# Lincoln Pediatrics Adam Sergiwa, M.D.

# Formula (Bottle) Feeding

#### Should I use formula?

Breast milk is best for babies, but breast-feeding isn't always possible. You will need to use a baby formula if:

- You decide not to breast-feed.
- You need to stop breast-feeding and your baby is less than 1 year old.
- You need to occasionally supplement breast-feeding with formula (after breast-feeding is well established).

If you want to breast-feed but you think you are not making enough milk, don't stop breast-feeding. Talk to your health care provider or lactation nurse before you stop. Any bottle feeding, before breast-feeding has been well established, could reduce your supply of breast milk and make it difficult to continue breast-feeding.

#### What type of formula should I use?

If your child is less than 1 year old, discuss which formula to use with your health care provider.

Baby formulas are designed to give your baby all known essential nutrients in their proper amounts. Most formulas are made from cow's milk. A few are made from soybeans. Soy formula is used for babies who may be allergic to or have difficulty digesting the type of protein in cow's milk. The American Academy for Pediatrics recommends you use iron-fortified (not low-iron) formula to prevent anemia.

Most formulas are available in three forms: powder, ready-to-serve liquid, and concentrated liquid. Powder and ready-to-serve liquid are best if you are using it to supplement breast milk. You must mix concentrated liquid before using. It forces you to prepare 26 ounces at a time. Powder and concentrated liquid formulas are less expensive per feeding than ready-to-serve formulas.

## When can I give my baby regular milk?

Regular, whole cow's milk should not be given to babies before 12 months of age. This is due to increased risks such as iron deficiency anemia and allergies. Skim or low-fat milk should not be given to babies before they are 2 years old because the fat in whole milk is needed for rapid brain growth.

#### How do I prepare formula?

Mix concentrated liquid formula with water in a ratio of one to one. Mix each level scoop of powdered formula with 2 ounces of water. Never make the formula for your baby more concentrated by adding extra concentrated liquid or extra powder. Never dilute the formula by adding extra water. Careful measuring and mixing ensure that your baby receives the proper mix of formula.

### Do I need to boil the water first?

Most city water supplies are quite safe. If you make one bottle at a time, you don't need to use boiled water. When using tap water for preparing formula, use only water from the cold water tap. Let the water run for 2 minutes before you use it. (Old water pipes may contain lead-based solder and lead dissolves more in warm water or standing water.) Fresh, cold water is safe. After you prepare the formula with the cold water, you can heat the bottle to the right temperature. Ask your health care provider if you are not sure whether your water supply is safe for your baby.

If you have well water, you need to boil your water for 10 minutes (plus 1 minute for each 1000 feet of elevation above sea level) or use distilled water until your child is 6 months old.

If you prefer to prepare a batch of formula, you must use boiled or distilled water and closely follow the directions printed on the side of the formula can. This prepared formula should be stored in the refrigerator and must be used within 48 hours.

# Can I make my own formula?

If necessary, you can make your own formula temporarily from evaporated milk. (Evaporated milk formulas have some of the same risks as whole cow's milk, namely, iron deficiency anemia and allergies.) Mix 13 ounces of evaporated milk with 19 ounces of boiled water and 2 tablespoons of corn syrup. Place this mixture in sterilized bottles and keep the bottles refrigerated until use (up to 48 hours).

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#### What temperature does the formula need to be?

In the summertime, many children prefer cold formula. In the wintertime, most prefer warm formula. By trying formula at various temperatures you can probably find out what your child prefers. If you do warm the formula, check the temperature of the formula before you give it to your baby. If it is too hot it will burn your baby's mouth. Be especially careful if you heat the formula in a microwave because the formula can get too hot very quickly.

#### How often should I feed my baby?

Your health care provider will tell you when and how often to feed your baby. In general, your baby will probably need:

- 6 to 8 formula feedings per day for the first month
- 5 to 6 formula feedings per day from 1 to 3 months
- 4 to 5 formula feedings per day from 3 to 7 months
- 3 to 4 formula feedings per day from 7 to 12 months

If your baby is not hungry at some feedings, increase the time between feedings.

# How much formula should I give my baby?

Newborns usually start with 1 ounce per feeding, but by 7 days they can take 3 ounces. The amount of formula that most babies take per feeding (in ounces) can be calculated by dividing your baby's weight (in pounds) in half. For example, if your baby weighs 8 pounds, your baby will probably drink 4 ounces of formula per feeding. No baby should drink more than 32 ounces of formula a day. If your baby needs more than 32 ounces and is not overweight, consider starting solid foods. Overfeeding can cause vomiting, diarrhea, or excessive weight gain.

#### How should I hold the baby during feedings?

Feeding should be a relaxing time -- a time for you to provide both food and comfort for your baby. Make sure that both you and the baby are comfortable:

- Your arm supported by a pillow.
- Baby in a semi-upright feeding position supported in the crook of your arm. This position reduces choking and the flow of milk into the middle ear.
- The bottle tilted so that the nipple and the neck of the bottle are always filled with formula. (This prevents your baby from taking in too much air.)

#### How long should I feed my baby?

Gently remove the bottle from time to time to let your baby rest. A feeding shouldn't take more than 20 minutes. If it does, you are overfeeding your baby or the nipple is clogged. A clean nipple should drip about 1 drop per second when the bottle of formula is turned upside-down.

# Do I need to burp my baby?

Burping is optional. It doesn't decrease crying. Burping helps your baby spit up less. Air in the stomach does not cause pain. If you burp your baby, be sure to wait until your baby reaches a natural pause in the feeding process. Burping two times during feeding and for about a minute is plenty. More burping may be needed if your baby spits up a lot.

#### How long can I store formula?

Prepared formula should be stored in the refrigerator. It must be used within 48 hours. Prepared formula left at room temperature for more than 1 hour should be thrown away. At the end of each feeding, throw away any formula left in the bottle.

### Does my baby need to drink water?

Babies do not routinely need extra water. However, when they have a fever or the weather is hot they should be offered a bottle of water twice a day. Run the water from the tap for 2 minutes before you use it for drinking. Keep some of this water in your refrigerator.

#### Do I need to give my baby vitamins?

No. Baby formulas contain all the vitamins and minerals your baby will need.

#### Do I need to give my baby fluoride?

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From 6 months to 16 years of age, children need fluoride to prevent cavities. If the water supply where you live contains fluoride and your child drinks at least 1 pint of formula made with water each day, this should be enough. Otherwise, fluoride drops or tablets should be given. Formula-fed infants should receive fluoride supplements without vitamins. You can get a prescription for fluoride drops from your child's health care provider.

Another way you can help your baby's teeth is by making sure your baby does not sleep with a bottle. Milk, juice, or any sweetened liquid in the mouth can cause severe decay of your baby's first teeth. Liquids tend to pool in the mouth during sleep. The sugar in these drinks is changed to acid by bacteria in the mouth. The acid then etches the tooth enamel and causes decay.

Prevent tooth decay by not using the bottle as a daytime or nighttime pacifier. If you cannot stop the nighttime bottle or replace it with a pacifier, fill the bottle with water.

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