

Childbirth

HEALTH TERMS

labor
episiotomy
cesarean birth
postpartum period
birthing center

HEALTH CONCEPTS

- There are three stages of labor.
- Mental and physical changes occur in a female's body in the period just after giving birth.

By the ninth month of pregnancy, the baby has turned with its head down in the uterus. Labor begins when a hormone called oxytocin is released from the pituitary gland and travels through the blood to the muscles of the uterus. The hormone causes the uterus to begin contracting. These contractions shorten the muscles of the uterus and begin to pull open the cervix (the neck of the uterus).

Stages of Labor

The birth process begins as the uterus contracts and the mother feels these contractions. There are three stages to **labor**, *the process by which the baby gradually moves out of the uterus into the vagina to be born*.

First Stage of Labor

For nine months, the cervix has held tightly shut, keeping the baby inside the uterus. Now it must open to a diameter of about 5 inches (10 cm) to allow the baby to pass through. Dilation, or opening of the cervix, is the first and, usually, the longest stage of the birth process.

With each contraction, the baby's head is pushed toward the cervix. As the baby is pushed, its head moves against the membranes of the amniotic sac. At some point during labor, often during the first stage but sometimes not until the end of the second stage, the sac ruptures. About one pint of fluid flows out of the vagina. This is often referred to as the breaking of water. Sometimes the doctor will break the water in an attempt to induce birth. As this stage progresses, the female's contractions will get stronger and closer together. The length of this stage varies. If this is the female's first pregnancy, this stage can last 12 hours or more.

Second Stage of Labor

This stage begins when the cervix is fully dilated and the mother feels the urge to push the baby out. Strong uterine contractions and the pushing of the mother forces the baby's head through the vagina—also referred to as the birth canal. *Crowning* is the term used to describe when the baby's head can be seen at the opening of the vagina. After the baby's head comes out, the body quickly follows. This stage usually lasts from $\frac{1}{2}$ to 2 hours.

At the point of crowning, some doctors may do an episiotomy. An **episiotomy** is *an incision made from the vagina toward the anus to enlarge the opening for delivery of a baby*. After the birth, the female's tissues are stitched back together. An episiotomy is not necessary for birth. Some obstetricians believe it prevents tearing tissue and routinely do an episiotomy during every birth. However, not everyone tears while giving birth, so some doctors prefer to wait and hopefully avoid this procedure altogether. Other doctors prefer to allow the mother to tear because they

Did You Know?

A breech birth is when the baby enters the vagina buttocks or feet first. The danger in a breech birth is that the umbilical cord—the cord connecting the baby and the placenta—can become compressed when the head moves through the birth canal and cuts off the oxygen supply.

NOTE. The most common reason for a cesarean delivery is that the baby is too large or the pelvis too small for a safe vaginal delivery. Fetal distress is another common reason.

▼ **Bonding, or forming a close personal relationship with a new baby, can begin immediately after birth.**



believe the wound heals more quickly than an episiotomy. A female should discuss her preference on this procedure with her doctor beforehand to be sure they are in agreement.

Third Stage of Labor

Uterine contractions continue into the third and final stage of labor. These last about 20 minutes. During this stage, the placenta is fully separated from the wall of the uterus and passes through the vagina. The detached placenta is called the afterbirth.

Delivery by Cesarean

Cesarean birth is a method of childbirth in which a surgical incision is made through the abdominal wall and uterus. The baby is lifted out through this opening.

There are numerous reasons a female may need to have a cesarean section (C-section). The baby may not be positioned correctly or may fail to descend into the birth canal. The mother's pelvic structure may be such that vaginal delivery would be dangerous or even impossible. The mother may have active herpes sores, which can seriously affect a baby passing through the vagina.

Whatever the reason, the doctor and mother must decide what is safest for the mother and the baby. Some females may have to have a C-section with one delivery, yet will have a vaginal delivery with the next baby.

Medication During Labor

During labor, the doctor may offer a variety of medications to ease the mother's discomfort. Which drugs, if any, are given and how much is given depend on the individual doctor and mother. Meperidine hydrochloride (Demerol) is a common type of analgesic (pain reliever) given to females in labor. Another family of drugs, tranquilizers such as

Valium and Vistaril, are also used. Some females find that these drugs relax them, making them better able to deal with contractions. Others may find these drugs make them too drowsy to concentrate and participate fully in the birth.

Another common pain medication used during labor is an epidural block. The epidural medication is injected through a tube that has been inserted between the vertebrae into the spine. The epidural block numbs the female from the waist down, reducing the feeling of contractions. General anesthesia, where the female is completely unconscious, is used almost exclusively for high-risk cesarean births.

After Delivery

At birth, progesterone levels in the mother's blood drop. This signals the release of another pituitary secretion—prolactin, which stimulates milk production.

For the first few days after the birth, the female's breasts secrete colostrum, which is a yellowish, low-fat, watery fluid she has been producing since the fifth month of pregnancy. If she breast-feeds, more nutritious milk is released on about the third day after birth.

Colostrum and milk contain antibodies. These antibodies protect the nursing infant from infections, so breast-fed babies are subject to fewer illnesses in their first year. If the nursing mother eats a healthy diet, her breast milk carries all the nutrition the baby needs. Breast milk is more easily digested than formula, and therefore doesn't cause constipation. No baby is allergic to breast milk, while many may be allergic to formulas based on cow's milk. Also, breast-feeding doesn't cost anything. Recent studies have even shown that breast-fed children have higher IQs. For these reasons, most pediatricians (doctors specializing in the care of children) and nutritionists recommend breast-feeding over giving formula.

The period of time from the birth of the baby until a female begins her menstrual period again is called the **postpartum period**. Her body adjusts to all the changes it has been through and begins to return to its pre-pregnant state. Because of the extreme changes in hormones during this time, a female may experience a postpartum let-down. This is sometimes referred to as the "baby blues" and, in more serious cases, postpartum depression. Some females may never experience it, others may have a difficult time with it. It is important for the female to talk with her doctor so she knows what to expect and can get help if she needs it.

Childbirth: Options and Trends

Over the years, there have been many changes in the procedures for labor and delivery. Today a female has many choices, and the father can play a major role in the entire delivery process.

Prepared Childbirth Training

Parents should become educated about the process of childbirth and different medical procedures that may be performed during delivery. Birthing classes are available at hospitals, health departments, and privately through teachers certified in different birthing methods, such as the Lamaze Method of Painless Childbirth and the Bradley Method®. Most classes begin during the last 10 to 8 weeks of pregnancy.

Doctors and midwives recommend that the expectant mother and father attend childbirth classes. The father can assume the role of coach, helping the mother with the delivery. These classes prepare the mother for the feelings and emotions associated with pregnancy and the birth process. They also teach the mother and the father (or other birth coach) certain techniques to help deal with any pain or discomfort the mother may feel during labor. Most concentrate on relaxation techniques. Some classes teach the use of controlled breathing to distract from labor pain. Many women are choosing natural childbirth and reducing the need for pain-killing medicines.

Did You Know?

Almost all American hospitals administer a routine test to determine an infant's physical condition at birth. This test is named after the late Virginia Apgar, a noted anesthesiologist. The Apgar test measures the baby's condition in five significant areas: appearance or coloring, pulse, grimace or reflex irritability, activity, and respiration. Any significant differences from the normal response in each of these areas may require further testing and observation.

NOTE. The placenta is usually disposed of by burial or burning after birth.

NOTE. Rather than having the mother in a hospital room for labor, taking her to an operating room for delivery, then moving her to a recovery room, many hospitals are using Labor, Delivery, and Recovery (LDR) Rooms. These rooms are set up to accommodate the mother and birthing team through all stages of labor and delivery. Once the baby is born, the mother remains in this room to recover. In some LDR rooms, the baby is given its post-natal test there as well.

Where to Give Birth

Birth centers are birthing facilities with homelike settings that are separate from a hospital and offer medication-free births. These are generally available only for low-risk births. People may choose a birthing center because they feel it gives them more control of the birth process with fewer restrictions. Because birthing centers tend to be small, the female may receive more individual care than at a large hospital. At a center, the female can give birth with her family members and friends present if she wishes. Family members that are going to be present may go through classes to prepare them for the delivery. After the birth, the mother and father may spend as much time with the baby as they

wish. Birthing centers tend to be located near hospitals in case the mother should need them. Some hospitals provide facilities within the hospital that are similar to a birthing center.

Many hospitals have a rooming-in arrangement. After delivery, the mother and baby are cared for in the same room. This allows parents to begin developing a bond with their baby immediately. It also encourages breast-feeding, which is considered healthiest for babies. In hospitals where the father is also allowed to stay, rooming-in gives fathers an opportunity to have a greater role in child care from the beginning. In traditional hospitals, the baby is taken care of in the nursery.

In a birthing center, the new parents and relatives spend as much time as they wish with the new baby.



LESSON

3

Review

LESSON 3 REVIEW ANSWERS ARE FOUND ON PAGE TM35.

Reviewing Facts and Vocabulary

1. Briefly describe what occurs during each of the three stages of labor.
2. Explain what an episiotomy is and why it is used.
3. What are three benefits of breast-feeding?

Thinking Critically

4. **Evaluating.** What are the benefits of allowing the father to participate in the birthing process?
5. **Analyzing.** How is a prepared childbirth course helpful to an expectant mother?

Applying Health Skills

6. **In Your Home.** Interview a couple who has gone through a cesarean delivery. Find out the reasons for this type of delivery, the outcomes of the delivery, and how the recovery went. Compare these findings with those of a couple who experienced a vaginal delivery.

Reviewing Facts and Vocabulary

1. What is an ectopic pregnancy?
2. When can the developing fetus usually hear sounds?
3. How much does the average baby weigh?
4. Decide whether the following statement is true or false. Then explain your answer. A couple can assume that their baby is healthy and has no birth defects if the baby is healthy at the time of birth.
5. Tay-Sachs disease is most common in what group of people?
6. Describe the physical and mental changes a female may have during her sixth month of pregnancy.
7. How can smoking cigarettes affect a developing baby?
8. Give one reason a pregnant woman would have an ultrasound.
9. Why might a doctor do an amniocentesis?
10. There are about how many known genetic conditions and birth defects?
11. Describe the third stage of labor.
12. What is taught in childbirth training classes?
13. Why might a female choose to deliver her baby in a birthing center?

Thinking Critically

14. **Evaluating.** If you were going to become a parent, would you like to know the gender of your child before delivery? Why or why not?
15. **Analyzing.** A pregnant woman notices a sudden weight gain. She visits her doctor, who finds her blood pressure is very high. What condition would the doctor likely suspect? What other symptoms will the doctor check for? Explain your answers.
16. **Evaluating.** Suppose you are a pregnant female who carries the gene for a fatal genetic birth defect. Would you prefer to have amniocentesis, chorionic villi sampling, or neither? Explain your choice.
17. **Synthesizing.** What difficulties might a baby with fetal alcohol syndrome have immediately after delivery, and what problems might this child have for the rest of his or her life?

CHAPTER 5 REVIEW ANSWERS ARE FOUND ON PAGE TM36.

18. **Analyzing.** Compare the accuracy of home pregnancy tests to those tests used to determine pregnancy in a doctor's office. Which is a female's best choice to know for certain that she is or is not pregnant?
19. **Evaluating.** Would you prefer rooming-in or having your newborn stay in the hospital nursery? Explain your answer.

Applying Health Skills

20. **In Your Home.** Imagine you are in your twenties and have a child. Your father just found out he has Huntington's Chorea. What reasons might you have for wanting to take the test that will tell you whether you have the gene for this disease? For what reasons might you not want to have the test?
21. **In Your Home.** Review the information presented in this chapter. Talk with a couple who is planning to become pregnant or is having a child soon. Tell them the things you have learned about pregnancy and the birth process.

BEYOND THE CLASSROOM

22. **Further Study.** Interview a female who has experienced postpartum depression, or research the symptoms at the library. Suggest ways that you think this problem might be treated.
23. **Parental Involvement.** Have your parents tell you about your birth experience. Then write a story about your birth. You may want to put your story in book form, including drawings or photos of your mother while pregnant and photos of you soon after birth. Share your story with the class.
24. **Community Involvement.** Find out whether any hospitals in your area have nurse-midwife delivery programs. Learn the details of such programs.