



During labor, your contractions cause the cervix to open so that your baby can be born. This is called "dilation." Your cervix must dilate to about 10 centimeters before your baby will be born. The cervix also becomes shorter and thinner during labor. This is called "effacement." Effacement is measured in percentages. When the cervix is 100% effaced, it is completely thinned out in preparation for birth.

As labor progresses, your contractions help the baby's head move down into the birth canal. You may hear the doctors and nurses talking about the position of the baby's head or "station." The station is measured according to where your baby's head is in your pelvis. A negative number (-3, -2) means your baby's head is high in the pelvis. A station of "0" means the head has moved down. The head is at +4 or +5 right before birth.

Support person policy in labor and delivery

We recognize that families play an important part in the birth process and are vital members of the health care team. Family members and support persons, as identified by the patient, provide support, comfort, and important information regardless of time of day or day of the week.

It is recommended that you discuss your choice for labor support persons ahead of time with your family and friends. Being a support person is a great honor and responsibility for those you choose. It's helpful for you to know ahead of time that those you have chosen are willing and available to be with you during this experience. It's also best to let others know that they are welcome to visit you in your postpartum room after you leave the labor and delivery unit.

All family/support persons will be asked to sign in at the registration desk in labor and delivery. We keep a log of everyone who has signed in. Each visitor is given a badge to wear while in the unit. Before any visitors go to your room, staff at the registration desk will confirm with the you and with the primary nurse that it's okay for them to come in.

Please ask family members and those you'd like to support you to not come to the hospital if they develop a contagious illness. This is for your safety. Our staff may ask your family/ support persons certain questions about symptoms to make sure they are not sick. While you are in labor, there may be circumstances in which staff will ask your support persons to wait in a comfortable area outside of your room. Also, in order to make sure we protect the safety and privacy of all our patients, we ask that those visiting you do not stand or wait in the hallways.

Active labor

The "active phase" of labor usually begins when the cervix is four to five centimeters dilated. In active labor, your contractions are more regular, last longer, and are more intense than they were in the latent phase. This is when you will want to use controlled breathing and other techniques you learned during childbirth preparation. Please discuss your goals for your labor with your nurse soon after your arrival in labor and delivery. Your nurse can show you a variety of positioning and movement techniques, and can explain the use of a labor ball or a shower to help your labor progress. Some of these techniques can be used in conjunction with

Pain control during labor and delivery

There are a number of methods you can use to help with the pain of labor. Many patients attend childbirth classes and learn relaxation techniques that help them manage labor. There are also several types of pain medication available. If you decide you would like pain relief, your nurse, doctor, and an anesthesiologist can help you choose the best option. You will be asked to "grade" your pain on a scale from 0-10, where 0 means no pain and 10 means the worst pain you can imagine. For more information on pain control options, including risks and benefits of each, please call our department of anesthesia at 617-667-3353 and ask about the information sessions on pain control during labor and delivery.

Pain medication, or analgesics – Pain medications are available through an intravenous (IV) line. Sometimes these are used before choosing an epidural.

Epidural anesthesia – An epidural involves injecting medicine into the epidural space in your lower spine. This helps block pain signals going to your uterus. While you are sitting up or lying on your side, a small area on your lower back is numbed, a small needle is inserted, and a thin tube is threaded through the needle. The needle is removed, and your medication is given through the tube. With an epidural, you may feel the pressure of your contractions, but not the pain. You should be able to walk or sit up in a chair. Epidural does not affect your baby, the progress of your labor, or your chance of having a cesarean delivery. Your epidural will be attached to a pump that will give you medication for as long as you need it. You may also receive patient-controlled epidural analgesia (PCEA). With PCEA, you are given a button you can press to give yourself a little more medication. You should press this button only if you feel pain, and only you should press the button. The machine is programmed so that you cannot give yourself too much medication.

Spinal/epidural combined technique—Sometimes a single injection of medication can be given deeper into into the sac that surrounds the spinal canal at the time an epidural catheter is placed. This provides fast pain relief that lasts several hours. After that, additional epidural medication can be given as described in the previous section.

Spinal anesthesia – In spinal anesthesia, medicine is injected through a small needle into the sac below the bottom of the spinal cord. The medicine numbs the body from the waist down. With a spinal, you cannot feel or move your lower body. Spinal may be used during vaginal delivery if forceps are needed. It is also sometimes used during cesarean delivery.

Local anesthetic – Numbing medicine will be given if needed before stitching any laceration or episiotomy.

pain-relief medication or procedures; others are best used in non-medicated births. Your nurse will talk with you about what might work best for your labor.

- So As you labor in the hospital, you will be cared for by a team of providers. This team works with your obstetrical provider. Members of the team include a registered professional nurse (RN) and physician residents - doctors who have completed medical school and are receiving advanced training in obstetrics. Residents always work closely with your obstetrical provider. Depending on your needs, others may be involved in your care as well, including an anesthesiologist (who can help provide pain relief during the birth), a neonatologist (a specialist in newborn care), or a neonatal nurse practitioner (a registered nurse with specialized training in the care of newborns). You may also see medical or nursing students who work alongside your health care team. The names of the doctors and nurses caring for you will be written on the white board in your room. If you ever have any questions about who is providing care, please be sure to ask. If you do not want students to be involved in your care, please let a member of our staff know.
- A fetal monitor will be placed on your abdomen when you come in for labor. This gives us information about your baby's heart rate, your contractions, and how your baby is tolerating the labor. Once this first assessment is done, the monitor will be used as needed during the labor to see how your baby is doing.
- Sometimes, ongoing (continuous) monitoring is best. Ongoing monitoring may be external as described above or may be internal. Internal monitoring is when a small electrode wire is placed on your baby's head. Your care team will explain in more detail if ongoing and/or internal monitoring is needed.

- The last part of active labor is called "transition." During transition, the cervix becomes fully dilated and the baby begins to move into the birth canal. This may be the shortest phase of labor for many women, but it may also be the most intense. Strong contractions occur every two to three minutes and last for 60 to 90 seconds. You may feel pressure in the rectum and/or an urge to push.
- All through your labor, your care team will be monitoring your condition and that of your baby using a variety of methods. Your nurse will be helping you with position changes, using a birthing ball to facilitate the proper movement of your baby into the pelvis.

Sometimes, your obstetrical provider may decide that medication or other interventions are needed based on how your labor is progressing and how your baby is responding. For example, a medication called Pitocin can be given intravenously if your labor is not progressing. In some cases, instruments can be used to help with your baby's birth if this is needed. As always, ask any questions or raise any concerns you have about your care. If possible, discuss any specific concerns

- about your care during labor with your provider ahead of time.
- When it is time, your care team will help you with pushing techniques so that your baby will be born. Pushing can take anywhere from several minutes to several hours. You will be encouraged to push with each contraction, and you may be asked to move into different positions for pushing.
- As your baby's head is about to be born, your obstetrical provider will decide if you need an episiotomy. An episiotomy is an incision that is made between the vagina and the rectum. It enlarges the opening of the birth canal to help with the delivery of the head. It may or may not be needed depending on a variety of factors. Your obstetrical provider can give you more information on episiotomy.
- About 5 to 30 minutes after the birth of your baby, the baby's placenta, or afterbirth, is delivered. You may be asked to push to help deliver the placenta. Your obstetrical provider may massage your uterus through your abdomen to help the uterus contract and to slow down any bleeding.

Cesarean birth and VBAC

Cesarean birth, sometimes called c-section, is an operation that delivers your baby through your abdomen. In some cases, a vaginal birth was planned but cesarean birth is needed to ensure a mother's or baby's health (unplanned cesarean). In other cases, a cesarean birth is planned (planned cesarean, repeat cesarean, or elective cesarean). This section tells more about when cesarean might be done and describes pain control used during cesarean birth. Information about vaginal birth after cesarean (VBAC) is also given. If you know you are having a cesarean, you will receive additional information about preparing for this surgery before you come to the hospital.

Unplanned cesarean – A decision is sometimes made during labor to deliver the baby by cesarean. This may occur when the baby is too large to pass through the pelvis or when

the baby is not tolerating labor well. In rare instances, emergency cesarean is needed if the mother's or baby's life is in danger.

Planned cesarean – Sometimes, your obstetrical provider will recommend a cesarean birth because of certain factors in your pregnancy. Examples of when a cesarean may be recommended for a first or subsequent birth include: the baby's position (including breech), an abnormal location of the placenta (such as placenta previa), multiple gestation (such as twins or triplets), an active genital herpes infection.

Repeat cesarean – If you have had a cesarean birth in the past, you and your obstetrical provider may decide on a repeat cesarean for this pregnancy. Because there are some medical risks to undertaking a vaginal birth after cesarean (VBAC, see below), the decision to attempt VBAC is individualized and is made in consultation with your obstetrician. Based on this consultation, a repeat cesarean delivery may be planned.

Some women who have had cesareans in the past are not candidates for VBAC and it is recommended they instead have a repeat cesarean delivery. These women include those with classical (vertical) uterine incisions, women with two or more previous cesarean deliveries, those with uterine scars from fibroid surgery that are incompatible with labor, and those with certain other medical conditions.

VBAC – This stands for "vaginal birth after cesarean." It is when a woman who has had a cesarean in the past goes through labor and has a vaginal delivery. The American College of Obstetricians and Gynecologists has determined that a "trial of labor" after previous cesarean delivery is an acceptable option for selected women. If you have had a cesarean in the past, talk with your obstetrical provider ahead of time about whether trying a vaginal birth is a good choice for you. BIDMC sup-

ports selected women in attempting VBAC, and the medical center has the required supports to safely offer this option to those who medically qualify for it. The decision to select VBAC is individualized, and is made after counseling from your obstetrician about the risks and benefits for you and your baby.

Elective cesarean – Elective cesarean is cesarean delivery by choice. Elective cesarean needs to be discussed with the obstetrician ahead of time. At BIDMC, some obstetricians will perform this procedure, but only after a thorough discussion with the patient about the risks and benefits, and only if the obstetrician and the mother believe it is safe and in the best interest of both the mother and the baby. Experts are studying this option. It is not yet known whether there are true long-term benefits to this choice. If you want more information, please talk with your obstetrician.

Pain control during cesarean birth

One or more of the following will be used during the surgery:

Epidural anesthesia is explained above, but stronger medication is used for cesarean. With an epidural, you will not feel pain, but you will be able to feel pressure and pulling during the birth of your baby.

Spinal anesthesia is explained above. Medication is injected low in the spine, and your body is numbed from the waist down.

General anesthesia puts you into a deep sleep so that you do not feel anything during the surgery. It is sometimes needed if the delivery must occur quickly or there are medical reasons an epidural or spinal anesthetic cannot be used.