

LABOR AND CHILDBIRTH

Labor refers to the energy and effort used to move the baby out of the mother's body. It is termed such because it truly is labor! It is accomplished through a series of contractions in the uterine muscles. These contractions cannot be controlled by the mother. Therefore, they are referred to as involuntary. Hormones inside of the mother control the onset, length, and strength of these contractions. The average length of labor for a first baby is between 12 and 14 hours. However, each woman's labor will vary and may be as short as three hours or last 24 or more hours.

There are several signs indicating the beginning of labor. These include:

1. **Lightening.** This is a change in the position of the baby. The baby drops lower in the pelvis, relieving the abdominal pressure on the mother and making her breathing easier.
2. **Contractions of the uterus.** These contractions usually begin as weak cramps and a backache, gradually increasing in intensity and coming at more frequent and regular intervals. Braxton Hicks contractions are false labor pains that prepare the uterus for labor and help circulate maternal blood.
3. **Passage of the mucous plug from the cervix.** Sometimes referred to as "the show" or "the bloody show" because it is blood tinged.
4. **Rupturing of the bag of water as the mio-chorionic membrane ruptures.** This may be a small trickle or a gush of fluid.

Labor is divided into three stages:

1. **DILATION STAGE:** In order for the baby to pass from the uterus to the vagina, the cervix must first stretch and expand. This is referred to as dilation. At first, the cervix is approximately 1/4 inch in diameter. The contractions push the baby's head against the cervix, causing it to widen. At the end of this stage of labor, the cervix is approximately 4 inches in diameter. If the bag of water has not ruptured by this time, the physician will break it.

This stage of labor is further divided into three categories. These categories are:

- a. **Early labor:** The cervix dilates from 0-4 cm in diameter. Contractions may or may not be regular, coming 5-10 minutes apart. Most women are still home at this time.
- b. **Active labor:** The cervix dilates from 4-8 cm. The uterine contractions will be longer, more regular, and more frequent. The mother should be in the hospital by this time.
- c. **Transition:** The cervix dilates from 8-10 cm or complete dilation. The mother's contractions become more frequent and much stronger. They are 1-3 minutes apart. During transition the baby's head moves from the uterus and into the vagina or the birth canal. This is the most difficult period of childbirth and is the time when anesthetic will most likely be given.

The dilation stage lasts the longest. The length of time varies with each birth; however, the average length for first pregnancies is eight hours. Remember, during this time, most hospitals will use a fetal monitor to record the strength and duration of contractions, as well as the baby's heartbeat.

2. **EXPULSION STAGE:** This stage begins when the baby's head is in the birth canal and ends when the baby is born. This stage does not last long, usually 5-10 minutes. During this stage, contractions become more frequent and longer. The contractions occur 1-3 minutes apart and last about 1 to 1 1/2 minutes. During the first stage, the function of the contractions is to dilate the cervix. In the second stage, their function is to push the baby out through the pelvis and the birth canal.

Crowning refers to the time when the baby's head is first seen. At the time of crowning, the physician or midwife will decide whether or not to perform an episiotomy. This is a small incision from the vagina to the anus in the perineum to prevent tearing. At the completion of birth, the incision is stitched closed.

During the expulsion stage, the physician may use forceps to help guide the baby's head during delivery. Forceps are specialized tongs made of surgical steel that are molded to fit the shape of the baby's head. The movement of the baby's head can be better controlled, sometimes aiding it in emerging more quickly and sometimes slowing the movement. (Check your local hospital for pictures of forceps.)

At other times, vacuum extraction may be used. A soft cap is put on top of the baby's head and suction is applied to help pull the baby through the birth canal.

The birth process places a great strain on the baby. Its heartbeat will dramatically increase.

3. **AFTERBIRTH STAGE:** The contractions of the uterus continue, causing the placenta to separate from the wall of the uterus and be expelled. The afterbirth, which is expelled, consists of placenta, umbilical cord, amniotic sac, and lochia.

Childbirth, although a natural process, is difficult for both the mother and the baby. Fortunately, nature makes this easier. The unborn baby's skull is soft and flexible so it can become longer and more narrow, allowing it to pass through the pelvis more easily.

During the birth process, complications may arise. The baby experiences great pressure as it is pushed out of the uterus and through the birth canal. At times, the umbilical cord may be constricted, restricting blood flow to the baby. In some instances, the mother's pelvis may not be large enough to allow passage of the baby. Sometimes the placenta is positioned close to or covering the cervix and must be delivered before the baby. In these instances, the doctor may decide to perform a cesarean section (c-section) to avoid danger to the mother or baby. This is performed by making an incision in the mother's abdomen and uterus. The baby is then removed from the uterus before it enters the birth canal. However, a vaginal birth, if possible, is best for the infant for several reasons: it helps expel any fluid out of the lungs, and the baby must fight more, which develops strength in the baby.

In most instances, the baby's face is looking downward as the head emerges. This is called a posterior position. Some babies are born in an anterior position. The head then rotates to the side, the shoulders come out one at a time, followed by the abdomen and legs. In some instances, the baby is not positioned correctly and will emerge buttocks, feet, or shoulders first. This is referred to as "breech." This type of birth is more difficult for both the mother and the child and, in many instances, the doctor will try and turn the baby or a c-section will be performed.