM) and the USDA.

recommendations

- Always hold infants in your arms or sitting up on your lap while feeding; do not prop a bottle
- No food or drink other than breast milk or formula should be served in a bottle
- Allow infants to self-regulate their intake
- Have infants eat with other children when possible
- Support self-feeding skills such as:
 - finger-feeding food served in the appropriate size and texture
 - being introduced to cups and utensils (fork and spoon)

why?

- Allowing an infant to lie down alone with a bottle is dangerous. It may lead to choking, ear infections or dental problems
- Food added to a bottle (e.g., infant cereal) does not help infants sleep, and the practice deprives them of the opportunity to learn to regulate food intake and may contribute to tooth decay
- Children will eat when they are hungry and stop when they are full. They are in tune with their bodies and hunger cues. Look for signs of hunger and fullness to determine when to offer food and when to stop feeding
- Mealtime is a social experience and infants learn from other children
- Self-feeding helps a child explore different sensory experiences. The child can play with and feel crumbly, rough, wet, squishy, spongy and slippery textures. Foods also provide different sounds, smells and tastes
- Using forks, spoons and cups are opportunities for a child to learn how to use tools, which is important as the child grows and starts to draw with crayons, write with pencils and cut with scissors
- A child practicing and learning self-feeding skills is also improving:
 - back, arm and hand strength
 - arm and hand coordination
 - hand-eye coordination



signs of hunger

- Rooting – a reflex in newborns that makes them turn their head toward a breast or bottle to feed
- Sucking on fingers or a fist
- Moving, licking or smacking of lips
- Fussing or crying
- Excited arm and leg movements

signs of fullness

- Sealing lips together, decreasing sucking, spitting out or refusing the nipple, pushing or turning away from the breast or bottle
- Milk begins to run out of the infant's mouth
- Leaning back
- Turning away
- Pushing food out of mouth
- Playing with food
- Pushing the bottle or spoon away

introducing infant foods

The decision to feed specific foods should be made by the parent and primary care physician.

do this...

- Communicate with parents when and how to introduce age-appropriate solid foods:
 - introduce solid foods (iron fortified infant cereal and fruits and vegetables) at 4-6 months; however, the American Academy of Pediatrics strongly recommends waiting until 6 months
 - introduce meat and meat alternates at 8 months
 - serve fin fish (salmon, tuna, trout, cod, haddock, perch, tilapia) only after parents have introduced first with no problems
 - introduce breads and other grain products at 8-9 months when the risk of a reaction to wheat decreases

not this...

- Do not introduce solid food or fruit juice before 4 months because it may lead to:
 - a decrease in the intake of breast milk or formula
 - choking, digestive problems, food allergies or intolerances
- Do not wait longer than 6 months to introduce solid foods because it may lead to:
 - inability to accept different food textures
 - reduced motor development (e.g., chewing)
 - decreased nutrient intake

See Appendix C for the CACFP Infant Meal Pattern

introducing solid foods

Developmental readiness is often linked with an infant's age and size; however, these should not be the only considerations for feeding.

Signs to look for:

- Good neck and head control
- Not using the tongue to push solid objects out of the mouth (tongue thrust reflex)
- Drawing in the lower lip when a spoon is removed
- Signs of hunger after breast milk or formula

Introduce foods one at a time

Single-ingredient solid foods should be introduced one at a time, with each food provided for a few days before a new food is introduced. This gives the infant time to get used to each flavor and texture, and to identify if there are any adverse reactions such as food allergies or intolerances.

sample policy

- Our child care center will work with families to gradually introduce solid foods to infants between 4-6 months based on their developmental readiness. We want to ensure that foods are introduced when appropriate so there are no negative consequences.

INFANT BEVERAGES

serve these...

- Breast milk
- Iron-fortified infant formula, including soy-based formula

instead of these...

- Fruit juice
- Cow's milk, lactose-free milk or nutritionally equivalent nondairy beverages such as soy or rice milk for infants less than 12 months (unless medically necessary)

why?

Breast milk

- Meets all nutritional needs of an infant and promotes health and development
- Protects infants from many illnesses and diseases including diarrhea, respiratory disease, SIDS, allergies and ear infections
- Reduces the risk of childhood obesity
- Is associated with improved mental development

Iron-fortified infant formula

- Is an acceptable alternative to breast milk and is specially formulated to have the right balance of nutrients
- Includes iron, a very important nutrient during the first year
- Does not protect infants against illness and disease as well as breast milk

Fruit juice

- Provides fewer nutrients and less fiber than whole baby food fruits and vegetables because much is lost during processing
- Too much can be linked to becoming overweight or obese; also associated with tooth decay and diarrhea
- Cow, lactose-free, soy and rice milk do not contain the right amounts of nutrients infants need and can harm their health

The American Academy of Pediatrics (AAP) recommends exclusive consumption of breast milk for at least the first six months of life. In addition, breast milk is the best source of milk for infants for at least the first 12 months.

breastfeeding support & promotion

recommendation

A clear message should be provided to families, staff and visitors that breastfeeding is accepted at your facility and efforts are made to provide a comfortable environment for breastfeeding.

why?

Breastfeeding mothers often cite embarrassment or a perceived lack of support. It is important to recognize that mothers may have strong feelings about breastfeeding when separated from their babies. Breastfeeding support should be provided as a means to increase confidence in you as their child care provider.

how?

- Post “Breastfeeding and breast fed babies are welcome here” messages or posters

- Create a private, quiet and comfortable place for mothers to breastfeed their child (see box, Furnishing a Lactation Room)
- Train all staff in breastfeeding support and promotion, and in the proper storing, handling and feeding of breast milk (see Appendix A)
- Ask a nursing mother what you should do if her baby is hungry and she is late or her supply of expressed breast milk is gone. Can you use center-provided formula or should you wait until mom arrives?

Ten Steps to Breastfeeding-Friendly Child Care Centers Resource Kit

View and download at www.dhs.wisconsin.gov/health/physicalactivity/pdf_files/BreastfeedingFriendlyChildCareCenters.pdf



furnishing a lactation room

- Private room with a lock on door
- Electrical outlet
- Chair
- Small table
- Waste basket
- Nearby sink with running water
- Nearby refrigerator or storage space for small cooler

sample policies

- Breast milk or iron-fortified infant formula will be served to infants less than 12 months.
- A refrigerator is available for storage of expressed breast milk and staff is trained on how to properly store, handle, prepare and feed breast milk to infants.
- Juice will not be served to infants less than 12 months.
- **To support breastfeeding:**
 - A comfortable, private area is provided to encourage and support breastfeeding mothers
 - Bottles will not be given when a mother is expected for breastfeeding
 - Staff is trained on how to work with breastfeeding mothers and how to properly handle breast milk

infant cereal

serve these...

- Iron-fortified infant cereal

instead of these...

- Commercially prepared cereal mixtures (cereal with fruit)
- Low-iron infant cereals
- Cereals designed for older children and adults
- Sweetened grains/baked goods for breakfast (e.g., donuts, cinnamon rolls, toaster pastries, muffins)

why?

- Iron-fortified infant cereal is a good first solid food because it is easy to digest and contains the iron that infants need for proper growth and development
- Commercially prepared cereal mixtures and cereals for older children and adults are not recommended because they may contain:
 - a food item the infant has not tried
 - vitamins and minerals in forms or amounts not ideal for infants
 - small, hard pieces of food that could cause choking (e.g., raisins, dates, nuts, or uncooked whole grain flakes)
- Sweetened grains/baked goods are high in fat and sugar and may displace the iron-fortified infant cereal needed

Why Iron-Fortified?

Iron helps blood cells carry oxygen from the lungs to the rest of the body. If infants do not get enough iron, it can delay their growth and development.

type of infant cereal to feed

1. Rice cereal is usually the best choice for the first cereal
2. Oat and barley cereals can be added at 1-week intervals after rice cereal
3. Do not serve wheat cereal until 8 months because it is most likely to cause an allergic reaction

Texture Appropriate

To prevent choking, whole foods should be pureed, ground, mashed or finely chopped. Do not serve large chunks.

See the following pages for information on:

- Infant Feeding Practicespage 22
- Introducing Foods to Infantspage 23
- Foods Not Recommended for Infants.....page 29
 - Food Allergies/Intolerances
 - Choking Hazards



infant breads & grains

serve these...

- Age-appropriate whole grain bread and crackers at snack:
 - strips or small pieces of dry bread, toast or crackers
 - plain crackers without seeds, nuts or whole kernels, graham crackers made without honey
 - teething biscuits

instead of these...

- Sweetened grains/baked goods (e.g., cookies, cakes, muffins)
- Foods that present choking hazards (see page 29)

why?

- An infant's risk of having a reaction to wheat decreases at 8-9 months
- Sweetened grains/baked goods are high in fat and sugar



infant fruits & vegetables

serve these...

- Offer a variety of the following:
 - commercially prepared baby fruits and vegetables
 - fresh or frozen fruits and vegetables
 - canned fruits in their natural juices or water
 - canned vegetables with no added salt

instead of these...

- 100% fruit and vegetable juices, until at least 12 months
- Fruits and vegetables with added fat, salt, honey, sugars or other sweeteners (including baby desserts)
- Commercially prepared baby food dinners listing a fruit or vegetable as the first ingredient (e.g., sweet potatoes and turkey)
- Fried or pre-fried vegetables (French fries, tater tots, hash browns, onion rings)
 - pre-fried foods are items that have been fried and then frozen prior to packaging, even if they are prepared in a microwave or oven. These include:
 - ✗ refrigerated or frozen items, breaded or battered
 - ✗ most frozen potato products, even if the label does not say "fried"
 - ✗ frozen products described as "crispy" or "crunchy"
- Fruits and vegetables that present choking hazards (see page 29)

why?

- Baby food fruits and vegetables:
 - do not usually contain sweeteners or salt
 - contain fewer ingredients that could cause an allergic reaction
 - provide nutrients and fiber that may be lost when juice is processed
- Foods with added fat, salt, sugars and other sweeteners are not needed in infant diets and can prevent infants from developing a liking for the natural flavor of foods
- Commercially prepared baby food dinners do not specify the amount of fruit/vegetable in the product and may contain a new food that could cause an allergic reaction
- Fried or pre-fried vegetables are high in fat and salt

infant meats & meat alternates

serve these...

- Lean protein sources such as ground, well-cooked lean beef, pork, skinless chicken and turkey, fish, natural cheese, egg yolk, yogurt, legumes (e.g., kidney beans, black beans, garbanzo beans/chickpeas, lima beans, black-eyed peas, pinto beans, split peas, and lentils)

instead of these...

- Commercially prepared baby food combination dinners that include a meat component (e.g., turkey and rice)
- Processed meats such as bacon, beef jerky, bologna, hot dogs, liverwurst, pepperoni, sausage, Polish sausage
- Fried or pre-fried breaded meats including chicken nuggets, chicken patties, corn dogs, fish sticks
- Meat and meat alternates that present choking hazards or food allergies (see page 29)

SEAFOOD

Serve **fin fish** (salmon, tuna, trout, cod, haddock, perch, tilapia) only after parents have introduced first with no problems.

Shellfish (shrimp, lobster, crab, crawfish, scallops, oysters, clams) should not be served to infants less than 12 months because they may cause allergic reactions.

why?

- Lean protein sources have less trans fat, saturated fat, calories and salt than processed, fried or pre-fried breaded meats. Eating lean protein may decrease the risk of becoming overweight or obese and help to prevent heart disease, high cholesterol and high blood pressure
- Fish is an excellent source of lean protein. The benefits from eating a variety of fish outweigh the risks associated with mercury found in some fish. Also, because it contains healthy fats, fish is recommended for growth and development in early infancy and childhood
- Commercially prepared baby food dinners listing a meat or meat alternate as the first ingredient do not specify the amount of meat or meat alternate in the product and may contain a new food that could cause an allergic reaction

sample policies

To promote the health and wellness of infants:

- Iron-fortified infant cereal will be served to ensure proper growth and development
- Sweetened grains/baked goods will not be served at meals or snacks
- Fried or pre-fried vegetables and processed, fried or pre-fried breaded meats will not be served
- Fruit juice will not be served to infants less than 12 months
- Foods will be prepared in the appropriate textures

foods not recommended for infants

Do not feed infants foods that are choking hazards or may cause food allergies and intolerances

	Allergy	Choking Hazard*
Meat & Meat Alternate	<ul style="list-style-type: none"> • Egg Whites or Whole Eggs • Shellfish (shrimp, lobster, crab, crawfish, scallops, oysters, clams) • Peanuts or other nuts and seeds • Peanut butter or other nut or seed butters 	<ul style="list-style-type: none"> • Tough meat or large chunks of meat • Fish sticks or other fish with bones • Hot dogs, sausages or toddler hot dogs • Chunks of cheese • Peanuts or other nuts and seeds • Peanut butter or other nut or seed butters
Fruits & Vegetables	<p>Use caution before 12 months</p> <ul style="list-style-type: none"> • Citrus fruits (e.g., orange, tangerine, grapefruit) • Pineapple • Tomato juices or tomato products 	<ul style="list-style-type: none"> • Dried fruits and vegetables, including raisins • Hard pieces of raw fruit such as apple, pear or melon • Whole grapes, berries, cherries and cherry or grape tomatoes • Whole pieces of canned fruit • Raw vegetable pieces (e.g., carrots, green peas, string beans, celery, etc.) or hard pieces of partially cooked vegetables including cooked or raw whole corn kernels • Whole beans
Breads & Grains	<ul style="list-style-type: none"> • Wheat before 8 months 	<ul style="list-style-type: none"> • Potato or corn chips, pretzels or cheese twists • Cookies, granola bars or adult cereals • Crackers or breads with seeds, nut pieces or whole grain kernels • Whole kernels of cooked rice or barley
Other	<ul style="list-style-type: none"> • Honey and foods prepared with honey (e.g., honey graham crackers) should never be fed to infants less than 1 year because honey may contain botulism spores that can cause a serious food borne illness • Infants should not be served shark, swordfish, king mackerel or tilefish because they contain high levels of mercury which is harmful to infants 	

* **Choking Hazard:** Some foods are hard to control in the mouth and they can slip into the airway before being chewed properly. Do not feed infants foods or pieces of food that are the size or shape of a marble. Foods this size can be swallowed whole and could become lodged in a child's throat and cause choking.

SUCCESS STORY:

Farmers markets in early childhood education

At the REAL KIDS Early Childhood Education Center in Menomonee Falls, staff understands the challenge of getting children to try new foods, so they thought to spark some interest and enthusiasm they would get the children involved.

In order to successfully introduce local food from the farmers market into their meals, the staff decided they would bring the children to the farmers market.

The children and teachers walk to the local farmers market to purchase fresh produce. Children choose foods to use in the center's meals. Most meals are cooked from scratch, giving the children an opportunity to learn about different foods as they watch and assist in the cooking process. This participation in food selection and preparation serves as a great learning experience and gets children excited about trying new foods. Staff also models healthy eating habits and eagerly samples new foods, which influences the children to try new foods as well.

The center gradually began incorporating fresh produce from the farmers market, healthier foods and homemade meals into menus. To start, sandwiches were made with one slice of white bread and one slice of wheat, and whole-wheat and regular pasta were mixed. Introducing one new food each week gives children a chance to familiarize themselves with new foods.

Creating healthy homemade meals that incorporate fresh foods from the local farmers market promotes nutrition education and physical activity, in addition to introducing new nutritious foods into the children's lives.

— Maggie Smith, R.E.A.L. K.I.D.S., Menominee Falls