

## **Formula Feeding**

Infant formulas have been designed to meet the nutritional needs of your infant by providing all known essential nutrients in their proper amounts. Most formulas are derived from cow's milk. A few are derived from soybeans and are for infants who may be allergic to or have difficulty digesting the type of protein in cow's milk.

Most commercial infant formulas are available in three forms: powder, concentrated liquid, and ready-to-serve liquid. Powder and ready-to-serve liquid are the most suitable forms when formula is used to supplement breast milk. Powder and concentrated liquid formulas are less expensive per feeding than ready-to-serve formulas.

The majority of infant formulas contain lactose (milk sugar) as the only carbohydrate, just as breast milk does. Lactose aids digestion and promotes normal bowel function and healthy tissue formation.

A mixture of easily digested fats is also contained in the formulas. These help protect your baby's skin and aid the absorption and utilization of certain vitamins.

All known vitamins necessary for the development and growth of your baby are provided by infant formulas, including vitamin A for building body cells and good vision; the B vitamins for maintaining the nervous system, skin, and tissues; vitamin C for healthy gums and teeth; vitamin D for strong bones and teeth; and vitamin E for proper functioning of red blood cells.

Vital minerals such as calcium and phosphorus for developing bones and teeth, as well as iron for healthy blood and resistance to infection, are also among the nutrients supplied in formulas. The American Academy of Pediatrics recommends that all infants be given a commercial formula that is iron-fortified. These formulas do not contain enough iron to cause diarrhea, constipation, abdominal cramps, or any other symptoms. With iron-fortified formulas, no supplementary vitamins or minerals are needed.

## **Cow's milk**

Whole cow's milk should not be given to babies before 12 months of age because of increased risks of 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.

## **Preparing formulas**

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 more water than specified. Careful measuring and mixing ensure that your baby receives the proper concentration of formula.

If you use 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.

If you make one bottle at a time, you don't need to use boiled water. Just heat cold tap water to the preferred temperature. Most city water supplies are quite safe.

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.

## Formula temperature

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.

## Feeding your baby

**1. Schedules and amounts.** Your physician will tell you when and how often to feed your baby.

In general, your baby will probably need six to eight feedings per day for the first 3 weeks, five to six feedings per day from 1 to 3 months, four to five feedings per day from 3 to 7 months, and three to four feedings per day from 7 to 9 months. If your baby is not hungry at some feedings, increase the time between feedings.

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. Overfeeding can cause vomiting, diarrhea, or excessive weight gain.

**2. Position.** 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.)
- Talk to your baby and hold her close.

**3. Length of feeding.** 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 inverted.

- 4. Formula storage.** Prepared formula should be stored in the refrigerator and 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.

## **Extra Water**

Babies do not routinely need extra water. Formula provides all the calories and water they need. Supplemental water bottles only takes away extra calories they need for growth.