

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™



THE COMPLETE AND AUTHORITATIVE GUIDE
**CARING FOR
YOUR BABY AND
YOUNG CHILD**

BIRTH TO AGE 5



MORE THAN 350 ILLUSTRATIONS

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As you prepare for one of the most exciting moments in your life, I hope you'll find this copy of *The American Academy of Pediatrics' Caring for Your Baby and Young Child* both helpful and informative.

I'd like to be a resource for you and your family. It's my pleasure to help take care of the details so you can spend more time enjoying your newest addition. I appreciate your business and look forward to hearing from you soon.

Best Wishes,

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Birth to Age 5

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CARING FOR YOUR BABY AND YOUNG CHILD

Birth to Age Five

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DELIVERY ROOM PROCEDURES FOLLOWING A NORMAL VAGINAL BIRTH

As your baby lies with you following a routine delivery, his umbilical cord still will be attached to the placenta. The cord may continue to pulsate for several minutes, supplying the baby with oxygen while he establishes his own breathing. Once the pulsing stops, the cord will be clamped and cut. (Because there are no nerves in the cord, the baby feels no pain during this procedure.) The clamp will remain in place for twenty-four to forty-eight hours, or until the cord

Bonding

If you have a delivery without complications, you'll be able to spend the first hour or so after birth holding, stroking, and looking at your baby. Because babies are usually alert and very responsive during this time, researchers have labeled this the sensitive period.

The first exchanges of eye contact, sounds, and touches between the two of you are all part of a process called bonding, which helps lay the foundation for your relationship as parent and child. Although it will take months to learn your child's basic temperament and personality, many of the core emotions you feel for him may begin to develop during this brief period immediately after birth. As you gaze at him and he looks back, following your movements and perhaps even mirroring some of your expressions, you may feel a surge of protectiveness and awe. This is part of the attachment process.

It's also quite normal if you do *not* immediately have tremendously warm feelings for your baby. Labor is a demanding experience, and your first reaction to the birth may well be a sense of relief that at last it's over. If you're exhausted and emotionally drained, you may simply want to rest. That's perfectly normal. Give yourself a half hour or so until the strain of labor fades and then request your baby. Bonding has no time limit.

Also, if your baby must be taken to the nursery right away for medical attention, or if you are sedated during the delivery, don't despair. You needn't worry that your relationship will be harmed because you didn't "bond" during this first hour. You can and will love your baby just as much, even if you weren't able to watch his birth or hold him immediately afterward. Your baby also will be fine, just as loving of you, and connected to you.

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is dry and no longer bleeds. The stump that remains after the clamp is removed will fall off sometime between ten days and three weeks after birth.

Once you've had a few moments to get acquainted with your baby, she will be dried to keep her from getting too cold, and a doctor or nurse will examine her briefly to make sure there are no obvious problems or abnormalities. One minute after birth, and again at five minutes, she will be given Apgar scores (see pages 36–37), which measure her overall responsiveness. Then she will be wrapped in a blanket and given back to you.

Depending on the hospital's routine, your baby also may be weighed, measured, and receive medication before leaving the delivery room. All newborns are slightly low in vitamin K, which is necessary for normal blood clotting, so they are given an injection of this vitamin to prevent excessive bleeding.

Because bacteria in the birth canal can infect a baby's eyes, your baby will be given antibiotic eyedrops or erythromycin ointment or other hospital-approved medication, either immediately after delivery or later, in the nursery, to prevent any infection.

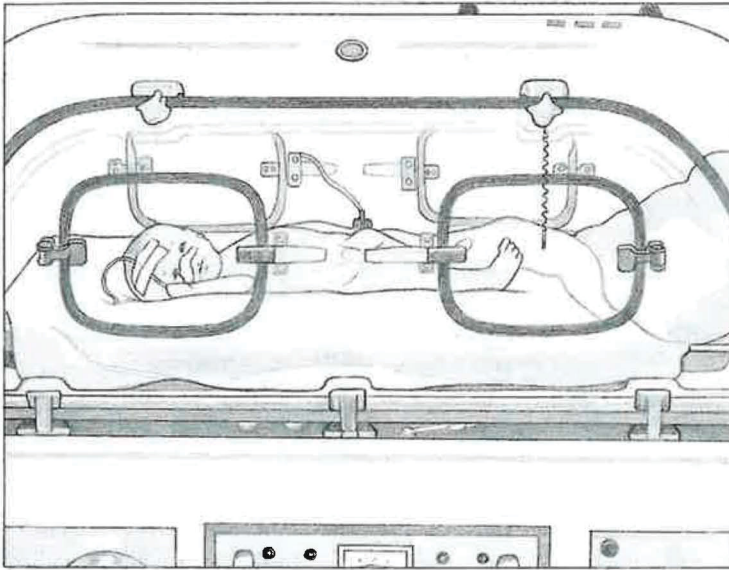
At least one other important procedure must be done before either you or your newborn leaves the delivery room: Both of you will receive matching labels bearing your name and other identifying details. After you verify the accuracy of these labels, one will be attached to your wrist and the other to your baby's. Each time the child is taken from or returned to you while in the hospital, the nurse will check the bracelets to make sure they match. Many hospitals also footprint newborns as an added precaution.

PROCEDURES FOLLOWING PREMATURE BIRTH

About five or six out of every one hundred births in this country are premature. Because these babies are born before they are physically ready to leave the womb, they often have problems. For this reason, premature babies are given extra medical attention and assistance immediately after delivery. Depending on how early the baby is, your pediatrician may call in another pediatrician (called a neonatologist), who specializes in premature intensive care (also known as neonatal intensive care), to help determine what, if any, special treatment the infant needs.

If your baby is born prematurely, she may neither look nor behave like a full-term infant. While the average full-term baby weighs about 7 pounds (3.17 kg) at birth, a premature newborn might weigh 5 pounds (2.26 kg) or even considerably less. But thanks to medical advances, children born after twenty-eight weeks of pregnancy, and weighing more than 2 pounds 3 ounces (1 kg), have almost a full chance of survival; eight out of ten of those born after the thirtieth week have no long-term health or developmental problems.

The earlier your baby arrives, the smaller she will be, the larger her head will seem in relation to the rest of her body, and the less fat she will have. With so little fat, her skin will seem thinner and more transparent, allowing you actually to see the blood vessels beneath it. She also may have fine hair, called lanugo, on



Your premature baby will be placed immediately after birth in an enclosed bed to keep her warm.

Nursing After Delivery

Do you plan to breastfeed your baby? If so, ask ahead of time about the hospital's policies on nursing in the delivery area. Today most hospitals encourage immediate breastfeeding following routine delivery unless the baby's Apgar scores are low or he's breathing very rapidly, in which case nursing would be delayed temporarily.

Breastfeeding right away benefits the mother by causing the uterus to contract, thus reducing the amount of uterine bleeding. (The same hormone that stimulates the milk ejection reflex, or let-down response, triggers the uterine contractions.)

The first hour or so after birth is a good time to begin breastfeeding, because your baby is very alert and eager. When put to the breast he may first lick it. Then, with a little help, he'll grasp the nipple and suck vigorously for several minutes. If you wait until later, he may be sleepier and have more difficulty holding the nipple effectively.

For the first two to five days after delivery, your body produces colostrum, a thin, yellowish fluid that contains protein and antibodies to protect him from infection. Colostrum provides all the nutrients and fluids your baby needs in the first few days of life. (For a complete discussion of breastfeeding, see Chapter 4.)

Apgar Scores

As soon as your baby is born, a delivery nurse will set one timer for one minute and another for five minutes. When each of these time periods is up, a nurse or physician will give your baby her first “tests,” called Apgars.

This scoring system (named after its creator, Virginia Apgar) helps the physician estimate your baby’s general condition at birth. The test measures your baby’s heart rate, breathing, muscle tone, reflex response, and color. It cannot predict how healthy she will be as she grows up or how she will develop; nor does it indicate how bright she is or what her personality is like. But it does alert the hospital staff if she is sleepier or slower to respond than normal and may need assistance as she adapts to her new world outside the womb.

Each characteristic is given an individual score; then all scores are totaled. For example, let’s say your baby has a heart rate of more than 100, cries lustily, moves actively, grimaces and coughs in response to the syringe, but is blue; her one-minute Apgar score would be 8. About nine out of ten newborns in this country score in the 8 to 10 range. Because their hands and feet remain blue until they are quite warm, few score a perfect 10.

If your baby’s Apgar scores are between 5 and 7 at one minute, she may have experienced some problems during birth that lowered the oxygen in her blood. In this case, the staff probably will dry her vigorously with a towel while oxygen is held under her nose. This should start her breathing deeply and improve her oxygen supply so that her five-minute Apgar scores total between 8 and 10.

A small percentage of newborns have Apgar scores of less than 5. For example, babies born prematurely or delivered by emergency C-section are more likely to have low scores than infants with normal births. These scores may reflect difficulties the baby experienced during labor or problems with her heart or respiratory system.

If your baby’s Apgar scores are very low, a mask may be placed over her face to pump oxygen directly into her lungs. If she’s not breathing on her own within a few minutes, a tube can be placed into

her back and shoulders. Her features will appear sharper and less rounded than they would at term, and she probably won’t have any of the white, cheesy vernix protecting her at birth, because it isn’t produced until late in pregnancy. Don’t worry, however; in time she’ll begin to look like a typical newborn.

Because she has no protective fat, your premature baby will get cold in normal room temperatures. For that reason, she’ll be placed immediately after

her windpipe, and fluids and medications may be administered through one of the blood vessels in her umbilical cord to strengthen her heartbeat. If her Apgar scores are still low after these treatments, she will be taken to the special-care nursery for more intensive medical attention.

Apgar Scoring System

Score	0	1	2
Heart Rate	Absent	Less than 100 beats per minute	More than 100 beats per minute
Respiration	Absent	Slow, irregular; weak cry	Good; strong cry
Muscle Tone	Limp	Some flexing of arms and legs	Active motion
Reflex*	Absent	Grimace	Grimace and cough or sneeze
Color	Blue or pale	Body pink; hands and feet blue	Completely pink

* Reflex judged by placing a catheter or bulb syringe in the infant's nose and watching her response.

birth in an incubator (an enclosed bed) in which the temperature can be adjusted to keep her warm. After a quick examination in the delivery room, she'll probably be moved to a special-care nursery (often called a neonatal intensive care unit [NICU]).

You also may notice that your premature baby will cry only softly, if at all, and may have trouble breathing. This is because her respiratory system is still im-

Health Issues of Premature Babies

When babies are born prematurely, they are more susceptible to a number of health problems. Here are some of the most common conditions:

- *Respiratory distress syndrome* is a breathing disorder related to the baby's immature lungs. It occurs because the lungs of preterm babies often lack surfactant, a liquid substance that gives lungs the elasticity that makes breathing easier. Artificial surfactants can be used to treat these babies, along with a ventilator to help them breathe.
- *Bronchopulmonary dysplasia*, or chronic lung disease, is a term used to describe babies who require oxygen for several weeks or months. They tend to outgrow this uncommon condition, which varies in severity, as their lungs grow and mature.
- *Apnea* is a temporary pause (more than fifteen seconds) in breathing that is common in preterm infants. It often is associated with a decline in the heart rate, called bradycardia. Your pediatrician can prescribe medication that helps regulate the breathing of babies with apnea, and most infants outgrow the condition by the time they leave the hospital for home.
- *Retinopathy of prematurity (ROP)* is an eye disease in which the retina is not fully developed. Most cases resolve without treatment, although serious cases may need treatment, including surgery in the most severe instances.
- *Jaundice* develops in babies whose liver is not mature enough to completely filter a normal blood breakdown product called bilirubin. As a result, the skin may develop a yellowish hue. The treatment for jaundice involves placing the baby under special lights (while her eyes are covered to protect them). For additional information about jaundice, see pages 139–140.
- Other conditions sometimes seen in preterm babies include *anemia of prematurity* (a low red blood cell count) and *heart murmurs*. For additional information on heart murmurs, see pages 667–668.

mature. If she's more than two months early, her breathing difficulties can cause serious health problems, because the other organs in her body may not get enough oxygen. To make sure this doesn't happen, doctors will keep her under

close observation, watching her breathing and heart rate with equipment called a cardiorespiratory monitor. If she needs help breathing, she may be given extra oxygen, or special equipment such as a ventilator; or another breathing assistance technique called CPAP (continued positive airway pressure) may be used temporarily to do some of her breathing for her.

As important as this care is for your baby's survival, her move to the special-care nursery probably will be wrenching for you. On top of all the worry about her health, you may miss the experience of holding, breastfeeding, and bonding with her right after delivery. You won't be able to hold or touch her whenever you want, and you can't have her with you in your room.

What's your and her father's best defense against the stress of an experience like this? Ask to see your baby as soon as possible after delivery, and become as active as you can in caring for her. Spend as much time with her in the special-care nursery as your condition—and hers—permit. Even if you can't hold her, touch her through the portholes of the enclosed bed. Feed her as soon as advised by her doctor. The nurses will instruct on either breast and bottle feeding techniques, whichever is appropriate for the baby's needs and your desires. Because premature babies have a great need for food in order to become stronger and increase their resistance to disease, they may require fluids given intravenously or through a feeding tube. But breastmilk is the best possible nutrition, and once you start breastfeeding, your baby should nurse frequently to increase your milk supply.

You may be ready to return home before your newborn is, which can be very difficult, but remember that your baby is in good hands, and you can visit her as often as you'd like. You can use your time away from the hospital to get some needed rest and prepare your home and family for your baby's homecoming.

The more you participate in her process of recovery and the more contact you have with her during this time, the better you'll feel about the situation and the easier it will be for you to care for her when she leaves the special-care nursery. As soon as your doctor says it's OK, gently touch, hold, and cradle your newborn. If you have questions, be sure to ask them of the doctors and nurses. Also, don't forget that your own pediatrician will be participating in, or at least will be informed about, your infant's immediate care. Because of this, he will be able to answer most of your questions. Your baby will be ready to come home once she's breathing on her own, able to maintain her body temperature, able to be fed by breast or bottle, and is gaining weight steadily.

LEAVING THE DELIVERY AREA

If you've given birth in a birthing room or alternative birth center, you probably won't be moved right away. But if you've delivered in a conventional delivery room, you'll be taken to a recovery area where you can be watched for problems such as excessive bleeding. Your baby may be taken to the nursery at that time, or he may receive his first physical examination by your side.

This exam will measure his vital signs: temperature, respiration, and pulse

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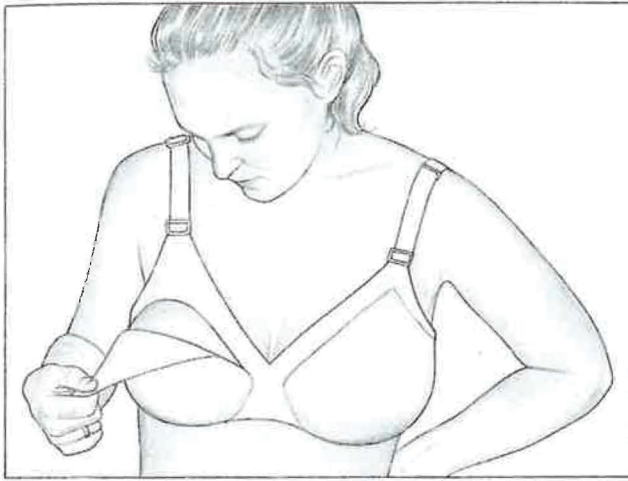
rate. The pediatrician or nurse will check his color, activity level, and breathing pattern. If he didn't receive his vitamin K and eyedrops earlier, they will be administered now. And once he's warm, he'll be given his first bath, and the stump of his cord may be painted with a blue antibacterial dye or other medication to prevent infection. Then he'll be wrapped in a blanket and, if you wish, returned to you.

NEWBORN SCREENING TESTS

Shortly after birth, and before you and your baby are discharged from the hospital to return home, he'll be given a number of screening tests to detect a variety of congenital conditions. These tests are designed to detect problems early in order to treat them promptly, prevent disabilities, and save lives. However, while some tests are mandated by law, the tests required in one state are often different from those required in another (and they change periodically). For instance, three-fourths of states have legislation governing newborn hearing screening. Only a few mandate screening for cystic fibrosis, HIV, or toxoplasmosis. However, all fifty states and the District of Columbia test for PKU (phenylketonuria), a rare condition in which the body lacks the ability to break down a particular amino acid that, at high levels, can cause brain damage. All states also mandate screening for congenital hypothyroidism, a developmental defect of the thyroid gland that causes mental and physical disabilities and for galactosemia (a metabolic disorder). Forty-nine states screen for sickle cell diseases; fewer require testing for conditions such as maple syrup urine disease (branched-chain ketoaciduria), biotinidase deficiency, homocystinuria, tyrosinemia, and congenital adrenal hyperplasia. Talk to your pediatrician about which screening tests your baby will undergo. (The American Academy of Pediatrics has urged the adoption of nationwide standards to ensure that all newborns are screened uniformly for important genetic or metabolic disorders.)

REFLECTING ON YOUR BABY'S ARRIVAL

After all this activity during his first few hours of life, your baby probably will fall into a deep sleep, giving you time to rest and think back over the exciting things that have happened since labor began. If you have your baby with you, you may stare at him in wonder that you could possibly have produced such a miracle. Such emotions may wipe away your physical exhaustion temporarily, but don't fool yourself. You need to relax, sleep, and gather your strength. You have a very big job ahead of you—you're a parent now!



Nursing bras have flaps that allow easy access to the breast. If you wear a nursing bra, make sure it fits properly and is not constricting.

end of pregnancy. The nipples do not need to be “toughened up” to withstand your baby’s sucking. In fact, some of these tactics actually may interfere with normal lactation by harming the tiny glands in the areola that secrete a milky fluid that lubricates the nipples in preparation for breastfeeding.

Normal bathing and gentle drying is the best way to care for your breasts during pregnancy. Although many women rub lotions and ointments on their breasts to soften them, these are not necessary and may clog the skin pores. Salves, particularly those containing vitamins or hormones, are unnecessary and could cause problems for your baby if used while breastfeeding.

Some women start wearing nursing bras during pregnancy. They are more adjustable and roomier than normal bras, and are more comfortable as the breast size increases. Nursing bras also have flaps that can be opened for breastfeeding or expressing milk.

Letting Down and Latching On

After your baby is born, your breasts are ready to produce milk. As he nurses, your infant’s actions will let your body know when to start and stop the flow of milk. The process begins with the baby getting a good grip on the areola, not the nipple, and starting to suck. This is called latching on. He should do this instinctively as soon as he feels the breast against his mouth. You can help him get started by holding him so that he squarely faces the breast and then stroking his lower lip or cheek with the nipple. Doing this stimulates the reflex that causes him to search for the nipple with his mouth (the rooting reflex). It will result in the infant opening the mouth widely, and at that moment the baby should be moved toward the breast.

As your baby takes the breast into his mouth, his jaws should close around the areola, *not* the nipple. His lips will separate and the gums will encircle the areola. His tongue will form a trough around the nipple and, in a wavelike mo-

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The baby has latched on to the breast correctly. The nose, lips, and chin are all close to the breast allowing for effective breastfeeding.



Most of the areola and nipple are in his mouth.

tion, compress the milk reservoirs and empty the milk ducts. Putting your baby to the breast in the first hour after delivery will establish good breastfeeding patterns at a time when infants are usually alert and vigorous. Later in the first day he may get sleepy, but if he began nursing in the first hour, he is more likely to be a successful breastfeeder.

In some cases an infant will have trouble latching on. This occurs most often in newborns who have been given bottles or pacifiers. Suckling from the breast is different from sucking the nipple on a bottle or pacifier, and some infants are very sensitive to the difference. These babies may simply lick, nibble, or chew with their jaws instead of using the tongue. Others may show frustration, pulling away or crying. This sensitivity has been called nipple confusion or nipple preference. Although nipple confusion has been considered controversial, there is now good evidence to show that starting artificial nipples early on is associated with decreased exclusive breastfeeding and decreased duration of breastfeeding. We are still uncertain if the artificial nipples are the cause of breastfeeding problems or are just a response to a breastfeeding problem that already existed. Experts generally recommend that you avoid bottles and pacifiers for the first several weeks until you feel that breastfeeding is going well. During that time, if the baby seems to need more sucking, offer the breast

again, or help him to find his own hand or fingers to soothe himself.

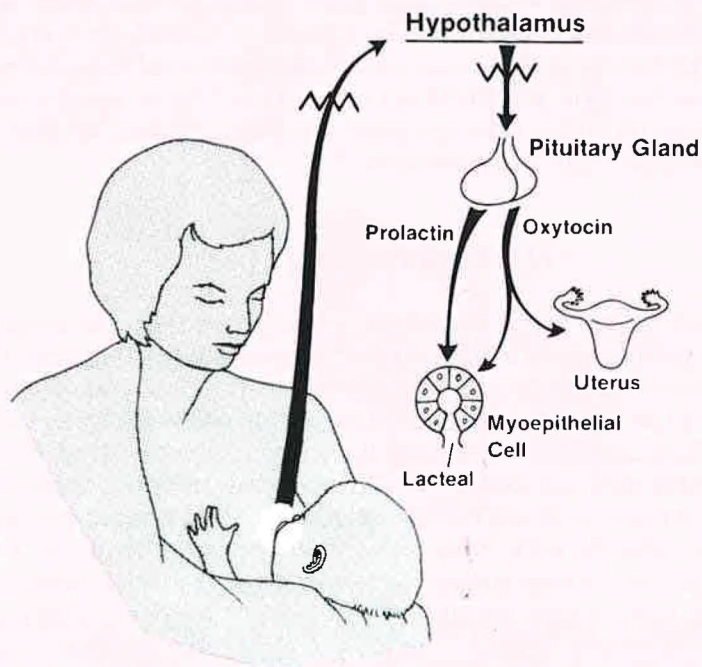
Once your baby is sucking efficiently, his movements will stimulate the nerve fibers in the nipple. In turn, the emptying of the breast and the release of the hormone prolactin from the pituitary gland (see box on page 87) will release hormones that prompt the breasts to make more milk. Breast stimulation also starts milk flowing through the milk ducts in what is known as the let-down reflex, due to the release of another pituitary hormone, oxytocin.

This hormone also causes the muscles of the uterus to contract. So, in the first days or weeks after delivery, you may feel "after pains," or cramping of the uterus, each time you nurse. Although this may be annoying and occasionally painful, it helps the uterus return quickly to its normal size and condition and reduces postpartum blood loss. It also indicates that breastfeeding is going well. Use some deep-breathing techniques or pain medication (ibuprofen is commonly prescribed after delivery) to ease the pain.

Once lactation has begun, it usually takes just a brief period of sucking before

The Let-down Process

As your baby sucks, several different hormones work together to produce milk and release it for feeding. From the moment she starts to nurse, here is what happens within your body:



1. Her sucking movements stimulate nerve fibers in the nipple.
2. These nerve fibers carry the request for milk up the spinal column to the pituitary gland in your brain.
3. The pituitary gland responds to this message by releasing the hormones prolactin and oxytocin.
4. Prolactin stimulates the breasts to produce more milk.
5. Oxytocin stimulates contractions of the tiny muscles surrounding the ducts in the breasts. These contractions squeeze the ducts and eject the milk into the reservoir under the areola.

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the milk lets down (begins to flow). Just hearing your baby cry actually may be enough to trigger milk flow.

• The signs that let-down is occurring vary from woman to woman and change with the volume of milk the baby demands. Some women feel a subtle tingling sensation, while others experience a buildup of pressure that feels as if their breasts are swelling and overfull—sensations that are quickly relieved as the milk starts to flow. Some women never feel these sensations, even though they are nursing successfully and the infant is getting plenty of milk. The way the milk flows also varies widely. It may spray, gush, trickle, or flow. Some women have leakage of milk with let-down or between feedings and others don't; either case can be normal. Flow or leakage also may be quite different in each breast—perhaps gushing on one side and trickling on the other. This is due to slight differences in the ducts on either side and is no cause for concern, as long as the baby is getting adequate milk and growing well.

The First Feeding

If you had a normal delivery, and you and your baby are alert and awake, you should nurse him as soon as he's born. If there were complications with the delivery, or if your newborn needs immediate medical attention, you may have to wait a few hours. If the first feeding takes place within the first day or two, you should have no physical difficulty nursing. If nursing has to be delayed beyond that time, the nursing staff will assist you with pumping and hand expression.

If you do nurse immediately after delivery, you may find it most comfortable to lie on your side, with the baby lying facing you, opposite the breast. If you'd rather sit up, use pillows to help support your arms and cradle the baby slightly below breast level, making sure his entire body, not just his head, is facing your body. Following a cesarean delivery, the most comfortable position may be a side hold, or what's also called a football hold, in which you sit up and the baby lies at your side facing you. Curl your arm underneath him and support and hold his head at your breast. This position keeps the baby's weight off your abdomen, but the infant must squarely face the breast for the proper grasp.

If you stroke your newborn's lower lip with the nipple, he'll instinctively open his mouth wide, latch on, and begin to suck. He's been practicing this for some time by sucking his hand, fingers, and possibly even his feet in utero. (Some babies actually are born with blisters on their fingers caused by this prenatal sucking.) It takes little encouragement to get him to nurse, but you may need to help him properly grasp the areola. You can hold the breast with your thumb above the areola and your fingers and palm underneath it. Some gentle compression may be helpful to form a surface for latch-on. Then, when the baby opens his mouth very wide, pull him onto the breast. It is important to keep fingers behind the areola and be sure the nipple is level or pointed slightly up. No matter which technique you try, you need to keep your fingers clear of the areola so the baby can grasp it. Be sure your fingers are no closer than two inches from the base of the nipple. Let your baby nurse at the first side as long as he wishes,

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