

## INFANT NUTRITION

Your baby's nutritional needs are great during the first year of life. It is important to get your baby off to the best start with a sound and sensible guide to good nutrition.

Feeding is one of your baby's most pleasant experiences. At feeding time, the baby receives nourishment from food and a feeling of security from the parent's loving care. It is important to remember that mealtimes should be relaxed as well as flexible. Each child has their own individual pace at which they accept new foods. It is also important to remember that a fat baby is not necessarily a healthy baby. Common feeding mistakes with babies include over-feeding, switching to cow's milk too soon, and starting solid foods at too early an age.

The following are nutritional guidelines to assist in providing a well-balanced diet for your child. Babies vary in the amount they will take at each feeding and the number of feeds, so the amounts suggested may vary with your individual child. Never force food on your child or expect them to finish every drop of milk. Babies are naturally self-regulating and will take all the food they can handle and need.

### FEEDING GUIDELINES FOR THE FIRST YEARS OF LIFE

This guideline is based on the official nutritional recommendations established by the Academy of Pediatrics. The timetable below represents a summary of the earliest times suggested for various feedings. Introduction of solids can be delayed until 6 months of age in cases where growth is adequate with either formula or breastmilk alone. Variations from the outline below may be suggested by your physician for specific reasons.

### YOUR BABY'S FEEDING NEEDS ARE UNIQUE

No book can tell you precisely how often your baby needs to be fed or how much they should take. As your baby grows, they will develop a regular timetable on their own and as you become familiar with his or her signals you will be able to schedule feedings around their schedule.

### MONTHS OF AGE

0-4 months	Breastmilk or iron-fortified formula.
2 months	Diluted juice (1 oz. juice with 3 oz. water) – apple, prune, or pear – No Citrus Juices <b>*Use juice only if recommended by your child's physician for constipation*</b> <b>* Do not exceed 1-2 ounces per day of diluted juice*</b>

4-5 months	Baby Cereal, Vegetables, Fruits
6-12 months	Meats, Milk Products (yogurt, cottage cheese, cheese), Eggs, Peanut butter

**\*NEVER GIVE HONEY TO INFANTS UNDER 1 YEAR OLD\***

### **BREASTFEEDING**

Breastfeeding is recommended for as long as possible, ideally through the first 12 months. If you stop nursing before 12 months, use infant formula until the 1<sup>st</sup> birthday.

Breast milk is very easily digested and provides adequate amounts of protein, sugar, fat, most vitamins (except Vitamin D) and iron for most infants. Your doctor will discuss supplementing with Vitamin D drops as early as your baby's first visit. Breastmilk passes quickly through the intestinal tract and seems to be digested more rapidly and easier than formula. Therefore, breast-fed babies may seem to require slightly more feedings, especially in the first few months of life. This is not because the breastmilk is "not rich enough" but because of its digestibility.

Breastmilk boosts your baby's immune system by delivering antibodies, immune factors, and white blood cells.

Breastfeeding is thought to reduce risk of Sudden Infant death Syndrome (SIDS) and lower the risk of obesity later in life.

### **BREASTFEEDING GUIDELINES**

Establish a pattern of breastfeeding based on your baby's signals and working around his or her needs.

Early signs of hunger include rooting or lip smacking. It is easier to get the baby to latch on to feed when showing these signs. **Crying is a late sign of hunger.**

Signals that your baby is full and is no longer interested in eating include:

- Moving away from the breast
- Dozing off
- Turning his or her head

In the first 2-6 weeks of life babies should have 8-12 feedings every 24 hours.

**During the first month** your baby should be fed throughout the day and night. If he or she is sleeping through the night right away they might not be getting enough to

eat. Wake them to feed every 4-6 hours until they are back up to birth weight. After that point they should wake up to feed when hungry.

Allow the baby to breastfeed until he or she seems full and satisfied in order to receive all the benefits of breastmilk. The longer they nurse the higher the fat content of the breastmilk they are drinking. Detaching before they are finished may throw off the breastfeeding rhythm of supply and demand.

Babies will generally feed adequately in 15-20 minutes. If your baby still acts hungry after feeding well on the first breast or wakes up during a diaper change, offer the other breast.

**Very long feedings** may indicate the baby is not latched on well or ingesting enough milk to be satisfied. Very long feedings may also indicate the baby has higher needs for sucking and is using you as a pacifier.

Babies experience at least two “growth spurts” in the early weeks. Even if you do not notice any outward growth, your baby’s body is changing in important ways and needs extra calories. More frequent breastfeeding will stimulate more milk production to meet increased calorie needs.

By 4-6 months of age the number of feedings usually decreases to 4-5 per day.

You will know whether your baby is getting the correct amount of milk by his or her weight. Most babies gain 4 to 7 ounces per week for the first 6 months. Any concerns about his or her weight should be reported to your doctor. If your baby is getting enough to eat, he or she should have at least 6 wet diapers and 1 bowel movement each day, however bowel movements may be variable.

### **BREASTFEEDING TIPS**

Breastfeeding does not happen by instinct as it does with other animals. The mother must understand the process to be successful. The following suggestions may help you.

#### **First – Relax**

- Breastfeeding gives a sense of warmth, closeness, and pleasure to both the baby and the mother. Try to be as relaxed as possible. If you are tense and nervous, it will interfere with the “milk let-down” and the flow of milk. Select a comfortable chair or lie down if you prefer.

#### **Helping the baby learn to suck – latching on**

- Press in and let go a few times on the areola (a-REE-oh-lah), the dark outer part of the nipple. The stroking will cause the baby to turn his or her head toward you to find the nipple.

- Teach your baby to “latch on” with his or her tongue down and mouth wide open.
- It will take a little time for the baby to learn how to get a large part of the areola into their mouth. Once they learn to do this they will start pressing on the areola with the tongue and gums while sucking on the nipple. This action will make the milk flow.

## **Breastfeeding your baby**

- At first, let your baby breastfeed on both breasts at each feeding. Sucking helps to stimulate milk supply.
- To keep the milk supply equal in both breasts, start with the opposite breast at each feeding. For example, at 8 a.m. let the baby nurse from the right breast, then from the left breast. At 11 a.m., start with the left breast, then the right breast.
- You can tell your baby has finished the first breast when the sucking slows down and your breast becomes soft. Then offer the second breast if your baby is interested.
- Every baby has his or her own way of breastfeeding. One baby may nurse quickly and finish both breasts in 10 minutes, while another may need to nurse 20 minutes on each breast.

## **Burping**

- The air that your baby swallows while breastfeeding must be brought up or “burped” to prevent stomach pain.
- To remove the air bubbles, sit your baby on your lap while supporting his or her head with your hand. With your other hand, gently pat or rub his or her back. After you hear a burp, continue feeding the baby. Usually, a little milk comes out with the burp, so have a clean cloth available.
- Burp your baby after finishing one breast and again after finishing nursing on the other side.

## **Supplemental feedings**

- Bottle feeding should be avoided, unless otherwise directed by a healthcare provider, during the first 4 weeks after birth because this is when you establish your milk supply. Good breast milk production depends on frequent emptying of your breasts.
- After your baby is 4 weeks old and nursing is well established, bottle feedings (preferably of breast milk) may be substituted for breastfeeding when you need to be away from the baby for a few hours.
- Your baby may be fed breastmilk or formula from the bottle. Doctors recommend that babies receive breast milk during the first 12 months.

## Pumped breast milk

- You can pump your breast milk and leave this milk to be fed to the baby while you are away.
- When pumping your breast milk, collect all the milk in one sterile container. Then pour the milk into sterile baby bottles in the amounts your baby usually takes at one feeding. Start with ½ ounce more per bottle and increase ½ at a time as needed.
- The breast milk may be refrigerated for up to 48 hours. It can be frozen in a refrigerator freezer for up to 4 weeks and in a freezer only unit for up to 6 months.
- Frozen milk should be thawed in a container of warm water. Keep thawed milk in the refrigerator. Discard any unused milk after 24 hours. **DO NOT** refreeze thawed milk.
- **Breast milk SHOULD NOT BE MICROWAVED.** Microwaving could destroy the parts of the milk that protect your baby from illness, and it could burn the baby's mouth.

## Formula

- Instead of using pumped breast milk, you may ask your doctor what formula is best for your baby and learn how to prepare it.
- It is best not to skip too many breast-feedings because your breasts will become engorged (very full), you will feel uncomfortable, and your milk supply will decrease.

**CAUTION: Infants under 1 year of age should not be fed honey or corn syrup. They may cause food poisoning in young infants.**

## Mother's nutrition

- Mothers who breastfeed should have more calories and protein each day than they would normally need. Eating an extra meal each day (such as a sandwich, a piece of fruit, and a glass of milk) adds more calories for energy and protein to the diet. Meat, fish, milk, and cheese are all high in protein.
- Many mothers naturally lose the extra weight gained during pregnancy while breastfeeding.
- Eating the right foods and drinking plenty of liquids will help keep milk production up. Drink enough liquids to keep your urine pale yellow.
- It is a convenient time to drink a glass of water or juice while you are sitting down to nurse your baby.
- The breastfeeding mother should keep alcohol and caffeine use to a minimum.
- Continue to take your prenatal vitamins while breastfeeding.

## **Menstruation**

- Your menstrual periods may stop during the time you are breastfeeding. However, if you do not want to become pregnant, ask your doctor to recommend the birth control method that is best for you.

## **Medications**

- You should not take any medicine or non-prescription drugs while breastfeeding unless ordered by your doctor. Most drugs can pass into your milk supply, and some can affect the baby.
- Use of alcohol, which is a drug, is discouraged.

## **Smoking**

- You should quit smoking or cut down while nursing your baby. Smoking more than 10 cigarettes a day has been shown to decrease a mother's milk supply. Smoking in the same room with the baby is harmful to the baby and makes the risk higher that he or she will have more colds, respiratory problems, and increases the risk of SIDS.

## **BREAST-FEEDING POSITIONS**

### **Cradle hold**

- This is the most common position. Sitting with your baby in your lap and the baby's head is resting in the bend of your elbow on the same side you will breast-feed. The baby's chest should be against your chest. Use the arm of the chair or pillows to support your arm, back and the baby's head.

### **Cross-cradle hold**

- Like the cradle hold except the baby is supported on the arm and hand opposite the breast you are using. The baby's head should rest between your thumb and forefinger. This allows more control of the baby's head as you help them take the breast in his or her mouth.

### **Football hold**

- Hold your baby like a football along your forearm, with the baby's body on your arm, his or her feet pointing toward your back, and his face toward your breast. This is a good hold if you have engorged breasts, sore nipples, or if you have had a C-section and cannot lay the baby on your stomach.

## Lying down

- Lie on your side and place the baby on his or her side facing you, with their head near your breast and their mouth lined up with your nipple. You can use pillows at your back for some extra support—**make sure your baby can breathe through his or her nose.**



## BREAST CARE AND EXPRESSING MILK

If your baby cannot breastfeed now and you plan to breastfeed later, it is important to care for your breasts. This means you must make sure the milk is expressed (removed) from your breasts every day at least 6 times a day. This prevents breast engorgement (swollen breasts) and ensures that milk will continue to be produced. Caring for your breasts will help keep you comfortable and will help to make sure there is milk for your baby.

### How the breasts produce milk:

- The breasts are made up of milk-producing glands, tubes called “ducts,” milk storage areas called “sinuses,” and fatty tissue. The glands produce the

milk. When the baby sucks, the milk flows through the sinuses and ducts to the nipple openings.

### **How to care for your breasts:**

- Wash your breasts with clear, warm water before expressing the milk. Do not use soap as it removes the natural oils and may cause your nipples to crack.
- Wear loose-fitting clothing to prevent binding.
- Wear a nursing bra 24 hours a day (even to bed) to give support. A nursing bra allows you to uncover the breasts without removing the bra.
- Keep nursing pads (without plastic backing) or clean, large, folded handkerchiefs inside your bra to soak up drops of milk that may leak between feedings or expressions. The pads help keep the nipples dry. Change pads when they become wet.
- Allow the nipples to be exposed to air, when possible (by leaving nursing flaps open), especially right after breastfeeding. This will prevent cracking.
- It is not necessary to wash your breasts after breastfeeding or expressing milk. Just let the breast milk dry on your breasts.

### **Breast engorgement:**

- Breast engorgement sometimes occurs when milk builds up in the breasts. Gentle massaging may help open the ducts and let the milk flow.
- A warm shower or warm packs placed on the breasts will stimulate the milk to leak out and relieve the swelling.
- A bra that is too tight can cut off circulation and cause the ducts to become plugged. Loosen your bra if it is too tight.
- If you have severe engorgement, call your doctor or a lactation specialist.

### **When to express the milk:**

- Express the milk as often as your baby would be nursing if you were breastfeeding him or her (every 2-3 hours while awake). Express milk if you are awake during the night as well.

### **How to express the milk:**

- Milk can be expressed with your hands (manual expression), with an electric breast pump, or with a battery-powered or hand-operated breast pump that can be purchased at a pharmacy.
- It takes practice and time to learn to express milk by any of these methods. Do not become discouraged if you have trouble at first. It is easier to express milk if you are relaxed.

## **Electric breast pump**

- Mothers who need to express milk for several weeks may wish to use an electric pump. If you have a prescription for the pump, your insurance may pay for rental.

## **Hand-operated or battery powered breast pump**

1. **Wash your hands** thoroughly with soap and water.
2. Wash your breasts with clear, warm water.
3. Place the shield of the pump over the nipple area. Make sure there is complete contact with the skin around the rim of the shield.
4. Follow the directions from the specific pump you are using.
5. Repeat on the other breast. Wash the collection parts in soapy water and rinse thoroughly after use.

## **How to hand (manual) express:**

1. **Wash your hands** thoroughly with soap and water.
2. Wash your breasts with clear, warm water. Dry.
3. Place your thumb on top and your forefinger under the nipple.
4. Gently push your finger and thumb back toward your chest to grasp behind the milk sinuses (sinuses are the milk storage areas behind the nipple).
5. Squeeze gently in a “milking” motion to remove the milk that has collected in the sinuses.
6. Repeat the procedure, changing the position of your grasp on the breast so that all the sinuses are drained. Repeat on the other breast.
7. Express the milk into a clean container. Some women prefer to use a cup or bowl.

## **Care of the milk/equipment:**

- If your baby will be fed your breast milk you need to pour the milk into sterile containers.
- **Label the milk container with your baby’s name, and the date and time of the collection of milk.**
- Freeze the breast milk right away.
- Pack the milk on ice in a cooler if you must bring it to the hospital.
- If you are using pumping equipment, rinse the equipment right after each pumping and wash it in hot, soapy water. Rinse thoroughly and store in a clean area. Once a day, sterilize the equipment by boiling the washable equipment in water for 15 minutes or wash it in a dishwasher. Clean equipment is essential to providing your baby with a safe supply of milk.

## **When to call the doctor:**

- If your breasts stay swollen or painfully engorged after expressing milk several times.
- If your breasts look red or feel hot when you touch them.
- If you develop a fever and/or chill.

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## **FORMULA FEEDING**

Use formula with iron for the **entire first year of life**. All formula in the United States is monitored by the FDA. Formula comes as a powder (mix with water), a liquid concentrate (add water as directed) and as ready-to feed.

There are several basic types of formula. Your pediatrician can recommend the best formula for your baby.

- **Soy or other special formulas should only be used if the pediatrician recommends them for a specific reason.**
- Iron-fortified formula is ideally suited for your baby's needs with a proper balance of easily digestible proteins, vitamins, and iron.

If you think your baby is having trouble digesting the formula that was recommended, **consult your pediatrician** before switching formulas. Multiple formula changes may cause further problems rather than help the situation.

**Whole milk should never be used as a substitute for formula.** Whole milk is not easily digestible for young infants. It also lacks proper amounts of iron, vitamins and nutrients and does not contain the healthiest types of fats for growing babies. Do not give whole cow's milk until your baby is over one year of age.

## **FORMULA FEEDING GUIDELINES**

Establish a pattern of formula feeding based on your baby's signals and working around his or her needs.

Early signs of hunger include rooting or lip smacking. **Crying is a late sign of hunger.**

Signs that your baby is full may include:

- Becoming distracted while drinking from the bottle.
- Become fidgety or turn the head away.
- Closing the mouth tightly.

- Trying to push the bottle away (as they get a little older).

Signs that your baby may still be hungry may include:

- Smacking lips after finishing a bottle.
- Starting to cry after finishing a bottle.

**During the first month** your baby should be feeding through the day and night. If he or she is sleeping through the night right away they might not be getting enough to eat. Wake them to feed every 4-6 hours until they are back up to birth weight. After that point, your baby should wake to feed when hungry.

Let your baby set the pace of the feeding. Allow him to pause, look around or play with the nipple. Hold your baby in the crook of your arm for each feeding. He will want to be close to your body.

You should feel a strong suck in a healthy baby. Check this by placing your clean finger in his mouth. If you sense a weakness in his suck, or are concerned about feeding laziness, call your primary care provider.

### **AMOUNT AND SCHEDULE OF FORMULA FEEDINGS**

After the first few days, your baby may take 2-3 ounces per feeding and eat every 3-4 hours on average during the first few weeks.

By the end of the first month the baby should be taking up to 4 ounces per feeding about every 4 hours.

By six months they should take 6-8 ounces at each of 4-5 feedings in 24 hours.

**Your baby should drink no more than 32-36 ounces of formula in 24 hours.** Sometimes patterns of obesity begin during infancy, so it is important not to overfeed your baby.

Some babies have higher needs for sucking. This is not always a sign of hunger. Offer a pacifier after feeding instead of another bottle.

### **FORMULA PREPARATION**

Make sure you use formula before its “use before” date. Do not buy damaged packages or dented cans. Never use formula that you know has been frozen or stored above 95 degrees.

- Shake the bottle of liquid formula and wash and dry the lid before opening.
- Cover and store open liquid formula and bottles of formula not used immediately, in the refrigerator.

- Throw out unused liquid formula 48 hours after opening or mixing.
- Bottles need to be sterilized. The dishwasher is an excellent sterilizer. However, if you do not have a dishwasher, hot, soapy water and a bottle brush will adequately clean your bottles.
- The water you use to prepare the formula does not need to be sterilized or boiled unless you want to do so.
- If you have well water, it may contain bacteria or impurities that boiling will not remove. If you are concerned about your water, take a sample to the county health department to be tested. They will tell you if your water is safe to mix with formula. If it is not, use distilled or bottled water, or Ready-to-feed formula.
- Formula itself is sterile in the can. **Do not boil formula** as this will increase its concentration, possibly making it too strong for the baby's digestive system and kidneys.
- Basic units of measurement for preparing formula
  - 1 ounce = 30 cc (cubic centimeters)
  - 1 ounce (30 cc) = 30 ml (milliliters)
  - 8 fluid ounces = 1 cup
  - 32 fluid ounces = 1 quart
- You can feed your baby formula straight from the refrigerator, at room temperature or warm (never hot!)
- If your baby likes it warm, hold the bottle of formula under warm tap water, or place it in a bowl of warm water for a few minutes. Test the temperature of the heated formula before feeding.
  - NEVER use a microwave oven to heat formula. Microwaves heat unevenly and hot spots in the formula can burn your baby's tender mouth.
- **KEEP YOUR BABY SAFE.** Never prop a bottle for feedings. Your infant may swallow air, and choke or spit up. After feeding, throw away all formula remaining in the bottle. Always use a fresh bottle for the next feeding. Remember do not heat your baby's bottle in a microwave.

**If your baby almost always seems hungry or does not seem to have the appetite that you think he/she should, talk to your pediatrician about any specific questions or concerns.**

### **NO MICROWAVES FOR FORMULA OR BREAST MILK**

Yes, microwaves are convenient. But they have a nasty habit of heating food unevenly. Your baby could burn his or her tongue, throat, or stomach. Have you ever been surprised by a hot spot in your food? That is something you do not want to happen in your baby's tender mouth. It is much safer to take the chill off your baby's bottle with warm water.

## **MICROWAVES SHOULD NEVER BE USED TO PREPARE BOTTLES.**

- **Control the temperature of the bottle.** It is very easy to overheat a bottle in a microwave oven. The bottle may feel cool to the touch while the liquid inside is much too hot for your baby to drink. Sometimes it can also create steam that can burn your baby or you.
- **Preserve the protective properties of breast milk.** Breast milk can lose its natural protective properties if a microwave causes overheating.
- **Avoid serious accidents.** Because the bottle is closed tightly, pressure build-up from steam can cause it to explode in a microwave oven.

## **WARMING YOUR BABY'S BOTTLE**

If your baby prefers warm formula or breast milk, then follow these steps, and **never use a microwave oven.**

- Place baby's bottle in a bowl of warm (not boiling) water or swirl it under warm tap water for a few minutes.
- Gently shake the bottle to warm the formula or expressed breast milk evenly.
- Shake a few drops onto your wrist to check the temperature. If it is not too hot for you, it is probably just right for your baby.
- **DO NOT BOIL FORMULA** as this will increase its concentration, making it too strong for the baby's digestive system and kidneys.

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## **COLIC**

Colic is not an illness, but rather a self-limiting condition that affects approximately one-fifth of newborns. It usually begins between the 2<sup>nd</sup> and 3<sup>rd</sup> week of life. These otherwise healthy babies have repeated periods of inconsolable crying for at least 3-4 hours every day. They are fussy, fretful, and irritable.

A colicky baby seems to be gassy (fists clenched; legs drawn up as if the baby is having abdominal pain.) Colicky babies tend to scream loudly shortly after feeding and are only comforted for a few minutes at a time. Crying spells can occur around the clock, although they often become worse in the early evening.

Unfortunately, there is no definite explanation for why this happens. Most often, colic means simply that the child is unusually sensitive to stimulation or cannot "self-console" or regulate his nervous system.

Generally, this "colicky crying" will stop by three to four months, but it can last until six months of age. Sometimes, in breastfeeding babies, colic is a sign of sensitivity to a food in the mother's diet. Colicky behavior also may signal a medical problem, such as a hernia or illness.

Although you simply may have to wait it out, several things might be worth trying. First consult your pediatrician to make sure that the crying is not related to any serious medical condition that may require treatment. Because the cause of colic is unknown, the treatment is primarily supportive and may include:

- Feeding the baby slowly and in an upright position (colicky babies tend to be gulpers and suckers.)
- Burp the baby thoroughly.
- Feeding the baby at least 2-3 hours apart to avoid overfeeding (use of a pacifier in between meals may help.)
- Give infant simethicone drops before feeding.
- Reduction or elimination of certain foods from a breastfeeding mom's diet:
  - Milk and milk products
  - Caffeine
  - Carbonated beverages
  - Any other potential irritating foods
- Change of environment for your infant. (Some colicky babies are hypersensitive to stimulation or sudden motion and should be swaddled, while others like to be jostled or bounced. Motion in the form of rocking or riding in the car or stroller may help.)
- Rock your baby, run the vacuum in the next room, or place him/her where they can hear the clothes dryer, a fan or a white-noise machine. Steady rhythmic motion and a calming sound may help your baby fall asleep. However, be sure to never place your child *on top* of the washer/dryer.
- Lay your baby tummy-down across your knees and gently rub the back. Pressure against the belly can provide comfort.
- Swaddle in a large, thin blanket so they feel secure and warm.
- Walk your baby in a baby carrier to soothe. The motion and body contact will reassure her, even if discomfort persists.
- A colicky baby can be a difficult baby to care for; consequently, parents should attempt to find assistance in childcare to allow time away from the infant. Even an hour or two away will help you maintain a positive attitude.
- **No matter how impatient or angry you become, a baby should *never* be shaken.** Shaking an infant hard can cause blindness, brain damage, or even death.
- **If you become upset, angry, or frustrated, it is completely acceptable and recommended that you put your baby down in a safe place and walk away.**

**Remember that time and patience are really the only cures for colic.**

## WEANING

Begin weaning from the bottle or breast to a cup between 8 and 10 months of age. The American Academy of Pediatrics suggests the bottle should be given up entirely by the age of 12 months and almost certainly by 18 months of age.

Start by placing some, and gradually all, of the baby's formula and juice in a cup. Once your baby is drinking from a cup, he or she does not need to take any liquids from the bottle any longer. **If you must give a bottle, limit the contents to plain water.**

- Babies often cling to the bottle for comfort, especially at night.
- The American Academy of Pediatrics recommends eliminating the midday bottle first, then the evening and morning bottles, saving the bedtime bottle for last – **remember to limit the contents to plain water.**
- If at first your baby will not take plain water from the bottle, progressively dilute the formula or other contents with water over a short period of time so that after 1-2 weeks the bottle contains only water.

**Never put your baby to bed with a bottle of formula, milk, or juice.** Infants who sleep with a bottle are at high risk for developing tooth decay. This is a very difficult habit to break once it begins.

Giving your toddler a drink or other snack **before bedtime** is acceptable; it may help them fall asleep. You can try a short breastfeeding, a drink of milk or other liquid, or even some fruit or other nutritious foods. However, **it is very important to brush your toddlers' teeth afterwards. Allowing food or liquid to remain on their teeth all night can result in tooth decay.**

At this age, your toddler does not need anything to eat or drink during the night. Sometimes they get into a habit of using a bottle as comfort or to help get to sleep. Even if they cry for a bottle and drink as if thirsty, nighttime feedings are for comfort, they are not a nutritional necessity.

Giving a bottle at night can result in preventing your toddler from learning to fall back to sleep on their own. It is ok to try letting them cry back to sleep **if they only cry for a short time.** After a few nights they will most likely forget about the bottle. If that does not happen, let your pediatrician know.

## WATER

Babies get all the water they need from breastmilk or formula until they start eating solid foods.

In the first 6 months, additional water is **generally unnecessary** for babies who are breastfed or formula fed.

One your baby is eating solid food; the need for liquids will increase. Getting him or her used to the taste of plain water can develop a life-long healthy habit. After 6 months you may offer your **formula-fed** baby water between feedings, but **do not force it** on them or worry if they reject it. He or she may prefer to get the extra liquid they need from more frequent feedings.

After 6 months your **breast-fed** baby generally will not need extra water if they have enough access to the breast for feeding.

While fruit juice can provide extra water for normal infants/children, **plain water is a much healthier option.**

- **Hot weather**
  - You can offer your baby some water if the weather is very hot.
  - You can give ½ ounce of water per month of age for babies up to 6 months of age.
  - Do not give more than 4 ounces (120 mL) of extra water per day during the first 6 months of life.
  
- **Illness**
  - When your baby is ill, he or she may need extra fluid, especially if they have a fever or vomit and/or diarrhea.
  - Consult your pediatrician to figure out how much water your baby would need during times of illness.
  - The best fluid for your breastfed baby when they are ill is breastmilk.

## JUICE

### **Infants**

- **Juice is not recommended for infants.**
- Babies who drink too much fruit juice may become malnourished if the juice takes the place of formula or breastmilk. Most fruit juices do not contain significant protein, fat, minerals, or vitamins other than Vitamin C.
- Giving extra juice at mealtimes may curb your baby's appetite for solid foods.
- Drinking too much juice can result in gas or diarrhea.
- Diluted apple, prune, or pear juice (1 oz. juice with 3 oz. water) can be given to babies at any age **only if recommended by your physician for constipation.**

## Children

- **If you do give your child juice, make sure the daily juice intake does not exceed 4-6 ounces of Vitamin C fortified juice per day.**
- Try giving water with meals rather than excess amounts of juice. Some children who drink too much juice can be at increased risk of being overweight.
- Try giving juice that is a combination of one-half juice and one-half water.

## VITAMINS AND IRON

### Formula-Fed

- Formula contains added vitamins so babies taking formula generally receive adequate vitamins.
- Formula has vitamin D added. If your baby is taking at least 32 ounces of formula a day, extra vitamin D is not necessary.
- It is recommended that formula-fed babies are fed with iron-fortified formula from birth until their 1<sup>st</sup> birthday.

### Breastfed

- Nursing mothers and their babies should receive all the vitamins (except vitamin D) that they need if Mom has a well-balanced diet.
  - **Pediatricians recommend that nursing mothers continue taking a daily prenatal vitamin while breastfeeding to ensure nutritional balance.**
  - Nursing mothers who are on a strict vegetarian diet need to take an extra B-complex supplement. Certain B vitamins are only found in meat, poultry, or fish.
- Breastfed infants need supplemental vitamin D. Your pediatrician will recommend starting supplemental vitamin D drops soon after birth.
- After 4 months of age the iron requirement for Breastfed babies may exceed the amount that can be provided by breastmilk alone.
- Some form of iron supplementation is recommended after 4 months of age and can be found in pureed meats, iron-fortified infant cereal and oral iron supplements.
- This daily iron requirement can be met with an average of two servings per day of iron fortified cereal or ½ to 1 jar of pureed meat per day.
- When your baby starts on solid foods such as cereals, meats, and green vegetables, make sure they are fortified with iron. This should guarantee that they continue to receive enough iron for proper growth.

## VITAMINS FOR PREMATURE BABIES

Babies who were born prematurely may need vitamin supplements as directed by your pediatrician.

Premature babies have fewer iron stores. They will often need additional iron beyond what they get from breastmilk or formula.

**Once your baby is over one year and on Vitamin D fortified milk, extra Vitamin D is not needed.**

## DAILY CALCIUM REQUIREMENTS

<u>AGE</u>	<u>Adequate Intake (mg)</u>
Birth – 6 months	210
6 Months – 1 year	270
1 – 3 Years	500

## CALCIUM IN YOUR FOODS

### Natural Dairy Sources of Calcium (Approximate Calcium Amounts)

Milk (1 cup)	300 mg
Cheese (1 ounce)	175-275 mg
Cottage Cheese (1 cup)	140 mg
Yogurt (1 cup, low-fat/non-fruit)	415 mg
Yogurt (1 cup, low-fat/fruit)	315 mg
Ice Cream, Ice Milk, Pudding, Custard	150 mg

### Natural Nondairy Sources of Calcium (Approximate Calcium Amounts)

Calcium-enriched Orange Juice (1 cup)	300 mg
Tofu (with calcium sulfate, ½ cup)	324-434 mg
Sardines/Salmon (with bones, 3 ounces)	250 mg
Broccoli (cooked, 1 cup)	240 mg
Greens (turnip and beet) and Okra (1 cup)	150 mg
Cooked dried beans (1 cup)	50-150 mg

## INFANTS AND MILK

**Whole cows' milk should never be used as a substitute for formula or breastmilk for infants under 1 year old.**

- Whole milk is not easily digestible for young infants and can lead to vomiting, constipation, or diarrhea.
- Whole milk also frequently causes irritation of the intestinal walls **in young infants** and can cause an allergic reaction leading to inflammation of the intestine and microscopic bleeding into the stool.
- Whole milk lacks proper amounts of iron, vitamins and other nutrients and does not contain the healthiest types of fats for growing babies.

Do not give whole cow's milk **until your baby is over age one**. The problems mentioned above usually do not occur when whole milk is introduced after one year of age and is not given in large amounts.

- Once your baby turns 1, whole milk should be given. They need only 16-24 ounces of whole milk daily.

## GETTING STARTED WITH SOLID FOODS

The American Academy of Pediatrics recommends waiting to introduce solid foods until infants are between 4-6 months of age. A recent study found that introduction of solid foods before 4 months of age among formula-fed infants is related to a higher risk of obesity. Research suggests that strict adherence to guidelines regarding the timing of introducing solid foods may reduce the risk of childhood obesity.

The American Academy of Pediatrics recommends mothers breastfeed exclusively for at least 4 months, but preferably 6 months, and continue breastfeeding after introducing solid foods until 12 months of age.

**When your child is between 4-6 months of age, can sit with support and has good head control, it is time to start introducing solid foods.**

Before 4-6 months of age, babies will push their tongue against the food or spoon instead of swallowing it. This is a necessary reflex for when they are breastfeeding or drinking from a bottle. Most babies will stop this around 4-6 months.

Until your baby gets used to the spoon they may spit/drool most of the food out of their mouth. If he or she does this constantly, it is probably a sign they are not developmentally ready for a spoon. Wait a few weeks and try again!

Single-grain cereals, such as oatmeal cereal, are traditionally introduced first, but there is no medical evidence to suggest that introducing solid foods in any order has an advantage for your baby.

In the beginning, start with small serving sizes for your baby – just 1-2 small spoon-fuls.

### CEREAL

Look for infant cereals that are fortified with iron, most will provide about 30-45% of your baby's daily iron needs. Extra iron is essential at this age as their natural stores of iron become depleted midway through the first year.

- Make sure to use cereal that is **made for babies** to ensure they contain the extra nutrients that your baby needs at this age.
- Baby cereals are available dry or premixed in individual containers. Premixed cereal can be more convenient.
- Dry cereals can be mixed with breast milk, formula, or water, they are richer in iron, and they allow you to control the thickness of the cereal.

### SOLID FOODS

The AAP Committee on Nutrition suggests that infant cereals and pureed meats be offered first, then add strained or pureed fruits or vegetables.

Most pediatricians recommend starting vegetables before fruits but there is no evidence that your baby will develop a dislike for vegetables if you give fruits first.

Meat and vegetables generally contain more nutrients per serving than cereals or fruits.

- Give your baby one new food at a time and wait at least 3 to 5 days before starting another new food. This allows your baby time to adjust to the new taste and allows you to observe for any signs of allergy or intolerance.
- Contact your pediatrician for any symptoms that develop such as diarrhea, vomiting or rash that seem to be related to the introduction of foods. **Stop giving the new food until you consult with the pediatrician.**
- Contrary to popular opinion, true allergies to foods causing symptoms such as severe rash, hives, diarrhea, or wheezing, are extremely unusual.

**\*Never give honey to infants under 1 year old\***

### VARIETY

Within 2-3 months of starting solid foods, your baby's daily diet should incorporate a variety of foods that may include the following:

- Breastmilk and/or formula
- Meats
- Cereals

- Vegetables and fruits
- Eggs and fish

### SOLID FOOD PREPARATION

Serve food warmed up or at room temperature.

Always read the labels on store-bought baby food. Give your child high-protein, low-carbohydrate foods.

- If possible, avoid store-bought baby food labeled as stews or mixed dinners. These contain high amounts of ‘filler’ carbohydrates such as starch.
- Always read labels and buy products with **“No added salt.”**
- Buy prepared fruit with **“No added sugar.”** Some fruits are prepared with up to 10% sugar.
- Avoid all jars labeled as “desserts.” These are foods with high amounts of sugar and little or no nutritional value.
- Baby food can be made at home from fresh fruits or vegetables that are steamed, boiled, or baked and prepared with a food grinder, blender, or food processor.
- If you decide to make your own baby food, be careful never to add salt, spices, or sugar. Limiting our children’s salt and sugar intake early in life may help them avoid developing the ‘sweet tooth’ or salt-cravings later that are not good for overall health.
- **Never put solid food in a bottle. Always use a spoon for solid foods.**
- Cereal should not be added to bottles unless recommended by your pediatrician if your baby has gastroesophageal reflux (GER).

### FINGER (TABLE) FOODS

At 8-9 months of age, introduce finger foods or table foods that your baby can pick up and feed themselves.

- **Do not give your baby anything that is large enough to choke on.**
- Give small, soft food items that can be easily chewed and digested.
- Some examples of finger foods to introduce at certain ages include:

#### 6-8 Months

Toast	Graham Cracker
Cheerios	Arrowroot Cookies
Baby Puffs	Mashed or slices of banana
Applesauce	Ground meat such as hamburger
Cottage Cheese	Steamed veggies – cut in small pieces
Peanut butter- 1 tsp 3 times a week.	

## 9-12 Months

Bagel	Pasta – Macaroni/Noodles
Small Fish Sticks	Small orange section– remove all seeds
Whole Grain Rice	Tender pieces of Meat – cut very small
Small pieces of cheese	Small pieces of peeled peach
Scrambled or boiled egg	Small pieces of peeled apple

### **\*Make sure to cut up finger foods and offer small pieces to your baby\***

- Finger foods introduce new textures of foods into your baby’s diet.
- Introducing finger foods helps your infant develop self-feeding skills. By 9-10 months of age, your child may refuse to allow you to feed them.
- Offer small portions. Be careful of over-crowding your child’s plate or tray.
- Be prepared for a mess.

### **Certain foods should be avoided for children less than 24 months:**

Gum	Nuts
Corn	Olives
Peanuts	Popcorn
Meat sticks	Whole Grapes
Round Candies	

Whole or large sections of Hot dogs

Seeds (processed pumpkin/sunflower seeds)

Cherry tomatoes (unless they are cut in quarters)

Hard Candies (including jellybeans or gummy bears)

Raw fruits and vegetables such as carrot or celery sticks

Hot dogs should be quartered lengthwise and then sliced into small pieces

### **\*NEVER GIVE HONEY TO INFANTS UNDER 1 YEAR OLD\***

## Infant Feeding Guide

Age (months)

Foods	0-4	4-6	6-8	8-10	10-12
<b>Breastmilk</b> <b>Iron fortified infant formula</b>	8-12 feedings per day 8-12 feedings per day (16-32 ounces)	4-6 feedings per day 4-6 feedings per day (24-32 ounces)	On Demand 24-32 ounces per day 3-5 feedings	On Demand 16-32 ounces daily 3-4 feedings	On Demand 16-24 ounces daily 3-4 feedings
<b>Cereals, bread, and starches</b>	None	None	Infant Cereal Cheerios (cut in half) 1-4 tablespoons twice a day	Plain hot cereals  Toast, bagel, crackers	Hot/Cold unsweetened cereal  Peeled and seeded canned fruits in water or juice
<b>Fruits and vegetables</b> <b>*One serving is 1-2 tablespoons*</b>	None	None	Mashed bananas, applesauce, strained fruits peaches, pears, prunes ½ cup per day	Peeled soft fruit wedges-bananas, peaches, pears, oranges, apples 1-2 servings per day*	Soft cut up/mashed vegetables and fruits 4 servings per day*
<b>Meats and other proteins</b> <b>*One serving is 1-2 tablespoons*</b>	None	None	Pureed meats Plain yogurt	Lean meat, chicken, fish- chopped, strained, or small tender pieces Eggs, yogurt, mild cheese, cooked dried beans 2 servings per day	Small tender pieces of meat, chicken, fish (1-2 ounces) Eggs, yogurt, mild cheese, cooked dried beans 2-3 servings per day
<b>Fruit Juice</b>	None	None	Infant Juice Vitamin C fortified adult apple juice From a cup Max- 4 ounces a day	All 100% juices from a cup Max-4 ounces per day	All 100% juices from a cup Max-4 ounces per day

