

First Weeks at Home with a Newborn

Preventing Fatigue and Exhaustion

For most mothers the first weeks at home with a new baby are often the hardest in their lives. You will probably feel overworked, even overwhelmed. Inadequate sleep will leave you fatigued. Caring for a baby can be a lonely and stressful responsibility. You may wonder if you will ever catch up on your rest or work. The solution is asking for help. No one should be expected to care for a young baby alone.

Every baby awakens one or more times a night. The way to avoid sleep deprivation is to know the total amount of sleep you need per day and to get that sleep in bits and pieces. Go to bed earlier in the evening. When your baby naps you must also nap. Your baby doesn't need you hovering while he or she sleeps. If sick, your baby will show symptoms. While you are napping take the telephone off the hook and put up a sign on the door saying MOTHER AND BABY SLEEPING. If your total sleep remains inadequate, hire a baby sitter or bring in a relative. If you don't take care of yourself, you won't be able to take care of your baby.

The Postpartum Blues

More than 50% of women experience postpartum blues on the third or fourth day after delivery. The symptoms include tearfulness, tiredness, sadness, and difficulty in thinking clearly. The main cause of this temporary reaction is probably the sudden decrease of maternal hormones. Since the symptoms commonly begin on the day the mother comes home from the hospital, the full impact of being totally responsible for a dependent newborn may also be a contributing factor. Many mothers feel let down and guilty about these symptoms because they have been led to believe they should be overjoyed about caring for their newborn. In any event, these symptoms usually clear in 1 to 3 weeks as the hormone levels return to normal and the mother develops routines and a sense of control over her life.

There are several ways to cope with the postpartum blues. First, acknowledge your feelings. Discuss them with your husband or a close friend as well as your sense of being trapped and that these new responsibilities seem insurmountable. Don't feel you need to suppress crying or put on a "supermom show" for everyone. Second, get adequate rest. Third, get help with all your work. Fourth, mix with other people; don't become isolated. Get out of the house at least once a week--go to the hairdresser, shop, visit a friend, or see a movie. By the third week, setting aside an evening a week for a "date" with your husband is also helpful. If you don't feel better by the time your baby is 1 month old, see your physician about the possibility of counseling for depression.

Helpers: Relatives, Friends, Sitters

As already emphasized, everyone needs extra help during the first few weeks alone with a new baby. Ideally, you were able to make arrangements for help before your baby was born. The best person to help (if you get along with her) is usually your mother or mother-in-law. If not, teenagers or adults can come in several times a week to help with housework or look after your baby while you go out or get a nap. If you have other young children, you will need daily help. Clarify that your role is looking after your baby. Your helper's role is to shop, cook, houseclean, and wash clothes and dishes. If your newborn has a medical problem that requires special care, ask for home visits by a public health nurse.

The Father's Role

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The father needs to take time off from work to be with his wife during labor and delivery, as well as on the day she and his child come home from the hospital. If the couple has a relative who will temporarily live in and help, the father can continue to work after the baby comes home. However, when the relative leaves, the father can take saved-up vacation time as paternity leave. At a minimum he needs to work shorter hours until his wife and baby have settled in.

The age of noninvolvement of the father is over. Not only does the mother need the father to help her with household chores, but the baby also needs to develop a close relationship with the father. Today's father helps with feeding, changing diapers, bathing, putting to bed, reading stories, dressing, disciplining, homework, playing games, and calling the physician when the child is sick.

A father may avoid interacting with his baby during the first year of life because he is afraid he will hurt his baby or that he won't be able to calm the child when the baby cries. The longer a father goes without learning parenting skills, the harder it becomes to master them. At a minimum, a father should hold and comfort his baby at least once a day.

Visitors

Only close friends and relatives should visit you during your first month at home. They should not visit if they are sick. To prevent unannounced visitors, the parents can put up a sign saying MOTHER AND BABY SLEEPING. NO VISITORS. PLEASE CALL FIRST. Friends without children may not understand your needs. During visits the visitor should pay special attention to older siblings.

Feeding Your Baby: Achieving Weight Gain

Your main assignments during the early months of life are loving and feeding your baby. All babies lose a few ounces during the first few days after birth. However, they should never lose more than 7% of the birth weight (usually about 8 ounces). Most bottle-fed babies are back to birth weight by 10 days of age, and breast-fed babies by 14 days of age. Then infants gain approximately an ounce per day during the early months. If milk is provided liberally, the normal newborn's hunger drive ensures appropriate weight gain.

A breast-feeding mother often wonders if her baby is getting enough calories, since she can't see how many ounces the baby takes. Your baby is doing fine if he or she demands to nurse every 1 1/2 to 2 1/2 hours, appears satisfied after feedings, takes both breasts at each nursing, wets 6 or more diapers each day, and passes 3 or more soft stools per day. Whenever you are worried about your baby's weight gain, bring your baby to your physician's office for a weight check. Feeding problems detected early are much easier to remedy than those of long standing. A special weight check 1 week after birth is a good idea for infants of a first-time breast-feeding mother or a mother concerned about her milk supply.

Dealing with Crying

Crying babies need to be held. They need someone with a soothing voice and a soothing touch. You can't spoil your baby during the early months of life. Overly sensitive babies may need an even gentler touch.

Sleep Position

Remember to place your baby in his crib on his back. As of 1992, this is the sleep position

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recommended by the American Academy of Pediatrics for healthy babies. The back (supine) position reduces the risk of Sudden Infant Death Syndrome (SIDS).

Taking Your Baby Outdoors

You can take your baby outdoors at any age. You already took your baby outside when you left the hospital, and you will be going outside again when you take him or her for the two-day or two-week checkup.

Dress the baby with as many layers of clothing as an adult would wear for the outdoor temperature. A common mistake is overdressing a baby in summer. In winter, a baby needs a hat because he or she often doesn't have much hair to protect against heat loss. Cold air or winds do not cause ear infections or pneumonia.

The skin of babies is more sensitive to the sun than the skin of older children. Keep sun exposure to small amounts (10 to 15 minutes at a time). Protect your baby's skin from sunburn with longer clothing and a bonnet.

Camping and crowds should probably be avoided during your baby's first month of life. Also, during your baby's first year of life try to avoid close contact with people who have infectious illnesses.

Medical Checkup on the Third or Fourth Day of Life

Early discharge from the newborn nursery has become commonplace for full-term babies. Early discharge means going home within 24 to 48 hours after giving birth. In general this is a safe practice if the baby's hospital stay has been uncomplicated. These newborns need to be re-checked 2 days after discharge to see how well they are feeding, urinating, producing stools, maintaining weight, and breathing. They will also be checked for jaundice and overall health. In some cases, this special re-check will be provided in your home.

The Two-Week Medical Checkup

This checkup is probably the most important medical visit for your baby during the first year of life. By two weeks of age your baby will usually have developed symptoms of any physical condition that was not detectable during the hospital stay. Your child's physician will be able to judge how well your baby is growing from his or her height, weight, and head circumference.

This is also the time your family is under the most stress of adapting to a new baby. Try to develop a habit of jotting down questions about your child's health or behavior at home. Bring this list with you to office visits to discuss with the physician. Most physicians welcome the opportunity to address your agenda, especially if your questions are not easily answered by reading or talking with other mothers.

If at all possible, both the mother and father should go to these visits. Most physicians prefer to get to know both parents during a checkup rather than during the crisis of an acute illness.

If you think your newborn is sick between the routine visits, be sure to call your child's physician for help.

Written by B.D. Schmitt, M.D., author of "Your Child's Health," Bantam Books.

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Newborn's Normal Appearance

Even after your child's healthcare provider assures you that your baby is normal, you may find that he or she looks a bit odd. Your baby does not have the perfect body you have seen in baby books. Be patient. Most newborns have some peculiar characteristics. Fortunately they are temporary. Your baby will begin to look normal by 1 to 2 weeks of age.

This discussion of these newborn characteristics is arranged by parts of the body. A few minor congenital defects that are harmless but permanent are also included. Call your healthcare provider if you have questions about your baby's appearance that this list does not address.

HEAD

1. Molding

Molding refers to the long, narrow, cone-shaped head that results from passage through a tight birth canal. This compression of the head can temporarily hide the fontanel. The head returns to a normal shape in a few days.

2. Caput

This refers to swelling on top of the head or throughout the scalp due to fluid squeezed into the scalp during the birth process. Caput is present at birth and clears in a few days.

3. Cephalohematoma

This is a collection of blood on the outer surface of the skull. It is due to friction between the infant's skull and the mother's pelvic bones during the birth process. The lump is usually confined to one side of the head. It first appears on the second day of life and may grow larger for up to 5 days. It doesn't resolve completely until the baby is 2 or 3 months of age.

4. Anterior fontanel

The "soft spot" is found in the top front part of the skull. It is diamond-shaped and covered by a thick fibrous layer. Touching this area is quite safe. The purpose of the soft spot is to allow rapid growth of the brain. The spot will normally pulsate with each beat of the heart. It normally closes with bone when the baby is between 12 and 18 months of age.

EYES

1. Swollen eyelids

The eyes may be puffy because of pressure on the face during delivery. They may also be puffy and reddened if silver nitrate eyedrops are used. This irritation should clear in 3 days.

2. Subconjunctival hemorrhage

A flame-shaped hemorrhage on the white of the eye (sclera) is not uncommon. It's harmless and due to birth trauma. The blood is reabsorbed in 2 to 3 weeks.

3. Iris color

The iris is usually blue, green, gray, or brown, or variations of these colors. The permanent color of the irises is often uncertain until your baby

reaches 6 months of age. White babies are usually born with blue-gray eyes. Black babies are usually born with brown-gray eyes. Children who will have dark irises often change eye color by 2 months of age; children who will have light-colored irises usually change by 5 or 6 months of age.

4. Tear duct, blocked

If your baby's eye is continuously watery, he or she may have a blocked tear duct. This means that the channel that normally carries tears from the eye to the nose is blocked. It is a common condition, and more than 90% of blocked tear ducts open up by the time the child is 12 months old.

ears

1. Folded over

The ears of newborns are commonly soft and floppy. Sometimes one of the edges is folded over. The outer ear will assume normal shape as the cartilage hardens over the first few weeks.

2. Earpits

About 1% of normal children have a small pit or dimple in front of the outer ear. This minor congenital defect is not important unless it becomes infected.

NOSE, FLATTENED

The nose can become misshapen during the birth process. It may be flattened or pushed to one side. It will look normal by 1 week of age.

MOU

1. Sucking callus (or blister)

A sucking callus occurs in the center of the upper lip from constant friction at this point during bottle- or breast-feeding. It will disappear when your child begins cup feedings. A sucking callus on the thumb or wrist may also develop.

2. Tongue-tie

The normal tongue in newborns has a short tight band that connects it to the floor of the mouth. This band normally stretches with time, movement, and growth.

3. Epithelial pearls

Little white-colored cysts can occur along the gumline or on the hard palate. These are a result of blockage of normal mucous glands. They disappear after 1 to 2 months.

4. Teeth

The presence of a tooth at birth is rare. Approximately 10% are extra teeth without a root structure. The other 90% are prematurely erupted normal teeth. The distinction can be made with an X-ray. The extra teeth should be removed, usually by a dentist. The normal teeth need to be removed only if they become loose (with a danger of choking) or if they cause sores on your baby's tongue.

BREAST ENGORGEMENT

Swollen breasts are present during the first week of life in many female and male babies. They are caused by the passage of female hormones across the mother's placenta. Sometimes the breast will leak a few drops of milk, and this is normal. Breasts are generally swollen for 2 to 4 weeks, but they may stay swollen longer in breast-fed and female babies. One breast may lose its swelling before the other one by a month or more. Never squeeze the breast because this can cause infection. Be sure to call your healthcare provider if a swollen breast develops any redness, streaking, or tenderness.

GENITALS, GIRLS

1. Swollen labia

The labia minora can be quite swollen in newborn girls because of the passage of female hormones across the placenta. The swelling will resolve in 2 to 4 weeks.

2. Hymenal tags

The hymen can also be swollen due to maternal estrogen and have smooth 1/2-inch projections of pink tissue. These normal tags occur in 10% of newborn girls and slowly shrink over 2 to 4 weeks.

3. Vaginal discharge

As the maternal hormones decline in the baby's blood, a clear or white discharge can flow from the vagina during the latter part of the first week of life. Occasionally the discharge will become pink or blood-tinged (false menstruation). This normal discharge should not last more than 2 to 3 days.

GENITALS, BOYS

1. Hydrocele

The newborn scrotum can be filled with clear fluid. The fluid is squeezed into the scrotum during the birth process. This painless collection of clear fluid is called a "hydrocele." It is common in newborn males. A hydrocele may take 6 to 12 months to clear completely. It is harmless but can be rechecked during regular visits. If the swelling frequently changes size, a hernia may also be present and you should call your healthcare provider during office hours for an appointment.

2. Undescended testicle

The testicle is not in the scrotum in about 4% of full-term newborn boys. Many of these testicles gradually descend into the normal position during the following months. In 1-year-old boys only 0.7% of all testicles are undescended; these need to be brought down surgically.

3. Tight foreskin

Most uncircumcised infant boys have a tight foreskin that doesn't allow you to see the head of the penis. This is normal and the foreskin should not be retracted.

4. Erections

Erections occur commonly in a newborn boy, as they do at all ages. They are usually triggered by a full bladder. Erections demonstrate that the nerves to the penis are normal.

BONES AND JOINTS

1. Tight hips

Your child's healthcare provider will test how far your child's legs can be spread apart to be certain the hips are not too tight. Upper legs bent outward until they are horizontal is called "90 degrees of spread." (Less than 50% of normal newborn hips permit this much spreading.) As long as the upper legs can be bent outward to 60 degrees and are the same on each side, they are fine. The most common cause of a tight hip is a dislocation.

2. Tibial torsion

The lower legs (tibia) normally curve in because of the cross-legged posture your baby was confined to while in the womb. If you stand your baby up, you will also notice that the legs are bowed. Both of these curves are normal and will straighten out after your child has been walking for 6 to 12 months.

3. Feet turned up, in, or out

Feet may be turned in any direction inside the cramped quarters of the womb. As long as your child's feet are flexible and can be easily moved to a normal position, they are normal. The direction of the feet will become more normal between 6 and 12 months of age.

4. Long second toe

The second toe is longer than the great toe as a result of heredity in some ethnic groups that originated along the Mediterranean, especially Egyptians.

5. "Ingrown" toenails

Many newborns have soft nails that easily bend and curve. However, they are not truly ingrown because they don't curve into the flesh.

HAIR

1. Scalp hair

Most hair at birth is dark. This hair is temporary and begins to shed by 1 month of age. Some babies lose it gradually while the permanent hair is coming in; others lose it rapidly and temporarily become bald. The permanent hair will appear by 6 months. It may be an entirely different color from the newborn hair.

2. Body hair (lanugo)

Lanugo is the fine downy hair that is sometimes present on the back and shoulders. It is more common in premature infants. It is rubbed off with normal friction by 2 to 4 weeks of age.

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Normal Newborn Reflexes and Behavior

Some newborn behaviors that concern parents are not signs of illness. Most of the following harmless reflexes are due to an immature nervous system and will disappear in 3 or 4 months:

- chin trembling
- lower lip quivering
- hiccups
- irregular breathing (This is normal if your baby is content, the rate is less than 60 breaths per minute, any pauses are less than 10 seconds long, and your baby doesn't turn blue. Occasionally infants take rapid, progressively deeper, stepwise breaths to completely expand their lungs.)
- passing gas (not a temporary behavior)
- sleep noise from breathing and moving
- sneezing
- spitting up or belching
- brief stiffening of the body after a noise or sudden movement (also called the startle reflex, the Moro reflex, or the embrace reflex)
- straining with bowel movements
- throat clearing (or gurgling sounds of secretions in the throat)
- trembling or jitteriness of arms and legs are common during crying (Jittery babies are common. Convulsions are rare. During convulsions babies also jerk, blink their eyes, rhythmically suck with their mouths, and don't cry.) If your baby is trembling and not crying, give her something to suck on. If the trembling doesn't stop when your baby is sucking, call your physician's office immediately.
- yawning.

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Newborn Skin: Rashes and Birthmarks

After the first bath your newborn will normally have a ruddy complexion due to the extra high count of red blood cells. He can quickly change to a pale- or mottled-blue color if he becomes cold, so keep him warm. During the second week of life, your baby's skin will normally become dry and flaky. Many babies also get rashes or have birthmarks. In this handout, seven kinds of rashes and birthmarks are covered.

1. Acne of newborn

More than 30% of newborns develop acne of the face: mainly small, red bumps. This neonatal acne begins at 3 to 4 weeks of age and lasts until 4 to 6 months of age. The cause appears to be the transfer of maternal androgens (hormones) just prior to birth. Since it is temporary, no treatment is necessary. Baby oil or ointments will just make it worse.

2. Drooling rash

Most babies have a rash on the chin or cheeks that comes and goes. Often, this rash is caused by contact with food and acid that have been spit up from the stomach. Rinse your baby's face with water after all feedings or spitting up.

Other temporary rashes on the face are heat rashes in areas held against the mother's skin during nursing (especially in the summertime). Change your baby's position more frequently and put a cool washcloth on the area that has a rash.

3. Erythema toxicum

More than 50% of babies get a rash called erythema toxicum on the second or third day of life. The rash is composed of 1/2 inch to 1 inch-size red blotches with a little white or yellow pimple in the center. They look like insect bites. They are numerous, keep recurring for a week, and can be anywhere on the body (except palms and soles). The cause of this rash is unknown and it is harmless. The rash usually disappears by the time an infant is 2 weeks old, but sometimes not until a child is 4 weeks old.

4. Forceps or birth canal injury

If your baby's delivery was difficult, a forceps may have been used to help him through the birth canal. The pressure of the forceps on the skin can leave bruises or scrapes or can even damage fat tissue anywhere on the head or face.

Pressure from the birth canal can damage the skin overlying bony prominences (such as the sides of the skull) even without a forceps delivery. Fetal monitors can also cause scrapes and scabs on the scalp. You will notice the bruises and scrapes 1 or 2 days after birth. They will disappear in 1 to 2 weeks.

Injury to fat tissue won't be apparent until the fifth or sixth day after birth. A thickened lump of skin with an overlying scab is what you usually see. This may take 3 or 4 weeks to heal. For any breaks in the skin, apply an antibiotic ointment (OTC) 3 times per day until healed. If it becomes tender to the touch or soft in the center or shows other signs of infection, call your healthcare provider.

5. Milia

Milia are tiny white bumps that occur on the faces of 40% of newborn babies. The nose and cheeks are most often involved, but milia are also seen on the forehead and chin. Although they look like pimples, they are smaller and not infected. They are blocked-off skin pores and will open up

and disappear by 1 to 2 months of age. Do not apply ointments or creams to them.

Any true blisters (little bumps containing clear fluid) or pimples (little bumps containing pus) that occur during the first month of life (especially on the scalp) must be examined and diagnosed quickly. If they are caused by the herpesvirus, they must be treated right away. If you suspect blisters or pimples, call your child's healthcare provider immediately.

6. Mongolian spots

A Mongolian spot is a bluish-gray, flat birthmark that is found in more than 90% of American Indian, Asian, Hispanic, and black babies. They occur most commonly over the back and buttocks, although they can be present on any part of the body. They vary greatly in size and shape. Most fade away by 2 or 3 years of age, although a trace may persist into adult life.

7. Stork bites (pink birthmarks)

Flat pink birthmarks (also called capillary hemangiomas) occur over the bridge of the nose, the eyelids, or the back of the neck in more than 50% of newborns. Most of these spots fade and disappear, but some can persist into adult life. Those on the forehead that run from the bridge of the nose up to the hairline usually persist into adult life. Laser treatment during infancy should be considered for these.

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Breast-Feeding Essentials

Babies who are breast-fed have fewer infections and allergies during the first year of life than babies who are fed formula. Breast milk is also inexpensive and served at the perfect temperature. Breast-feeding becomes especially convenient when a mother is traveling with her baby. Overall, breast milk is nature's best food for young babies.

How Often to Feed

The baby should nurse for the first time in the delivery room. The second feeding will usually be at 4 to 6 hours of age, after he awakens from a deep sleep. Until your milk supply is well established (usually 4 weeks), nurse your infant whenever he cries or seems hungry (demand feeding). Thereafter, babies can receive enough milk by nursing every 2 to 2-and-1/2 hours. If your baby cries and less than 2 hours have passed, he can be rocked or carried in a frontpack. However, waiting more than 2-and-1/2 hours can lead to swollen breasts (engorgement), which decreases milk production. (Feeding less frequently is OK at night, but no more than 5 hours should pass between feedings.)

Your baby will not gain adequately unless he nurses 8 or more times per day initially. The risks of continuing to nurse at short intervals (more often than every 1 and 1/2 hours) are that "grazing" will become a habit, your baby won't be able to sleep through the night, and you won't have much free time.

How Long Per Feeding

During the first week, bring in your full milk supply by offering both breasts with each feeding. Try 10 minutes on the first breast and as long as your baby wants on the second breast (at least 10 minutes). Alternate which breast you start on. You may need to stimulate your baby to take the second breast.

After your milk supply has come in (by day 8 at the latest), encourage your baby to nurse as long as she wants to on the first breast (up to 20 minutes). This is so your baby can get the high-fat, calorie-rich hind milk. 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. Alternate breasts at the start of each feeding.

How to Know Your Baby is Getting Enough Breast Milk

In the first couple of weeks, if your baby has 3 to 4 good-sized bowel movements per day and six or more wet diapers per day, he is receiving a good supply of breast milk. (Infrequent bowel movements are not normally seen before a baby is 1 month old.) In addition, most babies will act satisfied after completing a feeding.

Your baby should be back to birth weight by 10 to 14 days of age if breast-feeding is going well. Therefore, the 2-week checkup by your baby's physician is very important.

The presence of a letdown reflex is another indicator of good milk production.

The Letdown Reflex

A letdown reflex develops after 2 to 3 weeks of nursing and is indicated by tingling or milk ejection in the breast just before feeding (or when you are thinking about feeding). It also occurs in the opposite breast while your baby is nursing.

Formula (Bottle) Feeding

Fluoride Requirements

From 6 months to 16 years of age, children need fluoride to prevent dental caries. If the water supply where you live contains fluoride and your child drinks at least 1 pint each day, this should be adequate. Otherwise, fluoride drops or tablets should be given separately. This is a prescription item that can be obtained from your child's physician.

Prevention of Baby-Bottle Tooth Decay

Sleeping with a bottle of 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 this tragedy of tooth decay by not using the bottle as a daytime or nighttime pacifier. If you cannot discontinue the nighttime bottle or replace it with a pacifier, fill it with water. This approach will prevent tooth decay.

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Formula (Bottle) Feeding

iron-fortified formulas, no supplementary vitamins or minerals are needed.

2. Homemade formulas from evaporated milk

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).

3. Cow's milk

Breast milk is the first choice for feeding during the first year of life. A commercially prepared infant formula is the second choice. 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 Commercial 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.

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 preferred 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.

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,

Formula (Bottle) Feeding

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. 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.

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.)

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.

5. Burping

Burping is optional. It doesn't decrease crying. Its only benefit is to decrease spitting up. 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 is a "spitter."

Traveling

When you are traveling, powdered or ready-to-serve formulas are the most convenient. To prepare the formula, simply add the appropriate number of scoops of powder to bottled, previously boiled water, or pour ready-to-serve formula into a sterilized bottle.

Extra 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.

Breast-Feeding Essentials

Letdown is enhanced by adequate sleep, adequate fluids, a relaxed environment, and reduced stress (such as not expecting much housework to get done). If your letdown reflex is not present yet, take extra naps and ask your husband and friends for more help. Also consider calling the local chapter of La Leche League, a support group for nursing mothers.

Supplemental Bottles

Do not offer your baby any routine bottles during the first 4 to 6 weeks after birth because this is when you establish your milk supply. Good lactation (breast milk production) depends on frequent emptying of the breasts. Supplemental bottles take away from sucking time on the breast. If your baby is not gaining well, see your physician or a lactation specialist for a weight check and evaluation.

After your baby is 6 weeks old and nursing is well established, you may want to offer your baby a bottle of expressed milk or 1 ounce of formula once a day so that he can get used to the bottle and the artificial nipple. Once your baby accepts bottle feedings, you can occasionally leave your baby with a sitter and go out for the evening or return to work outside the home. You can use pumped breast milk that has been refrigerated or frozen.

Extra Water

Babies do not routinely need extra water. Even when they have a fever or the weather is hot and dry, breast milk provides enough water.

Pumping the Breasts to Relieve Pain or Collect Milk

Severe engorgement (severe swelling) of the breasts decreases milk production. To prevent engorgement, nurse your baby more often. Also, compress the area around the nipple (the areola) with your fingers at the start of each feeding to soften the areola. For milk release, your baby must be able to grip and suck on the areola as well as the nipple. Every time you miss a feeding (for example, if you return to work outside the home), pump your breasts. Also, whenever your breasts hurt and you are unable to feed your baby, pump your breasts until they are soft. If you don't relieve engorgement, your milk supply can dry up in 2 to 3 days.

A breast pump is usually not necessary because pumping can be done by hand. Ask someone to teach you the Marmet technique.

Pumped breast milk can be stored for 5 to 7 days in a refrigerator and up to 6 months in a freezer. To thaw frozen breast milk, put the container of breast milk in the refrigerator (it will take a few hours to thaw) or place it in a container of warm water until it has warmed up to the temperature your baby prefers.

Sore Nipples

Clean a sore nipple with water after each feeding. Do not use soap or alcohol because they remove natural oils. At the end of each feeding, the nipple can be coated with some breast milk to keep it lubricated. For cracked nipples, apply 100% lanolin (no prescription necessary) after feedings. Try to keep the nipples dry with loose clothing, air exposure, and nursing pads.

Sore nipples usually are due to poor latching on and a feeding position that causes undue friction on the nipple. Position your baby so that he directly faces the nipple without turning his neck. At the start of the feeding, compress the nipple and areola between your thumb and

Breast-Feeding Essentials

index finger so that your baby can latch on easily. Throughout the feeding, hold your breast from below so the nipple and areola aren't pulled out of your baby's mouth by the weight of the breast. Slightly rotate your baby's body so that his mouth applies pressure to slightly different parts of the areola and nipple at each feeding.

Start your feedings on the side that is not sore. If one nipple is extremely sore, temporarily limit feedings to 10 minutes on that side. The pain will not improve, however, until your baby starts to correctly latch on and is correctly positioned during feeding.

Vitamins/Fluoride for the Baby

Breast milk contains all the necessary vitamins and minerals except vitamin D and fluoride. Full-term dark-skinned babies and all premature babies need 400 units of vitamin D each day. White babies who have little or no sun exposure (less than 15 minutes of sun exposure twice a week) also need vitamin D supplements. From 6 months to 16 years of age, children need fluoride to prevent tooth decay. For children up to 3 years old who are breast-feeding and not drinking any water, 0.25 mg of fluoride drops should be given each day. This is a prescription item that you can obtain from your child's physician.

Vitamins for the Mother

A nursing mother can take a multivitamin tablet daily if she is not following a well-balanced diet. She especially needs 400 units of vitamin D and 1200 mg of both calcium and phosphorus per day. A quart of milk (or its equivalent in cheese or yogurt) can also meet this requirement.

The Mother's Medications

Almost any drug a breast-feeding mother consumes will be transferred in small amounts to her breast milk. Therefore, try to avoid any drug that is not essential, just as you did during pregnancy.

Some commonly used drugs that are safe for you to take while nursing are acetaminophen, ibuprofen, penicillins, erythromycin, cephalosporins, stool softeners, antihistamines, decongestants, cough drops, nosedrops, eyedrops, and skin creams. Aspirin and sulfa drugs can be taken if your baby is more than 2 weeks old AND not jaundiced. Consult your physician about all other drugs. Take drugs that are not harmful immediately after you breast-feed your child so that the level of drugs in the breast milk at the time of the next feeding is low.

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Baby Equipment and Supplies

Before a baby is born, most parents prepare a special room. They buy a layette including clothing, a place to sleep, feeding equipment, bathing equipment, and diapers.

The most common mistake parents on a limited budget make during this time is the purchase of items they don't really need or expensive versions of essential pieces of equipment. Instead of buying everything you need, you may be able to borrow some baby equipment from friends or relatives.

Some baby equipment is essential, some is helpful but not essential, and some is unnecessary for most families. These three categories of equipment are described below. The final section explains why walkers are not only unnecessary but also dangerous.

Essential Equipment

1. Car safety seat

Child restraint seats are essential for transporting your baby in a car. They are required by law in all 50 states. Consider buying one that is convertible; that is, a seat that you can use from the time your child is a newborn to the time your child reaches 40 pounds and 40 inches. While your child weighs less than 20 pounds, the car seat faces backward. When your child is 1 year old and weighs more than 20 pounds, the seat is moved to a forward-facing position.

Car seats must conform to federal safety standards. They are also ranked by consumer magazines.

Many hospitals have a rental program for car seats that can save you money unless you are going to have several children.

2. Crib

Your baby will spend much time in the crib unattended, so you must make certain it is a safe crib. Federal safety standards require that the crib bars of all cribs built after 1974 be no more than 2 and 3/8 inches apart. The purpose of this restriction is to prevent a child from getting his head or body stuck between the bars. If you have a crib built before 1974, check the distance between the bars. The width of 2 and 3/8 inches is approximately the width of three fingers. Do not buy or use a crib with spaces larger than this. Also check for any defective crib bars.

The mattress should be the same size as the crib so that your baby's head can't get caught in the gap. It should also be waterproof.

Bumper pads are unnecessary because infants rarely strike their head on the railings. The pads have the disadvantage of keeping your baby from seeing out of the crib. Also, an older infant might climb on top of the pads and possibly fall from the crib.

During the first 2 or 3 months of life it may be more convenient for feeding during the night to have your baby sleep next to your bed in a bassinet. A drawer, cardboard box, or basket with a firm pad on the bottom will also work.

3. Bathtub

You can buy small plastic bathtubs and molded sponge linings. A large plastic dishpan will also suffice. A kitchen sink works well if you are careful about preventing your child from falling against hard edges or turning on

the hot water, thereby causing a burn. Until the umbilical cord falls off, keep the water level below your baby's navel. Most children can be bathed in a standard bathtub by the time they are 1 year old.

4. Bottles and nipples

If you are feeding your baby formula, you will need about ten 8-ounce bottles. Although clear plastic bottles cost twice as much as glass ones, you will be glad you bought the unbreakable type the first time you or your baby drops one. If you use disposable bottle liners, you probably will need only five bottles.

You will also need 5 to 10 nipples. If you prepare more than one bottle at a time from concentrated formula, you will need a 1-quart measuring cup and a funnel for mixing a batch of formula. If you use powdered formula, the measuring cup is unnecessary.

5. Diapers

You can choose disposable or cloth diapers. Disposable diapers are better for preventing diaper rashes. If you're concerned about using diaper pins, diaper covers come with Velcro straps. The main advantage of disposable diapers is that they are very convenient. They make it easier to travel, and day care centers can operate more efficiently. The superabsorbent-gel diapers do not leak.

The main disadvantage of disposable diapers is that they cost more. The average cost of disposable diapers is about 20 cents per diaper. Cloth diapers delivered and cleaned by a diaper service cost about 12 cents per diaper. If you buy and wash your own cloth diapers, the average cost each time you use a diaper is 3 cents (after the initial purchase of the diapers).

If you are breast-feeding, you may want to know how often your baby wets so you can check if your baby is getting enough breast milk. It is easy to know when a cloth diaper is wet. It is more difficult to know when a disposable diaper is wet, but you can insert a cotton ball or piece of tissue.

Which type of diaper to use can be a difficult decision. Why not take advantage of both options? Use cloth diapers when you are home. Use disposable diapers when you are away from home. Use disposables when your child has diarrhea because they prevent leakage of watery stools. During a baby's first 2 or 3 months of life, when most mothers are exhausted by new baby care, consider using a diaper service rather than washing diapers yourself. You will find that modern diaper services are very efficient, provide excellent sterilized diapers, and pick up dirty diapers once a week.

6. Pacifier

A pacifier is often useful for soothing babies. To prevent choking on the pacifier, the pacifier's shield should be at least 1 and 1/2 inches in diameter and the pacifier should be one single piece. Some of the newer pacifiers are made of silicone (instead of rubber), which lasts longer because it doesn't dry out. The orthodontic-shaped pacifiers are accepted by some babies but not by others.

7. Nasal suction bulb

A rubber suction bulb is essential for helping young babies whose breathing has been made difficult by sticky or dried nasal secretions. A suction bulb with a blunt tip is more effective than a bulb with a long tapered tip and is less likely to irritate the nasal lining. (Bulbs with long tapered tips are used for irrigating ears.) The best suction bulbs on the market have a small clear plastic tip (a mucus trap) that can be removed from the bulb for cleaning.

8. Thermometer

A rectal thermometer is most helpful if your baby becomes sick. The

digital thermometers that display the temperature in 30 seconds are worth the few extra dollars. If you buy a glass thermometer, the ones with four color zones are easier to read.

9. Diaper and bottle bag

For traveling outside the home with your baby, you will need an all-purpose backpack to carry the items that you need to feed your baby and change diapers. Packs often fit on the back of strollers. Backpacks are more comfortable and convenient than shoulder bags.

10. Highchair

During the first 6 months of life you can hold your baby whenever you feed him. However, you will need a highchair when your child can sit unsupported and is eating solid foods.

The most important feature of a high chair is a wide base that prevents the high chair from tipping. The tray needs to have a good safety latch. The tray should also have adjustable positions to adapt to your infant's growth. A safety strap is critical. Plastic or metal chairs are easier to clean than wooden chairs.

Small portable, hook-on highchairs that attach directly to the tabletop are gaining in popularity. They are convenient and reasonably priced. The ones with a special clamp that keeps your child from pushing the chair off the tabletop with his feet have a good safety record. By 2 years of age, most toddlers can sit in a youth chair.

11. Training cup

By the time your child is 1 year old, she will want to hold her own cup. Buy a spillproof one with a weighted base, a lid, and a spout. By 2 years of age, most children can use a regular cup.

12. Bib

To keep food off your baby's clothes, find a molded plastic bib with an open scoop on the bottom to catch the mess.

13. Safety gadgets

Once your child is crawling, you will need safety gadgets such as electric-outlet safety plugs, cabinet door safety locks, bathtub spout protectors, toilet clamps, and plastic corner guards for sharp table edges.

HELPFUL EQUIPMENT

Some of the following items provide your child with forms of transportation or special places to play. They all have some advantages. However, if none of them are available, you can carry your child whenever necessary, and your child can play on a blanket on the floor.

1. Changing table

Diapers need to be changed many times a day. You can use a bed to change your baby, but bending over the bed so many times a day may cause back strain. If you have a changing table you won't have to bend over every time you change your child. A regular table or buffet covered with a changing pad can work as well as a special baby-changing table.

2. Automatic swing

Swings are entertaining to most babies. They are especially helpful for crying babies. They come in windup-spring, pendulum-driven, or battery-powered models. The mechanisms of the latter two types of swing are quieter than the first. Make sure a swing has a sturdy base and crossbars.

3. Front-carrier or sling

Cloth carriers or slings that allow you to carry your new baby in front

against your chest are great. They give your child a sense of physical contact and warmth. The slings are helpful during breast-feeding. They allow you freedom to use your hands. Buy one with head support.

Carrying a baby in front after the age of 5 or 6 months can cause a backache for the parent.

4. Backpack

Backpacks are useful for carrying babies who have good head support and are at least 5 or 6 months old. They are an inexpensive way to transport your baby when you go shopping, hiking, or walking anywhere. The inner seat of the carrier can usually be adjusted to different levels.

5. Stroller

Another way to transport a baby who has outgrown a front-carrier is a baby stroller. The most convenient strollers are the umbrella type, which fold up, and ones that have at least one reclining position. A safety belt is important to keep your baby from standing up in the stroller and falling out. A sun shade is also great for inspiring an afternoon snooze.

6. Infant seat or bouncer seat

An infant seat is a good place to keep a young baby when the baby is not eating or sleeping. A bouncer seat has the added advantage that your baby can make the seat move by him- or herself. Infants prefer this inclined position so they can see what is going on around them. Buy one with a safety strap, but don't substitute it for a car seat. After children are 3 to 4 months old they can usually tip the infant seat over, so stop using it when your baby reaches this age.

7. Playpen

A playpen is a handy and safe place to leave your baby when you need uninterrupted time to cook a meal or do the wash. Babies like playpens because the slatted or mesh sides afford a good view of their environment. Playpens can be used both indoors and outdoors.

As with cribs, the slats should be less than 2 and 3/8 inches apart. Playpens with a fine-weave netting are OK, although sometimes older infants can climb out of them. Bottomless playpens are gaining in popularity.

Your baby should be introduced to the playpen by the age of 4 months so that she feels good about staying in it. It is very difficult to introduce a baby to a playpen after the baby has learned to crawl.

Do not string any objects on a cord across the playpen. Your baby could become entangled in them and strangle.

8. Gates

A gate is essential if your house has stairways that your baby must be protected from. A gate also helps keep a child in a specific room with you and out of the rest of the house (for example, when you are working in the kitchen). Many rooms can be closed off with doors. All gates should be difficult for a baby to climb. The strongest gates are spring-loaded.

9. Humidifier

A humidifier is helpful in dry climates or areas with cold winters. The new ultrasonic humidifiers are quiet and have other advantages. Do not buy a vaporizer because the steam it produces could burn a child. Vaporizers also do not deliver humidity at as fast a rate as humidifiers.

10. Food grinder

The time comes when your baby must make the transition from baby foods to table foods. A baby-food grinder takes the work out of mashing up table foods. It's as effective as a blender, easier to clean, and less expensive. Food processors have the advantage of allowing you to make

Normal Newborn Reflexes and Behavior

Some newborn behaviors that concern parents are not signs of illness. They are usually due to an immature nervous system and will disappear in 3 or 4 months. Some common reflexes and behaviors include:

- trembling chin
- quivering lower lip
- having hiccups
- passing gas (this is not a temporary behavior)
- making noises when sleeping (from breathing and moving). Also during light sleep, babies can normally whimper, cry, groan, or make other strange noises. If you use a nursery monitor don't over-react to these normal variations in sleep sounds.
- sneezing
- yawning
- spitting up or burping
- stiffening of the body after a noise or sudden movement (also called the startle reflex)
- straining with bowel movements
- clearing the throat (or gurgling sounds in the throat)
- breathing irregularly (This is normal if your baby is content, the rate is less than 60 breaths per minute, any pauses are less than 10 seconds long, and your baby isn't turning blue. Sometimes babies take rapid, progressively deeper breaths to completely expand their lungs.)
- trembling or jitteriness of arms and legs during crying is normal. Convulsions are rare. During convulsions babies also jerk, blink their eyes, rhythmically suck with their mouths, and don't cry. If your baby is trembling and not crying, it could be abnormal. Give her something to suck on. If the trembling doesn't stop when your baby is sucking, call your healthcare provider immediately.

Written by B.D. Schmitt, MD, author of "Your Child's Health," Bantam Books.

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Sleep Position for Young Infants

come home, most premature babies should sleep on their backs.

Any baby who needs to sleep on his stomach must also be placed on a firm sleeping surface.

Should I lay my baby on his stomach during playtime?

It is good for your baby to spend some time on his stomach when he is awake during the day. The back position is only recommended for bedtime and naps. Letting your baby play on his stomach helps strengthen his shoulder muscles. Changing positions also keeps your baby's head from becoming flattened from laying in the same position all of the time.

For more information:

Sudden Infant Death Syndrome Alliance
1314 Bedford Ave. Ste. 210
Baltimore, MD 21208
800-221-SIDS(7437)
E-mail: sidshq@charm.net
<http://www.sidsalliance.org>

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What is the safest sleep position for my baby?

The American Academy of Pediatrics (AAP) recommends that all healthy infants sleep on their backs the first 6 months of life. Studies have shown sleeping on the back reduces the risk of Sudden Infant Death Syndrome (SIDS). SIDS is the sudden unexplained death of a healthy infant. Thousands of babies die each year from SIDS. Typically, a baby dies from SIDS while sleeping.

The AAP started recommending that babies sleep on their backs in 1992. Eighty percent of parents now follow this advice and there has been a 40% drop in the rate of SIDS.

Why does sleeping on the stomach increase the risk of SIDS?

Laying a baby on his stomach puts pressure on his jaw bone. This causes the airway in the back of the mouth to become narrower. Also, if the baby sleeps on a soft surface, the nose and mouth may sink in so the child breathes from a small pocket of stale air.

If your baby sleeps on his stomach, the risk of SIDS is 3 to 9 times greater. Sleeping on the side is safer than the stomach but still has twice the risk of SIDS as the back position. If you use a child-care center or babysitter, be sure they know how important it is to put your baby on his back to sleep.

Are there other ways I can reduce the risk of SIDS?

You can also reduce the risk of SIDS by:

- Using a firm mattress (avoid soft bedding). Young infants should never be placed on waterbeds, sheepskin, soft pillows, bean-filled pillows, or other soft, spongy surfaces. These surfaces are also potentially dangerous when a child is placed in the crib on his back because he may roll over during the night.
- Breast-feeding your baby, if possible.
- Protecting your infant from exposure to cigarette, cigar, or pipe smoke.
- Not letting your baby sleep in your bed during the first 6 months. The mattresses in most adult beds are too soft for babies. Blankets and pillows in your bed also increase the risk.

When should a baby sleep on his stomach?

The American Academy of Pediatrics recommends putting your baby to sleep on his stomach in the following cases:

- Infants with complications of spitting up. These complications include recurrent pneumonia from aspiration, interruption of breathing (apnea), or acid damage to the lower esophagus (esophagitis), and choking. While spitting up is common, these complications are rare. Years ago, doctors recommended that babies sleep on their stomachs to decrease the chance of choking. But choking is extremely rare and it was never proven that the stomach position prevented choking better than any other position.
- A birth defect of the upper airway that interferes with breathing. Examples are a large tongue, a very small mouth, or a large and floppy larynx.
- Premature babies who are having difficulty breathing or require oxygen. (Research shows that premature babies breathe better when lying on their stomachs.) By the time they

Newborn Skin Care (Normal)

Fingernails and Toenails

Cut the toenails straight across to prevent ingrown toenails. When you cut fingernails, round off the corners of the nails so your baby doesn't scratch himself or others.

Trim the nails once a week after a bath, when the nails are softened by the bath. Use clippers or special baby scissors. This job usually takes two people unless you do it while your child is asleep.

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Bathing

You may bathe your baby daily, but for the first few months, 2 or 3 times a week is often enough for a full bath. Clean your baby's drools and spills as they happen and keep the face, hands and diaper area clean.

Keep the bath water level below the navel or give sponge baths until a few days after the navel cord has fallen off. Submerging the cord could cause infection or interfere with its drying out and falling off. Getting the cord a little wet doesn't matter.

Use tap water without any soap or with a nondrying soap such as Dove. Don't forget to wash the face; otherwise, chemicals from milk and food can build up and cause an irritated rash. Also rinse off the eyelids with water.

Don't forget to wash the genital area. However, when you wash the inside of the female genital area (the vulva), never use soap. Rinse the area with plain water and wipe from front to back to prevent irritation. This practice and the avoidance of any bubble baths before puberty may prevent many urinary tract infections and vaginal irritations. At the end of the bath, rinse your baby well; soap residue can be irritating.

Changing Diapers

After you remove a wet diaper, just rinse your baby's bottom off with a wet washcloth. After soiled diapers, rinse the bottom under running warm water or in a basin of warm water. After you clean the rear, cleanse the genital area by wiping front to back with a wet cloth. If you have a boy, carefully clean the scrotum. If you have a girl, carefully clean the creases of the vaginal lips (labia).

Shampoo

Wash your baby's hair once or twice a week with a special baby shampoo that doesn't sting the eyes. Don't be concerned about hurting the anterior fontanelle (soft spot on the head). It is well protected.

Lotions, Ointments, and Powder

Newborn skin normally does not require any ointments or creams. Especially avoid putting any oil, ointment, or greasy substance on your baby's skin because this will almost always block the small sweat glands and lead to pimples or a heat rash. If the skin starts to become dry and cracked, use a baby lotion, hand lotion, or moisturizing cream twice a day.

Cornstarch powder can be helpful for preventing rashes in areas of friction. Avoid talcum powder because it can cause a serious chemical pneumonia if inhaled into the lungs.

Umbilical Cord

Try to keep the cord dry. Put rubbing alcohol on the base of the cord (where it attaches to the skin) twice a day (including after the bath) until 1 week after it falls off. Air exposure helps the cord stay dry and eventually fall off, so keep diapers folded down below the cord area. If you are using disposable diapers, you can cut out a wedge of diaper with a scissors so the cord is not covered.

Cup Feeding

Introduce your child to a cup at approximately 6 months of age. Total weaning to a cup will probably occur somewhere between 9 and 18 months of age, depending on your baby's individual preference. If you discontinue breast-feeding before 9 months of age, switch to bottle feeding first. If you stop breast-feeding after 9 months of age, you may be able to go directly to cup feeding.

Call Your Child's Physician within 24 Hours If:

- Your baby doesn't seem to be gaining adequately.
- Your baby has less than six wet diapers per day.
- During the first month, your baby has less than 3 bowel movements per day.
- You suspect your baby has a food allergy.
- You need to take a medication that is not mentioned in this discussion.
- Your breasts do not become full (engorged) before feedings by the time your baby is 5 days old.
- You have painful engorgement or sore nipples that do not respond to the recommended treatment.
- You have a fever (also call your obstetrician).
- You have other questions or concerns.

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After your baby is 6 weeks old and nursing is well established, you may want to offer your baby a bottle of expressed milk or 1 ounce of formula once a day so that he can get used to the bottle and the artificial nipple. Once your baby accepts bottle feedings, you can occasionally leave your baby with a sitter and go out for the evening or return to work outside the home. You can use pumped breast milk that has been refrigerated or frozen.

Extra Water

Babies do not routinely need extra water. Even when they have a fever or the weather is hot and dry, breast milk provides enough water.

Pumping the Breasts to Relieve Pain or Collect Milk

Severe engorgement (severe swelling) of the breasts decreases milk production. To prevent engorgement, nurse your baby more often. Also, compress the area around the nipple (the areola) with your fingers at the start of each feeding to soften the areola. For milk release, your baby must be able to grip and suck on the areola as well as the nipple. Every time you miss a feeding (for example, if you return to work outside the home), pump your breasts. Also, whenever your breasts hurt and you are unable to feed your baby, pump your breasts until they are soft. If you don't relieve engorgement, your milk supply can dry up in 2 to 3 days.

A breast pump is usually not necessary because pumping can be done by hand. Ask someone to teach you the Marmet technique.

Pumped breast milk can be stored for 5 to 7 days in a refrigerator and up to 6 months in a freezer. To thaw frozen breast milk, put the container of breast milk in the refrigerator (it will take a few hours to thaw) or place it in a container of warm water until it has warmed up to the temperature your baby prefers.

Sore Nipples

Clean a sore nipple with water after each feeding. Do not use soap or alcohol because they remove natural oils. At the end of each feeding, the nipple can be coated with some breast milk to keep it lubricated. For cracked nipples, apply 100% lanolin (no prescription necessary) after feedings. Try to keep the nipples dry with loose clothing, air exposure, and nursing pads.

Sore nipples usually are due to poor latching on and a feeding position that causes undue friction on the nipple. Position your baby so that he directly faces the nipple without turning his neck. At the start of the feeding, compress the nipple and areola between your thumb and

Breast-Feeding Essentials

Babies who are breast-fed have fewer infections and allergies during the first year of life than babies who are fed formula. Breast milk is also inexpensive and served at the perfect temperature. Breast-feeding becomes especially convenient when a mother is traveling with her baby. Overall, breast milk is nature's best food for young babies.

How Often to Feed

The baby should nurse for the first time in the delivery room. The second feeding will usually be at 4 to 6 hours of age, after he awakens from a deep sleep. Until your milk supply is well established (usually 4 weeks), nurse your infant whenever he cries or seems hungry (demand feeding). Thereafter, babies can receive enough milk by nursing every 2 to 2-and-1/2 hours. If your baby cries and less than 2 hours have passed, he can be rocked or carried in a frontpack. However, waiting more than 2-and-1/2 hours can lead to swollen breasts (engorgement), which decreases milk production. (Feeding less frequently is OK at night, but no more than 5 hours should pass between feedings.)

Your baby will not gain adequately unless he nurses 8 or more times per day initially. The risks of continuing to nurse at short intervals (more often than every 1 and 1/2 hours) are that "grazing" will become a habit, your baby won't be able to sleep through the night, and you won't have much free time.

How Long Per Feeding

During the first week, bring in your full milk supply by offering both breasts with each feeding. Try 10 minutes on the first breast and as long as your baby wants on the second breast (at least 10 minutes). Alternate which breast you start on. You may need to stimulate your baby to take the second breast.

After your milk supply has come in (by day 8 at the latest), encourage your baby to nurse as long as she wants to on the first breast (up to 20 minutes). This is so your baby can get the high-fat, caloric-rich hind milk. 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. Alternate breasts at the start of each feeding.

How to Know Your Baby is Getting Enough Breast Milk

In the first couple of weeks, if your baby has 3 to 4 good-sized bowel movements per day and six or more wet diapers per day, he is receiving a good supply of breast milk. (Infrequent bowel movements are not normally seen before a baby is 1 month old.) In addition, most babies will act satisfied after completing a feeding.

Your baby should be back to birth weight by 10 to 14 days of age if breast-feeding is going well. Therefore, the 2-week checkup by your baby's physician is very important.

The presence of a letdown reflex is another indicator of good milk production.

The Letdown Reflex

A letdown reflex develops after 2 to 3 weeks of nursing and is indicated by tingling or milk ejection in the breast just before feeding (or when you are thinking about feeding). It also occurs in the opposite breast while your baby is nursing.

Formula (Bottle) Feeding

Fluoride Requirements

From 6 months to 16 years of age, children need fluoride to prevent dental caries. If the water supply where you live contains fluoride and your child drinks at least 1 pint each day, this should be adequate. Otherwise, fluoride drops or tablets should be given separately. This is a prescription item that can be obtained from your child's physician.

Prevention of Baby-Bottle Tooth Decay

Sleeping with a bottle of 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 this tragedy of tooth decay by not using the bottle as a daytime or nighttime pacifier. If you cannot discontinue the nighttime bottle or replace it with a pacifier, fill it with water. This approach will prevent tooth decay.

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Formula (Bottle) Feeding

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. 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.

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.)

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.

5. Burping

Burping is optional. It doesn't decrease crying. Its only benefit is to decrease spitting up. 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 is a "spitter."

Traveling

When you are traveling, powdered or ready-to-serve formulas are the most convenient. To prepare the formula, simply add the appropriate number of scoops of powder to bottled, previously boiled water, or pour ready-to-serve formula into a sterilized bottle.

Extra 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.

Formula (Bottle) Feeding

iron-fortified formulas, no supplementary vitamins or minerals are needed.

2. Homemade formulas from evaporated milk

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).

3. Cow's milk

Breast milk is the first choice for feeding during the first year of life. A commercially prepared infant formula is the second choice. 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 Commercial 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.

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 preferred 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.

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,

Formula (Bottle) Feeding

Breast-Feeding Versus Formula Feeding

Breast milk is best for babies, but breast-feeding isn't always possible. Use an infant formula if:

- You decide not to breast-feed.
- You need to stop breast-feeding and your infant is less than 1 year old.
- Occasionally you need to supplement breast-feeding with formula after breast-feeding is well established. Note: If you want to breast-feed but you think your milk supply is insufficient, don't stop breast-feeding. Instead seek help from your physician or a lactation nurse.

Caution: 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.

The decision about the appropriate breast milk substitute for a child less than 1 year old should be made after talking with your physician or health care provider. When you and your physician select a method of infant feeding, you must consider your lifestyle and the costs of the different methods of feeding.

Types of Formulas and Cow's Milk

1. Commercial formulas

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

Sick Newborn: Subtle Symptoms

A newborn is a baby less than 1 month old. He or she mainly eats, sleeps, cries a little, and needs a lot of love and his or her diapers changed frequently. If a newborn is ill, the symptoms can be subtle. Also, an ill newborn can very quickly get much sicker. If a newborn is sick at all, the illness can be serious.

When should I call my child's health care provider

Call IMMEDIATELY if:

- Your baby is less than 1 month old and sick in any way (for example, with a cough or diarrhea or looks pale).
- Your newborn's appetite or suck becomes poor.
- Your newborn sleeps excessively--for instance, past feeding times.
- Your newborn cries excessively.
- Your newborn develops a fever over 100.4°F (38°C) measured rectally, or over 99°F (37.2°C) measured in the armpit. *
- Your newborn's temperature drops below 96.8°F (36°C) measured rectally, or 95.4°F (35.5°C) measured in the armpit. *
- You have other urgent questions.

* In general, do not take an infant's temperature unless he or she feels hot or looks sick.

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Newborn Skin: Rashes and Birthmarks

After the first bath your newborn will normally have a ruddy complexion due to the extra high count of red blood cells. He can quickly change to a pale- or mottled-blue color if he becomes cold, so keep him warm. During the second week of life, your baby's skin will normally become dry and flaky. Many babies also get rashes or have birthmarks. In this handout, seven kinds of rashes and birthmarks are covered.

1. Acne of newborn

More than 30% of newborns develop acne of the face: mainly small, red bumps. This neonatal acne begins at 3 to 4 weeks of age and lasts until 4 to 6 months of age. The cause appears to be the transfer of maternal androgens (hormones) just prior to birth. Since it is temporary, no treatment is necessary. Baby oil or ointments will just make it worse.

2. Drooling rash

Most babies have a rash on the chin or cheeks that comes and goes. Often, this rash is caused by contact with food and acid that have been spit up from the stomach. Rinse your baby's face with water after all feedings or spitting up.

Other temporary rashes on the face are heat rashes in areas held against the mother's skin during nursing (especially in the summertime). Change your baby's position more frequently and put a cool washcloth on the area that has a rash.

3. Erythema toxicum

More than 50% of babies get a rash called erythema toxicum on the second or third day of life. The rash is composed of 1/2 inch to 1 inch-size red blotches with a little white or yellow pimple in the center. They look like insect bites. They are numerous, keep recurring for a week, and can be anywhere on the body (except palms and soles). The cause of this rash is unknown and it is harmless. The rash usually disappears by the time an infant is 2 weeks old, but sometimes not until a child is 4 weeks old.

4. Forceps or birth canal injury

If your baby's delivery was difficult, a forceps may have been used to help him through the birth canal. The pressure of the forceps on the skin can leave bruises or scrapes or can even damage fat tissue anywhere on the head or face.

Pressure from the birth canal can damage the skin overlying bony prominences (such as the sides of the skull) even without a forceps delivery. Fetal monitors can also cause scrapes and scabs on the scalp.

You will notice the bruises and scrapes 1 or 2 days after birth. They will disappear in 1 to 2 weeks.

Injury to fat tissue won't be apparent until the fifth or sixth day after birth. A thickened lump of skin with an overlying scab is what you usually see. This may take 3 or 4 weeks to heal. For any breaks in the skin, apply an antibiotic ointment (OTC) 3 times per day until healed. If it becomes tender to the touch or soft in the center or shows other signs of infection, call your healthcare provider.

5. Milia

Milia are tiny white bumps that occur on the faces of 40% of newborn babies. The nose and cheeks are most often involved, but milia are also seen on the forehead and chin. Although they look like pimples, they are smaller and not infected. They are blocked-off skin pores and will open up

and disappear by 1 to 2 months of age. Do not apply ointments or creams to them.

Any true blisters (little bumps containing clear fluid) or pimples (little bumps containing pus) that occur during the first month of life (especially on the scalp) must be examined and diagnosed quickly. If they are caused by the herpesvirus, they must be treated right away. If you suspect blisters or pimples, call your child's healthcare provider immediately.

6. Mongolian spots

A Mongolian spot is a bluish-gray, flat birthmark that is found in more than 90% of American Indian, Asian, Hispanic, and black babies. They occur most commonly over the back and buttocks, although they can be present on any part of the body. They vary greatly in size and shape. Most fade away by 2 or 3 years of age, although a trace may persist into adult life.

7. Stork bites (pink birthmarks)

Flat pink birthmarks (also called capillary hemangiomas) occur over the bridge of the nose, the eyelids, or the back of the neck in more than 50% of newborns. Most of these spots fade and disappear, but some can persist into adult life. Those on the forehead that run from the bridge of the nose up to the hairline usually persist into adult life. Laser treatment during infancy should be considered for these.

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Newborn Skin Care (Normal)

Fingernails and Toenails

Cut the toenails straight across to prevent ingrown toenails. When you cut fingernails, round off the corners of the nails so your baby doesn't scratch himself or others.

Trim the nails once a week after a bath, when the nails are softened by the bath. Use clippers or special baby scissors. This job usually takes two people unless you do it while your child is asleep.

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Sleep Position for Young Infants

What is the safest sleep position for my baby?

The American Academy of Pediatrics (AAP) recommends that all healthy infants sleep on their backs the first 6 months of life. Studies have shown sleeping on the back reduces the risk of Sudden Infant Death Syndrome (SIDS). SIDS is the sudden unexplained death of a healthy infant. Thousands of babies die each year from SIDS. Typically, a baby dies from SIDS while sleeping.

The AAP started recommending that babies sleep on their backs in 1992. Eighty percent of parents now follow this advice and there has been a 40% drop in the rate of SIDS.

Why does sleeping on the stomach increase the risk of SIDS?

Laying a baby on his stomach puts pressure on his jaw bone. This causes the airway in the back of the mouth to become narrower. Also, if the baby sleeps on a soft surface, the nose and mouth may sink in so the child breathes from a small pocket of stale air.

If your baby sleeps on his stomach, the risk of SIDS is 3 to 9 times greater. Sleeping on the side is safer than the stomach but still has twice the risk of SIDS as the back position. If you use a child-care center or babysitter, be sure they know how important it is to put your baby on his back to sleep.

Are there other ways I can reduce the risk of SIDS?

You can also reduce the risk of SIDS by:

- Using a firm mattress (avoid soft bedding). Young infants should never be placed on waterbeds, sheepskin, soft pillows, bean-filled pillows, or other soft, spongy surfaces. These surfaces are also potentially dangerous when a child is placed in the crib on his back because he may roll over during the night.
- Breast-feeding your baby, if possible.
- Protecting your infant from exposure to cigarette, cigar, or pipe smoke.
- Not letting your baby sleep in your bed during the first 6 months. The mattresses in most adult beds are too soft for babies. Blankets and pillows in your bed also increase the risk.

When should a baby sleep on his stomach?

The American Academy of Pediatrics recommends putting your baby to sleep on his stomach in the following cases:

- Infants with complications of spitting up. These complications include recurrent pneumonia from aspiration, interruption of breathing (apnea), or acid damage to the lower esophagus (esophagitis), and choking. While spitting up is common, these complications are rare. Years ago, doctors recommended that babies sleep on their stomachs to decrease the chance of choking. But choking is extremely rare and it was never proven that the stomach position prevented choking better than any other position.
- A birth defect of the upper airway that interferes with breathing. Examples are a large tongue, a very small mouth, or a large and floppy larynx.
- Premature babies who are having difficulty breathing or require oxygen. (Research shows that premature babies breathe better when lying on their stomachs.) By the time they

reaches 6 months of age. White babies are usually born with blue-gray eyes. Black babies are usually born with brown-gray eyes. Children who will have dark irises often change eye color by 2 months of age; children who will have light-colored irises usually change by 5 or 6 months of age.

4. **Tear duct, blocked**

If your baby's eye is continuously watery, he or she may have a blocked tear duct. This means that the channel that normally carries tears from the eye to the nose is blocked. It is a common condition, and more than 90% of blocked tear ducts open up by the time the child is 12 months old.

EARS

1. **Folded over**

The ears of newborns are commonly soft and floppy. Sometimes one of the edges is folded over. The outer ear will assume normal shape as the cartilage hardens over the first few weeks.

2. **Earpits**

About 1% of normal children have a small pit or dimple in front of the outer ear. This minor congenital defect is not important unless it becomes infected.

NOSE, FLATTENED

The nose can become misshapen during the birth process. It may be flattened or pushed to one side. It will look normal by 1 week of age.

MOUTH

1. **Sucking callus (or blister)**

A sucking callus occurs in the center of the upper lip from constant friction at this point during bottle- or breast-feeding. It will disappear when your child begins cup feedings. A sucking callus on the thumb or wrist may also develop.

2. **Tongue-tie**

The normal tongue in newborns has a short tight band that connects it to the floor of the mouth. This band normally stretches with time, movement, and growth.

3. **Epithelial pearls**

Little white-colored cysts can occur along the gumline or on the hard palate. These are a result of blockage of normal mucous glands. They disappear after 1 to 2 months.

4. **Teeth**

The presence of a tooth at birth is rare. Approximately 10% are extra teeth without a root structure. The other 90% are prematurely erupted normal teeth. The distinction can be made with an X-ray. The extra teeth should be removed, usually by a dentist. The normal teeth need to be removed only if they become loose (with a danger of choking) or if they cause sores on your baby's tongue.

BREAST ENGORGEMENT

Swollen breasts are present during the first week of life in many female and male babies. They are caused by the passage of female hormones across the mother's placenta. Sometimes the breast will leak a few drops of milk, and this is normal. Breasts are generally swollen for 2 to 4 weeks, but they may stay swollen longer in breast-fed and female babies. One breast may lose its swelling before the other one by a month or more. Never squeeze the breast because this can cause infection. Be sure to call your healthcare provider if a swollen breast develops any redness, streaking, or tenderness.

GENITALS, GIRLS

1. Swollen labia

The labia minora can be quite swollen in newborn girls because of the passage of female hormones across the placenta. The swelling will resolve in 2 to 4 weeks.

2. Hymenal tags

The hymen can also be swollen due to maternal estrogen and have smooth 1/2-inch projections of pink tissue. These normal tags occur in 10% of newborn girls and slowly shrink over 2 to 4 weeks.

3. Vaginal discharge

As the maternal hormones decline in the baby's blood, a clear or white discharge can flow from the vagina during the latter part of the first week of life. Occasionally the discharge will become pink or blood-tinged (false menstruation). This normal discharge should not last more than 2 to 3 days.

GENITALS, BOYS

1. Hydrocele

The newborn scrotum can be filled with clear fluid. The fluid is squeezed into the scrotum during the birth process. This painless collection of clear fluid is called a "hydrocele." It is common in newborn males. A hydrocele may take 6 to 12 months to clear completely. It is harmless but can be rechecked during regular visits. If the swelling frequently changes size, a hernia may also be present and you should call your healthcare provider during office hours for an appointment.

2. Undescended testicle

The testicle is not in the scrotum in about 4% of full-term newborn boys. Many of these testicles gradually descend into the normal position during the following months. In 1-year-old boys only 0.7% of all testicles are undescended; these need to be brought down surgically.

3. Tight foreskin

Most uncircumcised infant boys have a tight foreskin that doesn't allow you to see the head of the penis. This is normal and the foreskin should not be retracted.

4. Erections

Erections occur commonly in a newborn boy, as they do at all ages. They are usually triggered by a full bladder. Erections demonstrate that the nerves to the penis are normal.

BONES AND JOINTS

1. Tight hips

Your child's healthcare provider will test how far your child's legs can be spread apart to be certain the hips are not too tight. Upper legs bent outward until they are horizontal is called "90 degrees of spread." (Less than 50% of normal newborn hips permit this much spreading.) As long as the upper legs can be bent outward to 60 degrees and are the same on each side, they are fine. The most common cause of a tight hip is a dislocation.

2. Tibial torsion

The lower legs (tibia) normally curve in because of the cross-legged posture your baby was confined to while in the womb. If you stand your baby up, you will also notice that the legs are bowed. Both of these curves are normal and will straighten out after your child has been walking for 6 to 12 months.

3. Feet turned up, in, or out

Feet may be turned in any direction inside the cramped quarters of the womb. As long as your child's feet are flexible and can be easily moved to a normal position, they are normal. The direction of the feet will become more normal between 6 and 12 months of age.

4. Long second toe

The second toe is longer than the great toe as a result of heredity in some ethnic groups that originated along the Mediterranean, especially Egyptians.

5. "Ingrown" toenails

Many newborns have soft nails that easily bend and curve. However, they are not truly ingrown because they don't curve into the flesh.

HAIR

1. Scalp hair

Most hair at birth is dark. This hair is temporary and begins to shed by 1 month of age. Some babies lose it gradually while the permanent hair is coming in; others lose it rapidly and temporarily become bald. The permanent hair will appear by 6 months. It may be an entirely different color from the newborn hair.

2. Body hair (lanugo)

Lanugo is the fine downy hair that is sometimes present on the back and shoulders. It is more common in premature infants. It is rubbed off with normal friction by 2 to 4 weeks of age.

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Normal Newborn Reflexes and Behavior

Some newborn behaviors that concern parents are not signs of illness. Most of the following harmless reflexes are due to an immature nervous system and will disappear in 3 or 4 months:

- chin trembling
- lower lip quivering
- hiccups
- irregular breathing (This is normal if your baby is content, the rate is less than 60 breaths per minute, any pauses are less than 10 seconds long, and your baby doesn't turn blue. Occasionally infants take rapid, progressively deeper, stepwise breaths to completely expand their lungs.)
- passing gas (not a temporary behavior)
- sleep noise from breathing and moving
- sneezing
- spitting up or belching
- brief stiffening of the body after a noise or sudden movement (also called the startle reflex, the Moro reflex, or the embrace reflex)
- straining with bowel movements
- throat clearing (or gurgling sounds of secretions in the throat)
- trembling or jitteriness of arms and legs are common during crying (Jittery babies are common. Convulsions are rare. During convulsions babies also jerk, blink their eyes, rhythmically suck with their mouths, and don't cry.) If your baby is trembling and not crying, give her something to suck on. If the trembling doesn't stop when your baby is sucking, call your physician's office immediately.
- yawning.

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Formula (Bottle) Feeding

Breast-Feeding Versus Formula Feeding

Breast milk is best for babies, but breast-feeding isn't always possible. Use an infant formula if:

- You decide not to breast-feed.
- You need to stop breast-feeding and your infant is less than 1 year old.
- Occasionally you need to supplement breast-feeding with formula after breast-feeding is well established. Note: If you want to breast-feed but you think your milk supply is insufficient, don't stop breast-feeding. Instead seek help from your physician or a lactation nurse.

Caution: 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.

The decision about the appropriate breast milk substitute for a child less than 1 year old should be made after talking with your physician or health care provider. When you and your physician select a method of infant feeding, you must consider your lifestyle and the costs of the different methods of feeding.

Types of Formulas and Cow's Milk

1. Commercial formulas

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

Sick Newborn: Subtle Symptoms

A newborn is a baby less than 1 month old. He or she mainly eats, sleeps, cries a little, and needs a lot of love and his or her diapers changed frequently. If a newborn is ill, the symptoms can be subtle. Also, an ill newborn can very quickly get much sicker. If a newborn is sick at all, the illness can be serious.

When should I call my child's health care provider

Call IMMEDIATELY if:

- Your baby is less than 1 month old and sick in any way (for example, with a cough or diarrhea or looks pale).
- Your newborn's appetite or suck becomes poor.
- Your newborn sleeps excessively--for instance, past feeding times.
- Your newborn cries excessively.
- Your newborn develops a fever over 100.4°F (38°C) measured rectally, or over 99°F (37.2°C) measured in the armpit. *
- Your newborn's temperature drops below 96.8°F (36°C) measured rectally, or 95.4°F (35.5°C) measured in the armpit. *
- You have other urgent questions.

* In general, do not take an infant's temperature unless he or she feels hot or looks sick.

Written by B.D. Schmitt, M.D., author of "Your Child's Health," Bantam Books.

This content is reviewed periodically and is subject to change as new health information becomes available. The information is intended to inform and educate and is not a replacement for medical evaluation, advice, diagnosis or treatment by a healthcare professional.

Baby Equipment and Supplies

Before a baby is born, most parents prepare a special room. They buy a layette including clothing, a place to sleep, feeding equipment, bathing equipment, and diapers.

The most common mistake parents on a limited budget make during this time is the purchase of items they don't really need or expensive versions of essential pieces of equipment. Indeed, instead of buying everything you need, you may be able to borrow some baby equipment from friends or relatives.

Some baby equipment is essential, some is helpful but not essential, and some is unnecessary for most families. These three categories of equipment are described below. The final section explains why walkers are not only unnecessary but also dangerous.

Essential Equipment

1. Car safety seat

Child restraint seats are essential for transporting your baby in a car. They are required by law in all 50 states. Consider buying one that is convertible; that is, a seat that you can use from the time your child is a newborn to the time your child reaches 40 pounds and 40 inches. While your child weighs less than 20 pounds, the car seat faces backward. When your child is 1 year old and weighs more than 20 pounds, the seat is moved to a forward-facing position.

Car seats must conform to federal safety standards. They are also ranked by consumer magazines.

Many hospitals have a rental program for car seats that can save you money unless you are going to have several children.

2. Crib

Your baby will spend much time in the crib unattended, so you must make certain it is a safe crib. Federal safety standards require that the crib bars of all cribs built after 1974 be no more than 2 and 3/8 inches apart. The purpose of this restriction is to prevent a child from getting his head or body stuck between the bars. If you have a crib built before 1974, check the distance between the bars. The width of 2 and 3/8 inches is approximately the width of three fingers. Do not buy or use a crib with spaces larger than this. Also check for any defective crib bars.

The mattress should be the same size as the crib so that your baby's head can't get caught in the gap. It should also be waterproof.

Bumper pads are unnecessary because infants rarely strike their head on the railings. The pads have the disadvantage of keeping your baby from seeing out of the crib. Also, an older infant might climb on top of the pads and possibly fall from the crib.

During the first 2 or 3 months of life it may be more convenient for feeding during the night to have your baby sleep next to your bed in a bassinet. A drawer, cardboard box, or basket with a firm pad on the bottom will also work.

3. Bathtub

You can buy small plastic bathtubs and molded sponge linings. A large plastic dishpan will also suffice. A kitchen sink works well if you are careful about preventing your child from falling against hard edges or turning on

the hot water, thereby causing a burn. Until the umbilical cord falls off, keep the water level below your baby's navel. Most children can be bathed in a standard bathtub by the time they are 1 year old.

4. **Bottles and nipples**

If you are feeding your baby formula, you will need about ten 8-ounce bottles. Although clear plastic bottles cost twice as much as glass ones, you will be glad you bought the unbreakable type the first time you or your baby drops one. If you use disposable bottle liners, you probably will need only five bottles.

You will also need 5 to 10 nipples. If you prepare more than one bottle at a time from concentrated formula, you will need a 1-quart measuring cup and a funnel for mixing a batch of formula. If you use powdered formula, the measuring cup is unnecessary.

5. **Diapers**

You can choose disposable or cloth diapers. Disposable diapers are better for preventing diaper rashes. If you're concerned about using diaper pins, diaper covers come with Velcro straps. The main advantage of disposable diapers is that they are very convenient. They make it easier to travel, and day care centers can operate more efficiently. The superabsorbent-gel diapers do not leak.

The main disadvantage of disposable diapers is that they cost more. The average cost of disposable diapers is about 20 cents per diaper. Cloth diapers delivered and cleaned by a diaper service cost about 12 cents per diaper. If you buy and wash your own cloth diapers, the average cost each time you use a diaper is 3 cents (after the initial purchase of the diapers).

If you are breast-feeding, you may want to know how often your baby wets so you can check if your baby is getting enough breast milk. It is easy to know when a cloth diaper is wet. It is more difficult to know when a disposable diaper is wet, but you can insert a cotton ball or piece of tissue.

Which type of diaper to use can be a difficult decision. Why not take advantage of both options? Use cloth diapers when you are home. Use disposables when you are away from home. Use disposables when your child has diarrhea because they prevent leakage of watery stools. During a baby's first 2 or 3 months of life, when most mothers are exhausted by new baby care, consider using a diaper service rather than washing diapers yourself. You will find that modern diaper services are very efficient, provide excellent sterilized diapers, and pick up dirty diapers once a week.

6. **Pacifier**

A pacifier is often useful for soothing babies. To prevent choking on the pacifier, the pacifier's shield should be at least 1 and 1/2 inches in diameter and the pacifier should be one single piece. Some of the newer pacifiers are made of silicone (instead of rubber), which lasts longer because it doesn't dry out. The orthodontic-shaped pacifiers are accepted by some babies but not by others.

7. **Nasal suction bulb**

A rubber suction bulb is essential for helping young babies whose breathing has been made difficult by sticky or dried nasal secretions. A suction bulb with a blunt tip is more effective than a bulb with a long tapered tip and is less likely to irritate the nasal lining. (Bulbs with long tapered tips are used for irrigating ears.) The best suction bulbs on the market have a small clear plastic tip (a mucus trap) that can be removed from the bulb for cleaning.

8. **Thermometer**

A rectal thermometer is most helpful if your baby becomes sick. The

digital thermometers that display the temperature in 30 seconds are worth the few extra dollars. If you buy a glass thermometer, the ones with four color zones are easier to read.

9. Diaper and bottle bag

For traveling outside the home with your baby, you will need an all-purpose backpack to carry the items that you need to feed your baby and change diapers. Packs often fit on the back of strollers. Backpacks are more comfortable and convenient than shoulder bags.

10. Highchair

During the first 6 months of life you can hold your baby whenever you feed him. However, you will need a highchair when your child can sit unsupported and is eating solid foods.

The most important feature of a high chair is a wide base that prevents the high chair from tipping. The tray needs to have a good safety latch. The tray should also have adjustable positions to adapt to your infant's growth. A safety strap is critical. Plastic or metal chairs are easier to clean than wooden chairs.

Small portable, hook-on highchairs that attach directly to the tabletop are gaining in popularity. They are convenient and reasonably priced. The ones with a special clamp that keeps your child from pushing the chair off the tabletop with his feet have a good safety record. By 2 years of age, most toddlers can sit in a youth chair.

11. Training cup

By the time your child is 1 year old, she will want to hold her own cup. Buy a spillproof one with a weighted base, a lid, and a spout. By 2 years of age, most children can use a regular cup.

12. Bib

To keep food off your baby's clothes, find a molded plastic bib with an open scoop on the bottom to catch the mess.

13. Safety gadgets

Once your child is crawling, you will need safety gadgets such as electric-outlet safety plugs, cabinet door safety locks, bathtub spout protectors, toilet clamps, and plastic corner guards for sharp table edges.

HELPFUL EQUIPMENT

Some of the following items provide your child with forms of transportation or special places to play. They all have some advantages. However, if none of them are available, you can carry your child whenever necessary, and your child can play on a blanket on the floor.

1. Changing table

Diapers need to be changed many times a day. You can use a bed to change your baby, but bending over the bed so many times a day may cause back strain. If you have a changing table you won't have to bend over every time you change your child. A regular table or buffet covered with a changing pad can work as well as a special baby-changing table.

2. Automatic swing

Swings are entertaining to most babies. They are especially helpful for crying babies. They come in windup-spring, pendulum-driven, or battery-powered models. The mechanisms of the latter two types of swing are quieter than the first. Make sure a swing has a sturdy base and crossbars.

3. Front-carrier or sling

Cloth carriers or slings that allow you to carry your new baby in front

against your chest are great. They give your child a sense of physical contact and warmth. The slings are helpful during breast-feeding. They allow you freedom to use your hands. Buy one with head support.

Carrying a baby in front after the age of 5 or 6 months can cause a backache for the parent.

4. **Backpack**

Backpacks are useful for carrying babies who have good head support and are at least 5 or 6 months old. They are an inexpensive way to transport your baby when you go shopping, hiking, or walking anywhere. The inner seat of the carrier can usually be adjusted to different levels.

5. **Stroller**

Another way to transport a baby who has outgrown a front-carrier is a baby stroller. The most convenient strollers are the umbrella type, which fold up, and ones that have at least one reclining position. A safety belt is important to keep your baby from standing up in the stroller and falling out. A sun shade is also great for inspiring an afternoon snooze.

6. **Infant seat or bouncer seat**

An infant seat is a good place to keep a young baby when the baby is not eating or sleeping. A bouncer seat has the added advantage that your baby can make the seat move by him- or herself. Infants prefer this inclined position so they can see what is going on around them. Buy one with a safety strap, but don't substitute it for a car seat. After children are 3 to 4 months old they can usually tip the infant seat over, so stop using it when your baby reaches this age.

7. **Playpen**

A playpen is a handy and safe place to leave your baby when you need uninterrupted time to cook a meal or do the wash. Babies like playpens because the slatted or mesh sides afford a good view of their environment. Playpens can be used both indoors and outdoors.

As with cribs, the slats should be less than 2 and 3/8 inches apart. Playpens with a fine-weave netting are OK, although sometimes older infants can climb out of them. Bottomless playpens are gaining in popularity.

Your baby should be introduced to the playpen by the age of 4 months so that she feels good about staying in it. It is very difficult to introduce a baby to a playpen after the baby has learned to crawl.

Do not string any objects on a cord across the playpen. Your baby could become entangled in them and strangle.

8. **Gates**

A gate is essential if your house has stairways that your baby must be protected from. A gate also helps keep a child in a specific room with you and out of the rest of the house (for example, when you are working in the kitchen). Many rooms can be closed off with doors. All gates should be difficult for a baby to climb. The strongest gates are spring-loaded.

9. **Humidifier**

A humidifier is helpful in dry climates or areas with cold winters. The new ultrasonic humidifiers are quiet and have other advantages. Do not buy a vaporizer because the steam it produces could burn a child. Vaporizers also do not deliver humidity at as fast a rate as humidifiers.

10. **Food grinder**

The time comes when your baby must make the transition from baby foods to table foods. A baby-food grinder takes the work out of mashing up table foods. It's as effective as a blender, easier to clean, and less expensive. Food processors have the advantage of allowing you to make

Car Seat Recommendations for Children

- Select a car seat based on your child's age and size, and choose a seat that fits in your vehicle and use it every time.
- Always refer to your specific car seat manufacturer's instructions; read the vehicle owner's manual on how to install the car seat using the seat belt or LATCH system; and check height and weight limits.
- To maximize safety, keep your child in the car seat for as long as possible, as long as the child fits within the manufacturer's height and weight requirements.
- Keep your child in the back seat at least through age 12.



www.nhtsa.gov

Birth – 12 months



Your child under age 1 should always ride in a rear-facing car seat.

There are different types of rear-facing car seats. Infant-only seats can only be used rear-facing. Convertible and 3-in-1 car seats typically have higher height and weight limits for the rear-facing position, allowing you to keep your child rear-facing for a longer period of time.

1 – 3 years



Keep your child rear-facing as long as possible. It's the best way to keep him or her safe. Your child should remain in a rear-facing car seat until he or she reaches the top height or weight limit allowed by your car seat's manufacturer. Once your child outgrows the rear-facing car seat, your child is ready to travel in a forward-facing car seat with a harness.

4 – 7 years



Keep your child in a forward-facing car seat with a harness until he or she reaches the top height or weight limit allowed by your car seat's manufacturer. Once your child outgrows the forward-facing car seat with a harness, it's time to travel in a booster seat, but still in the back seat.

8 – 12 years



Keep your child in a booster seat until he or she is big enough to fit in a seat belt properly. For a seat belt to fit properly the lap belt must lie snug across the upper thighs, not the stomach. The shoulder belt should lie snug across the shoulder and chest and not cross the neck or face. Remember: your child should still ride in the back seat because it's safer there.

DESCRIPTION (RESTRAINT TYPE)

A **REAR-FACING CAR SEAT** is the best seat for your young child to use. It has a harness and in a crash, cradles and moves with your child to reduce the stress to the child's fragile neck and spinal cord.

A FORWARD-FACING



CAR SEAT has a harness and tether that limits your child's forward movement during a crash.

A **BOOSTER SEAT** positions the seat belt so that it fits properly over the stronger parts of your child's body.

A **SEAT BELT** should lie across the upper thighs and be snug across the shoulder and chest to restrain the child safely in a crash. It should not rest on the stomach area or across the neck.



www.facebook.com/childpassengersafety

<http://twitter.com/childseatsafety>

March 21, 2011

Colorado's Child Restraint Law

Colorado Revised Statute 42-4-236

Most recent changes effective August 1, 2003.

Bolded text indicates Colorado Law. Smaller text indicates "best practice" recommendations by national safety advocates*.



Infants must ride in a rear-facing car seat until they are at least 1 year old and at least 20 lbs.

Safety advocates* recommend that infants continue rear-facing as long as possible for the best protection in a crash. Many larger "convertible" type car seats will allow children to ride rear-facing up to 30 lbs.



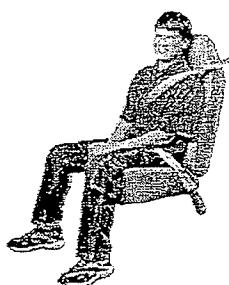
Children aged 1 to 4 years who weigh 20 to 40 lbs. must be restrained in a forward-facing car seat.

Safety advocates* recommend restraining your child in a "5-point" harness system until they are at least 40 lbs. This harness provides the best protection for your child. Use upper tether straps where applicable (refer to your car seat and vehicle's owner's manual for more information).



Children over 40 lbs. who are less than 6 years old must continue to ride in a child restraint (unless they are 55" tall). Typically, this is a booster seat.

While Colorado Law requires older children to be restrained in booster seats until they are 6 years old or 55" tall, safety advocates* recommend keeping children in booster seats until they are about 57" tall. A child's height is the best predictor of proper seat belt fit.



Children between 6 and 16 years old must be restrained in a seat belt.

Everyone in the car should always be properly buckled up, either with appropriate car seats, booster seats or vehicle seat belts. Proper seat belt fit is achieved when: (1) the child can sit all the way back against the seat back with their knees bent naturally at the edge of the seat; (2) the shoulder belt comfortably crossing the shoulder between the neck and arm; and (3) the lap belt sitting low on their hips, touching the thighs. This is usually achieved when the child is 57" tall, regardless of age or weight.

*Safety advocates include the American Academy of Pediatrics, the National Highway Traffic Safety Administration and the National SAFE KIDS Campaign.