

veins). In addition, during your labor, you will be positioned usually on your side. After delivery, you should remain in bed until the block wears off.

Shivering may occur and is a common reaction. Sometimes it happens during labor and delivery, even if you did not receive any anesthetic medications. Keeping you warm often helps it subside.

Although uncommon, a headache may develop following the block procedure. By holding as still as possible while the needle is placed, you help to decrease the likelihood of a headache. The discomfort, sometimes lasting a few days, often can be reduced or eliminated by simple measures such as lying flat, drinking fluids and taking pain tablets. Occasionally, a patient may need additional treatment if the headache persists.

On rare occasion, the anesthetic medication may affect the chest muscles and make it seem harder to breathe. Oxygen can be given to relieve this feeling and help the breathing.

The veins located in the epidural space become swollen during pregnancy. There is the risk that the anesthetic medication could be injected into one of them. To help avoid unusual reactions stemming from this, your anesthesiologist will first administer a test dose of medication and you may be asked if you notice any dizziness, a funny taste, rapid heart beat or numbness.

Your anesthesiologist carefully evaluates your condition, makes medical judgments, takes safety precautions and provides special treatment throughout the procedure. You should feel free to talk with your anesthesiologist about your options for pain relief and their possible side effects.

Anesthesia For Cesarean Births

Epidural, spinal or general anesthesia may be given safely for cesarean-section deliveries. Choices depend on several factors, including the medical conditions of you and your baby and, when possible, your preferences.

How is the epidural block given for a cesarean delivery?

If you already have a labor epidural catheter in place and then need a cesarean delivery, it is usually possible for your anesthesiologist to inject additional anesthetic medication through the same catheter to enhance pain relief safely. This stronger concentration of medication converts the analgesia to anesthesia. Anesthesia is necessary to numb the entire abdomen completely for the surgical incision. If you prefer to have an epidural block during your cesarean childbirth and you did not have labor epidural analgesia, there usually is enough time to provide epidural anesthesia.

What is spinal anesthesia?

Spinal anesthesia is given using a much thinner needle in the same location of the back where an epidural block is placed. The main differences are that a much smaller dose of anesthetic medication is needed for a spinal block, and it is injected into the sac of spinal fluid below the level of the spinal cord. Once the spinal anesthetic medication is injected, the onset of numbness is quite rapid.

When is general anesthesia used?

General anesthesia is used when a regional block is not possible or is not the best choice for medical or other reasons. It can be started quickly and causes a rapid loss of consciousness. It is used when an urgent vaginal or cesarean delivery is required, as in rare instances of problems with the baby or vaginal bleeding. In these circumstances, general anesthesia is quite safe for the baby.

One of the most significant concerns during general anesthesia is whether there is food or liquids in the mother's stomach. During unconsciousness, "aspiration" could occur, meaning that some stomach contents could come up and then go into the lungs. Here they could possibly cause pneumonia. Your anesthesiologist, therefore, takes extra precautions to protect your

lungs, such as placing a breathing tube into your mouth and windpipe after you are anesthetized. Before your cesarean delivery, you also may be given an antacid to neutralize stomach acid.

It is best to remember, though, that YOU SHOULD NOT EAT OR DRINK ANYTHING AFTER YOUR LABOR PAINS BEGIN, regardless of your plans for delivery or pain control. Sometimes during labor, small sips of water, clear liquids or ice chips are permissible with your physician's consent.

Will I receive a separate bill from the anesthesiologist?

Your anesthesiologist is a physician specialist like your obstetrician or pediatrician whose medical services have been requested. You likely will receive a bill for your anesthesiologist's professional service as you would from your other physicians. If you have any financial concerns, your anesthesiologist or an office staff member will answer your questions. You will note that your hospital charges separately for medications and equipment used.

Modern anesthesiology offers today's mothers a variety of choices for a more comfortable childbirth. It is the goal of your anesthesiologist to answer your questions, ease your fears and make your labor and delivery as safe as possible for you and your baby.

Please discuss your anesthesia-related questions or concerns with your obstetrician. A consultation with an anesthesiologist usually can be arranged before your anticipated delivery. The more prepared you are—in other words, the more you "plan your childbirth"—the more comfortable and memorable the birth of your baby will be.

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Anesthesia & You

Planning Your Childbirth



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Beautiful Beginnings

One of the most thrilling and gratifying experiences in your life will be the birth of your child. This significant event should be made as safe and pleasant as possible for both you and your baby. Your obstetrician, anesthesiologist and nurses want to help you and your partner reach this goal.

Each woman's labor is unique to her. The amount of labor pain you feel will differ from that felt by other women in labor. It depends on factors such as your level of pain tolerance, the size and position of the baby, strength of uterine contractions and prior birth experiences. Medical decisions regarding control of your labor pain must be made for you specifically.

Some women achieve adequate pain control with the breathing and relaxation techniques learned at childbirth classes. Others may find them inadequate.

Many mothers are reconsidering the idea that childbirth is "natural" only without medication, and they are choosing to have pain relief during labor and delivery to help them experience a more comfortable childbirth.

Analgesics and Anesthetics

Analgesia is the full or partial relief of painful sensations. Anesthesia is usually considered to be a more intense blockage of all sensations, including muscle movement. Your wishes and your medical condition are important in selecting the type of pain relief administered to you. Be assured that your physicians will prescribe or administer medications only in the amounts and during those stages of labor that are best for the safety and well-being of your baby. There are several choices for pain relief:

Intravenous "I.V." Medication – Pain-relieving medications that are injected into a vein or muscle will help dull your pain but may not eliminate it completely. These I.V. medications are usually prescribed by your obstetrician. Because they sometimes make both you and your baby sleepy, they are used mainly during early labor.

Local Anesthesia – Other pain-relieving medications may be injected in the vaginal and rectal areas by your obstetrician at the time of delivery. These medications are local anesthetics. They provide a numbness or loss of sensation in a small area. Local anesthesia is often used to ease the pain of delivery or when an episiotomy incision is done to assist the delivery. It does not, however, lessen the pain of contractions.

Regional Blocks – Regional blocks can reduce the discomfort of labor and provide either analgesia or anesthesia. Regional blocks refer to epidural and spinal blocks. They are administered in the lower back, usually by a specialist physician called an anesthesiologist. Local anesthetics and other drugs are used for these procedures to reduce or "block" pain and other sensations over a wider region of the body. Epidural analgesia may be used for labor and vaginal delivery. An epidural block may be used to provide anesthesia for a cesarean section. A spinal block may be used to provide labor analgesia or anesthesia for a cesarean delivery. A combined spinal/epidural block also may be used for labor analgesia and/or anesthesia in certain cases.

Regional Blocks For Labor

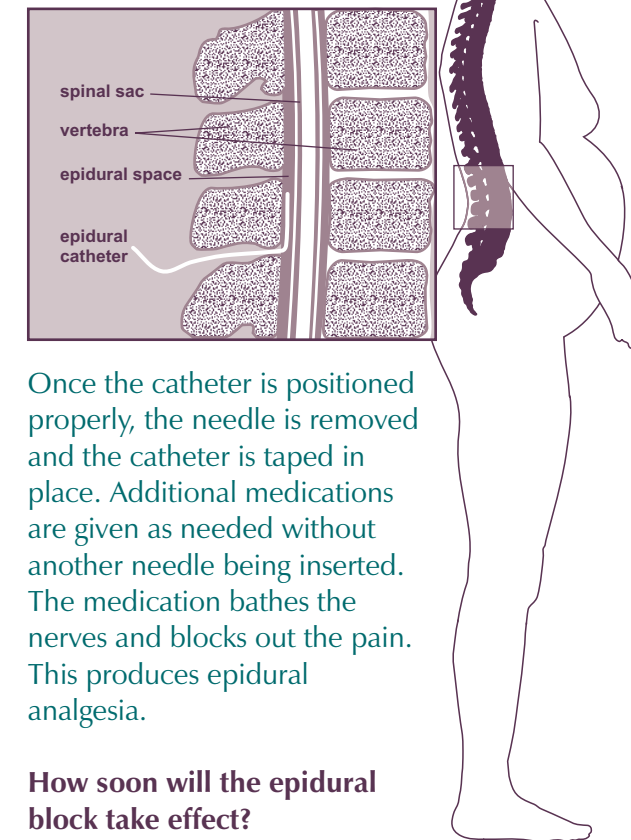
Regional blocks for labor and delivery have become very popular because of the comfort they provide. The epidural block decreases sensation in the lower areas of your body, yet you remain conscious. The right time to administer the epidural block will vary from patient to patient.

If you request an epidural block, your obstetrician and anesthesiologist will evaluate you and your baby, taking into account your state of health and past anesthetic experiences, the progress of labor and your baby's responses.

How is the epidural block performed?

An epidural block is given in the lower back. You will either be sitting up or lying on your side. The block is administered below the level of the spinal cord. This is called a *lumbar epidural block*. The block also may be given in the tailbone area. This is called a *caudal block*.

Before the block is performed, your skin will be cleansed with an antiseptic solution. The anesthesiologist will use local anesthesia to numb an area of your lower back or near the tailbone. A special needle is placed in the epidural space just outside the spinal sac. A tiny flexible tube called an epidural catheter is inserted through this needle. Occasionally, the catheter will touch a nerve, causing a brief tingling sensation down one leg.



Once the catheter is positioned properly, the needle is removed and the catheter is taped in place. Additional medications are given as needed without another needle being inserted. The medication bathes the nerves and blocks out the pain. This produces epidural analgesia.

How soon will the epidural block take effect?

Because the medication needs to be absorbed into several nerves, the onset is gradual, not immediate. Pain relief will begin to occur within 10 to 20 minutes after the medication has been injected.

What will I feel after the block takes effect?

Although significant pain relief will occur, you still may be aware of pressure or sensations with contractions. You may feel your obstetrician's examinations as labor progresses. Depending on your circumstances and your baby's condition, your anesthesiologist adjusts the degree of numbness for your comfort and to assist labor and delivery. You might notice some degree of temporary numbness, heaviness or weakness in your legs.

How long will the block last?

The duration of epidural analgesia can be extended usually for as long as you need it. After the epidural catheter is placed, additional medication can be administered through it as needed. Throughout your labor, your comfort and progress will be monitored frequently and medications adjusted accordingly. A nurse may assist your anesthesiologist with this monitoring. After delivery, the epidural catheter will be removed and, within a few hours, sensations will return to normal.

Will the epidural block affect my baby?

Considerable research has shown that epidural analgesia and anesthesia can be safe for both mother and baby, with little or no effect on the infant. However, medical judgment, special skills, precautions and treatments are required. That is why a qualified anesthesiologist should perform this procedure.

Will it slow down my labor?

Each mother may respond differently to the various epidural medications. Some may have a brief period of decreased uterine contractions. Many, however, are pleasantly surprised to learn that after the epidural medications have made them more comfortable and relaxed, their labor may actually progress faster.

Can I "push" when needed?

Regional analgesia allows you to rest during the longest part of labor, which occurs during cervical dilation. Then, when your cervix is completely dilated and it is time to push, you will have energy in reserve. The regional block can reduce your pain while allowing you to push when needed. Even if you do not have the urge to push, you should be able to do so with instruction. If the baby's head needs to be guided through the birth canal with forceps or a vacuum instrument, the block can be intensified to provide anesthesia and muscle relaxation.

What are the risks of a regional block?

Although not common, complications or side effects can occur, even though you are monitored carefully and your anesthesiologist takes special precautions to avoid them. To help prevent a decrease in blood pressure, fluids will be administered intravenously (into one of your