

Infant Feeding and Food Safety



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Program Agenda

- History of infant feeding
- Breast feeding and child care
- Safe handling of breast milk and formula
- Introducing solids
- Minimizing choking hazards
- Safe diapering



History of Infant Feeding

- Prior to mid-1800's, breastfeeding was the norm
- However, between 1500 and the late 1700s it was not fashionable for wealthier women in western countries to nurse their babies.
- Often, families hired another woman, called a wet nurse, to feed the baby.



Beginnings of Formula

- Before 1800s: Widespread attempts to make a substitute for breast milk before this time were met with disastrous results.



Mid-19th Century



- A liquid containing wheat and malt flour was mixed with cow's milk, cooked with bicarbonate of potash, and billed as the "perfect infant food."

Early 1900's

- Great improvements in sanitation.
- Most infants were breast-fed, often with some formula feeding as well.
- Availability of the home icebox
- Feeding of orange juice and cod liver oil greatly decreased the incidence of scurvy and rickets.



1930s to 1940s

- A typical home-prepared evaporated milk formula, as prepared in 1949 included evaporated milk, water and carbohydrate, usually in the form of corn syrup or sucrose.



1950's

- **1951:** The first non-powder infant formula hit the shelves
- The developed world fully embraced artificial infant formula



1930's to 1960's

- Breast-feeding declined.
- Cow's milk and solid foods were introduced into the diet at earlier and earlier ages.
- Few infants were breast-fed or formula fed after 4–6 months of age.
- Iron deficiency was prevalent.



1970's to 2000

- Breast-feeding increased,
 - although the duration of breast-feeding was generally less than 6 months and was commonly accompanied by formula feeding.



What do we know now?



Supporting the Breastfeeding Mother



Breastfeeding benefits infants.



Breastfeeding benefits child care providers.

Breastfeeding benefits mothers.



Safe Practices for Breast Milk



How do I Store Breast Milk?

- Store milk in the main refrigerator or freezer compartment, away from the door.
- Use milk that has been in the refrigerator or freezer the longest first.
- Use within 48 hours.
- Label each bottle with the child's name, date and time received.



Safely Thawing Breast Milk

- Thaw frozen breast milk by transferring it to the refrigerator or by swirling it in a bowl of warm water.
- Avoid using a microwave to thaw or heat bottles of breast milk .
- Do not re-freeze breast milk.
- Use breast milk within 24 hours after thawing



Freezer Storage of Breast Milk

Location	Temperature	Duration
Freezer compartment of a refrigerator	5°F	2 weeks
Freezer compartment of a refrigerator with separate doors	0°F	3-6 months
Chest or upright deep freezer	-4°F	6-12 months

Safe Bottle Feeding

- Wash your hands!
- Clean bottles and nipples after every use.
- Sterilize bottles and accessories in boiling water.
- Sterilize in dishwasher.



Safe Formula Feeding

- Select cans of formula carefully.
- Wash off tops of cans.
- Store cans of infant formula in a cool, indoor place.



Safe Formula Feeding

- Tightly cover and place cans of liquid formula directly in the refrigerator after filling the bottle.
- Open cans of liquid ready-to-use formula will remain safe for up to 48 hours.
- Prepared infant formula should be used within 24 hours.
- Observe the “use by” and “expiration” dates on formula cans.

Do I need to
boil water
first before
preparing
formula?



Can I freeze formula?



Can I reuse breast milk or formula left in the bottle?



Warming Bottles Safely

- Stovetop heating
- Hot running water
- Bottle warmer
- Microwave heating?



Is it OK to add cereal to an infant's bottle?



Can I give cow's milk to an infant?

Do Babies Need Extra Water?



What is BPA and do I need to worry about it?



Reduce babies' exposure to BPA:

- Discard scratched baby bottles and infant feeding cups.
- Temperature matters.
- Check the labels on your bottles and food preparation containers.



When are babies ready to eat solid foods?



What order should solid foods be introduced?



Feeding Baby Solids

- Serve baby only from a dish.
- Use clean utensils.
- Use a clean spoon if more is needed from a jar.
- Throw out any leftover food in the dish.
- Refrigerate and date after opening.



Commercially Prepared Baby Food

- Watch use-by dates
- For jars: Make sure that the safety button on the lid is down.
- For plastic pouches: Discard any packages that are swelling or leaking.
- Date containers after opening.
- Throw out any opened containers that have been stored for more than 2 days.

Safe Microwaving of Solid Foods

- Don't microwave baby foods in the jar.
- Microwave 4 ounces of solid food in a dish for about 15 seconds on high power. Always stir, let stand 30 seconds, and taste-test before feeding.
- Don't heat baby-food meats, meat sticks or eggs in the microwave.



Making Your Own Baby Food

- Wash your hands!
- Scrub all working surfaces with soap and hot water.
- Scrub all equipment with soap and hot water, and rinse well.



Making Your Own Baby Food

- Prepare fresh fruits or vegetables by scrubbing, paring or peeling, and removing seeds.
- Prepare meats by removing all bones, skin, connective tissue, gristle and fat.
- Cook foods, when necessary, boiling them in a small, covered saucepan with a small amount of water until tender.
- Puree food using a blender, food processor, baby food grinder, spoon or fork.

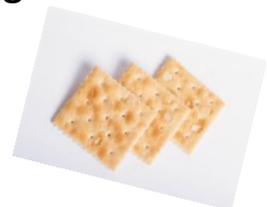


Should I avoid certain foods if I make my own baby food?

When are infants able to feed themselves?



When are babies ready for finger foods?



Choking Hazards:

- Popcorn
- Peanuts
- Raisins, whole grapes
- Uncut, stringy meats
- Hot dog pieces
- Hard, raw fruits or vegetables
- Chunks of meat, cheese or any other hard-to-chew foods
- Sticky foods



Household Items to Watch

- Coins
- Toys with small parts
- Small balls and marbles
- Balloons
- Arts and crafts material
- Ballpoint pen caps
- Watch batteries
- Jewelry



Choking Prevention Tips

- For infants up to age 1, cut up foods into small pieces no larger than $\frac{1}{4}$ inch.
- Toddlers generally can eat foods cut into $\frac{1}{2}$ inch pieces or slightly larger.
- Watch infants and young children when they are eating.



Drinking from a Cup

- Hold the cup for the young baby;
- Introduce small amounts of breast milk, infant formula, fruit juice, or water in a cup
- Feed very slowly, i.e., tilting the cup so that a very small amount of liquid (one mouthful) leaves the cup; then the baby can swallow without hurry.



Should infants be fed fruit juice?



When can I serve low-fat milk to a child?



Reducing Risk for Allergies:

- Exclusive breastfeeding for at least 4 months decreases the incidence of atopic dermatitis, cow's milk allergy and wheezing in early life.
- The use of soy-based infant formula does not appear to play a role in allergy prevention.
- Solid foods should not be introduced before 4 to 6 months of age.

Why shouldn't I feed honey to infants?



Handwashing:

Your First Step in Keeping Children Safe

- Our hands can pick up bacteria and spread bacteria to babies and other children in our care - for example, from:
 - Diapers containing feces and urine
 - Raw meat, poultry, seafood, and eggs
 - Pets, such as dogs, cats, turtles, snakes, birds, and lizards.
 - Soil



According to a study on mothers with infants less than four months old:

- 41% didn't wash after petting animals;
- 32% didn't wash after changing the baby's diaper;
- 15% didn't wash after using the bathroom;
- 10% didn't wash after handling raw meat;
- 5% didn't wash after gardening or working with soil.

What is the difference between “Disinfecting” and “Sanitizing?”



Disinfecting Solution

- If you are mixing your own disinfecting solution, The National Health and Safety Performance Standards for Child Care recommend 1/4 cup bleach in 1 gallon water.
- Mix fresh daily. And never mix bleach with anything other than water. A poisonous gas can result.



Safe Diapering

- Use the diapering area ONLY for diapering.
- Changing tables should be cleaned and disinfected after each use.
- Always wash your hands and the child's hands— even if hands look clean.



Resources

- Mini-posters from National Food Service Management Institute
<http://www.nfsmi.org/ResourceOverview.aspx?ID=45>
- Keeping Kids Safe Booklet from USDA
<http://www.fns.usda.gov/tn/resources/appendix.pdf>
- Care Connections National Food Service Management Institute
<http://www.nfsmi.org/ResourceOverview.aspx?ID=339>



References

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- American Academy of Pediatrics – <http://healthychildren.org>
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- Infant Feeding in the 20th Century: Formula and Breastfeeding. J. Nutr. February 1, 2001 vol. 131 no. 2 409S-420S
<http://jn.nutrition.org/content/131/2/409S.full>
- United States Department of Health and Human Services - <http://www.hhs.gov/safety/bpa/>
- North Dakota Extension Publications: Safe Food for Babies and Children - <http://www.ag.ndsu.edu/pubs/yf/foods/fn716.pdf>, <http://www.ext.nodak.edu/food/factsheet/handling.pdf>, <http://www.ag.ndsu.edu/pubs/yf/foods/fn664.pdf><http://www.ag.ndsu.edu/pubs/yf/foods/fn664.pdf>
- University of Nebraska-Lincoln Extension publications: Food Safety for Families, Safe Handling of Formula, Safe Handling of Breast Milk



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