



BRIGHAM AND
WOMEN'S HOSPITAL

The Obstetric Anesthesia Service

Providing Comfort and Care During Labor and Birth



MARY HERRIGAN CONNORS CENTER
FOR WOMEN'S HEALTH

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The Obstetric Anesthesia Service at Brigham and Women's Hospital is recognized as one of the finest departments of its kind in the world. The nationally and internationally renowned physicians of the Obstetric Anesthesia Service, all of whom are faculty members at Harvard Medical School, are actively involved in a variety of research projects to better understand labor pain and to make obstetric anesthesia safer and more comfortable for women and their babies. From the most routine births to the most complex, we are ready to help take care of every mother who delivers her baby at Brigham and Women's Hospital.

We realize that the birth of your child will be one of the most important experiences in your life, which is why we are committed to making this event as safe and comfortable as possible for you and for your baby. The Obstetric Anesthesia Service staffs the labor and delivery floor 24 hours-a-day, 7 days-a-week to provide specialized care for you. You can contact us anytime by dialing (617) 732-5435 and asking for the anesthesiologist on duty, or you may visit www.brighamandwomens.org/obanesthesia for more information.

Each woman's labor is unique. The amount of pain that you will experience is dependent on many different factors. These include:

- the size of the baby
- the position of the baby
- the dimensions of your pelvis
- the strength of the contractions
- your previous experiences and expectations
- many issues not yet understood

Therefore, it is hard to predict how much pain you will have until you go through labor. Some women have tolerable, controllable levels of pain, while others may benefit from some form of pain relief. Many non-medical techniques exist that can help the pain during labor, including breathing and relaxation techniques, warm showers, massage, supportive nursing care, position changes (standing, sitting, walking, rocking), and using a labor ball to name a few. For some women, these measures may not be enough.

This booklet will provide you with an overview of our service and your options at Brigham and Women's Hospital. We support any decision you will make regarding pain relief during labor and will provide you with the information you need and answer any questions you may have. Our goal is to make the labor and delivery experience safe and pleasant for you and your baby.

Anytime that you are on the labor and delivery floor, you can request to talk to one of the obstetric anesthesiologists. If you have a medical condition that may have an impact on anesthesia during your labor and delivery, your obstetrician or midwife will ask us to talk to you. This may occur days or weeks before you are due to deliver. The anesthesiologist will spend a few minutes interviewing and examining you to become familiar with your medical history. This insures that if you need or choose to have anesthesia for any reason, we will be prepared to provide the best care possible. A discussion with the anesthesiologist in no way obligates you to have anesthesia. Our desire is to provide you with the best possible information so that you can make the most informed decision for you and your baby.

Types of Anesthesia

Systemic Medications

These are medications that are given either intravenously or intramuscularly to decrease the amount of labor pain. These medicines are usually ordered by the obstetricians and midwives, and given by the nurses. Common examples at Brigham and Women's Hospital would include Nubain®, morphine or Dilaudid®. These medications enter the blood stream and may make you feel sleepy. Also, some of the medicine will pass to the baby. Most of the medicine is easily eliminated so that the baby is not sleepy at birth. The amount of pain relief from these medications does vary, but they can take the "edge" off the pain and make your labor more tolerable. The vast majority of women who do not have an anesthetic for labor do opt for one of these medications. There is no problem with receiving such medications prior to receiving an epidural or spinal anesthetic.

Regional Anesthetics

Epidural anesthesia and spinal anesthesia are called regional anesthetics because they anesthetize one specific region of the body. These are popular for childbirth because the pain relief is excellent and very little medication reaches the baby. The medications used here include local anesthetics (e.g. novocain-like drugs) and opiates. These medicines block the nerves that carry sensations of pain from the uterus and cervix back to the spinal cord and brain. This method allows you to be awake and alert, yet relatively free of pain.

Epidural Anesthesia

The Procedure

At the beginning of the procedure, the anesthesiologist will clean your back with an antiseptic solution prior to placing the epidural. You will be asked either to lie on your side or sit up and curl your back out as much as you can. A small amount of local anesthetic will be injected to numb your skin prior to insertion of the hollow epidural needle.

After the needle is advanced to the epidural space, a tiny catheter (tube) is placed through the epidural needle into the epidural space. Once the catheter is in place, the needle is removed, and the catheter is taped onto your back. Initial medication is injected through the catheter. Thereafter, the medication is delivered via an automated pump until your baby is born. Since the nerves from the uterus and cervix pass through the epidural space, the medication bathes these nerves and blocks the sensation of pain.

The epidural can take 15-20 minutes to place, and the medication works gradually in the epidural space over 15 to 20 minutes. Initially, many women notice that their pain during contractions is less intense and lasts for a shorter duration, until eventually, all they feel is the tightening feeling of the contraction. You may not feel the contractions at all; it differs for every woman.

Although you may feel strong enough to stand up and move around, you will not be allowed to walk once your epidural is in place. This is because your sense of balance may be impaired while standing or walking.

Timing

You and your obstetrician or midwife will decide when you will receive epidural analgesia. In general, the decision will be made once you are in active labor. This often occurs when the contractions are regular and the cervix is between 4 and 6 cm dilated. An epidural can be placed at much lesser and greater degrees of cervical dilation, though.

It is almost never too late for an epidural. However, since it will take 20 to 30 minutes for a laboring woman to get comfortable from an epidural, there may not be time if the birth of your baby is impending.

Cesarean Section

Occasionally, women in labor will require a cesarean section. If you already have an epidural catheter in place, the anesthesiologist will inject a different and more concentrated medicine to completely numb your abdomen. This medication should completely weaken your muscles in your abdomen and legs, so that the obstetrician can work unimpeded. If you do not have an epidural in place, the anesthesiologist may perform a spinal anesthetic for the surgical procedure.

Spinal Anesthesia

The Procedure

The procedure of placing a spinal anesthetic is very similar to that of an epidural placement. Your back will be cleansed with an antiseptic solution and the skin is numbed with a small amount of local anesthetic. A small needle will then be placed through the numbed skin until it goes through the epidural space into the spinal fluid. A small amount of local anesthetic and opiate is injected into the spinal space, and the needle is removed. Usually, no catheter is placed in the spinal space. You will be in the same position as in the placement of an epidural, and the needle is placed at the same level, below the level of the spinal cord.

Spinal anesthesia is most commonly performed for a cesarean section. When doing a spinal for a cesarean section, a local anesthetic and a small amount of morphine is injected into the spinal space. The local anesthetic makes you numb for the operation, and the morphine provides pain relief for up to 24 hours after surgery.

Combined Spinal-Epidural

Occasionally, a combined spinal-epidural is the best option. This is performed just as described above for an epidural with the following exceptions. After inserting the epidural needle into the epidural space, a spinal needle is placed through the epidural needle and through a small section of the vertebrae into the spinal space. A small amount of local anesthetic and opiate is injected into the spinal space and the needle is removed. This is followed by placing the catheter through the epidural needle into the epidural space.

A great deal of research and experience over the last 100 years has demonstrated the safety of regional anesthesia for women and their babies during labor and delivery. The overwhelming majority of women who decide to have regional anesthesia for labor and delivery have no problems. Nevertheless, the following infrequently occurring problems need to be mentioned.

- Your blood pressure can drop after epidural or spinal anesthesia and that is why it is checked frequently after placement of a regional. If your blood pressure does drop, more intravenous fluid may be administered, your position may be changed or medications may be given to you to increase your blood pressure.

- Sometimes, pain relief may not be achieved perfectly after placement of a regional anesthetic. For example, the medication may spread unevenly in the epidural space leading to incomplete pain relief. To remedy this, the anesthesiologist may inject more or different medications, withdraw the epidural catheter slightly, or even replace the epidural catheter.
- A spinal headache may occur after either an epidural or a spinal. This happens to one percent of women (slightly lower with a spinal) receiving a regional anesthetic. The headache, which has no impact on the baby, will eventually get better. If it does not resolve quickly on its own, the anesthesiologist may perform a “blood patch” to relieve the headache. Other therapies include lying flat, drinking fluids, and taking oral analgesics (e.g. Motrin®, Tylenol®).
- Back pain is common after labor and delivery. Recent evidence suggests that the incidence of back pain is the same whether or not you get an epidural. It is not unusual to have slight tenderness at the site of the epidural for a day or two after the birth of your baby.

General Anesthesia

General anesthesia (“going to sleep”) is rarely performed for women delivering babies because regional anesthesia is safer for most women. Rarely, there are medical conditions that may necessitate general anesthesia. For example, it may be unsafe to perform regional anesthesia for women with bleeding problems or severe infections. With general anesthesia, medicine is administered intravenously to insure that the mother is asleep for the delivery of the baby and remains asleep until the operative procedure is over. Once the mother is asleep, a tube is placed in the trachea to assist with breathing and to give more medication. No support persons are allowed in the operating room when general anesthesia is performed.

Important Information on Eating and Drinking

We often receive questions about eating and drinking during labor from patients planning to deliver at Brigham and Women’s Hospital.

The Division of Obstetric Anesthesia is committed to enhancing patient comfort in any way that is possible and safe during labor. Patients may drink moderate amounts (not more than 8 ounces an hour) of clear liquids during labor and while receiving epidural analgesia. Clear liquids include water, clear juices, tea or coffee without milk, frozen juice bars, sports drinks, gelatin, or clear broth. Eating solid foods during labor is discouraged, and some patients that have particular high-risk conditions may be subject to further limitations of oral intake.

Make The Best Decision For You And Your Baby

You should discuss these options for pain relief with your obstetrician or midwife when talking about your birthing plan. If you would like more information on the Obstetric Anesthesia Service at Brigham and Women's Hospital, call (617) 732-4805.

Many patients planning to deliver at Brigham and Women's Hospital find it valuable to participate in prenatal education. We offer the following high quality prenatal education classes for BWH patients, taught by certified childbirth education nurses and certified lactation consultants:

- Childbirth Preparation
- Breastfeeding Basics
- Newborn Essentials

Visit *Health Events*, under *Health Information* on the Brigham and Women's Hospital website and select *Center for Women and Newborns* in the dropdown box to view the dates of upcoming classes and to register. Please register for classes by your sixth month of pregnancy (28-32 weeks) to ensure you can enroll in the classes and times you prefer. For questions you may call the BWH Childbirth Educator at (617) 732-5182 or email childbirtheducator@partners.org.

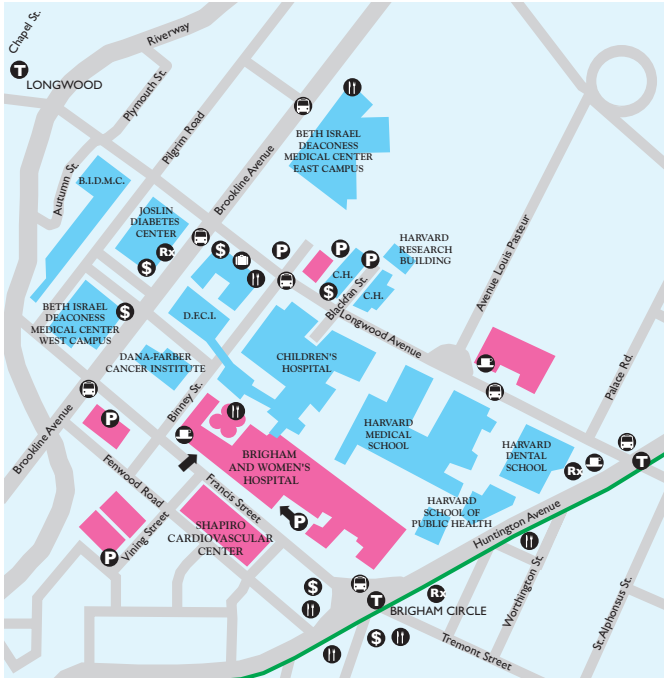
Are You Considering a Childbirth Plan Free of Medicated Pain Relief?

The Center for Women and Newborns is committed to developing the most appropriate birth plan for each patient - including families who choose not to use medications for pain relief in childbirth. Your obstetric care team will answer all of your questions and work with you to create the birth plan that best suits you and your family.

Options include:

- Hydrotherapy or immersion in a labor tub
- Birth balls
- Ambulation or walking
- Hypnotherapy or the use of mental imagery
- Use of a doula or labor support coach
- Nitrous oxide

For questions, call the BWH Childbirth Educator at (617)732-5182 or email childbirtheducator@partners.org.



Directions to Brigham and Women's Hospital at 75 Francis Street

From the North

Head south on Route 93, then head west on Storrow Drive. Take the Fenway out-bound 1-S exit (on the left). At lights, bear right onto Boylston Street. At third set of lights, bear left onto Brookline Avenue. At fifth set of lights (overall), turn left onto Francis Street.

From the South

Head north on Route 3 (Southeast Expressway), take the Mass Ave-Roxbury exit. At the end of the ramp, cross Mass Ave. onto Melnea Cass Boulevard. Take a left onto Tremont Street. Take first right onto Ruggles Street. Turn left onto Huntington Avenue. At second set of lights (Brigham Circle), turn right onto Francis Street.

From the West

Head east on the Massachusetts Turnpike into Boston. Take Route 128 south for approximately one mile. Take Route 9 east for six miles. Bear left onto Brookline Avenue (Brook House apartments will be on the right). At third set of lights, turn right onto Francis Street.

Parking

Valet parking is available to patients at a special rate. If you choose to park your car, the ServiceCenter garage is located opposite the 75 Francis Street entrance to the hospital.

The Obstetric Anesthesia Service

75 Francis Street, Boston, MA 02115
(617) 732-4805

www.brighamandwomens.org/obanesthesia



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