Epidural pain relief

What is an epidural catheter?

An epidural catheter is a small tube placed through the skin in a space between the bones of the spine and the spinal cord. The size of the catheter is about the same as a fishing line. The end of the catheter is in the epidural space, the space just outside the spinal cord. This picture shows you where the epidural space is located.

The other end of the catheter is then connected to a pump. The pump will give your child a small amount of pain medicine at all times. This is one way to reduce your child’s pain. The medicine directly blocks the pain messages sent by the nerves to the brain.

Pain is a normal body reaction after surgery. However, severe pain can slow recovery and have other unwanted effects.

Why use an epidural catheter rather than other methods of giving pain medicine?

When your child receives pain medicines by mouth as a pill or through the intravenous (IV) line, some of the drug goes to the brain and may cause your child to feel sleepy. When medicines are directed to the pain nerves, less of the drug goes to the brain. For this reason, epidural medicines may control the pain without making your child too sleepy. We want to reduce or prevent pain so your child can breathe deeply, get out of bed, and sleep in
comfort. Since he is more alert, he will know right away if he needs more pain medicine. Being alert and having good pain control allows ease in turning, coughing, sitting up, or walking after surgery. All of these movements are crucial for your child to recover from surgery.

Who places the epidural catheter?

An anesthesiologist places the catheter during surgery after your child is asleep and before the surgery begins. The anesthesiologist is a doctor who specializes in managing pain.

Even though the doctor uses a needle to place the catheter, the needle will be removed leaving the catheter in place before your child wakes up.

Does it hurt to get medicines through an epidural catheter?

No, most children cannot feel the catheter or the medicines at all.

What medicines will my child receive through the epidural catheter?

The staff can give 2 types of medicines in the epidural catheter. More than likely, your child will have both types:

- Local anesthetics (numbing agents)
- Opioids (narcotics)

Is it safe to use an epidural catheter to control pain?

Yes. The anesthesiologist will decide how much pain medicine your child needs. This doctor will base that amount on your child’s age, body size, type of surgery, and overall medical condition. The doctor can change the rate of infusion (how fast the medicine is given) based on your child’s needs. The doctor can speed up the rate if your child needs more pain relief or slow it down if he has unwanted side effects.

The Pain Management Service (Pain Team), including the anesthesiologist, will assess your child at least one (1) time each day to make sure he remains comfortable. The Pain Team will change the dose and infusion rate as needed.

Are there side effects with epidural infusions?

Yes. Any medicine used to manage pain can cause side effects. If side effects occur, the anesthesiologist will adjust the medicines to make your child feel better. These are the most common side effects:

- Numbness, tingling, and weakness in the legs, feet, or buttocks at times, causing them to feel heavy. Most often, these feelings lessen over time. Numbness in the painful area is helpful in reducing your child’s pain. Slowing the infusion rate or changing the medicines used will reduce this side effect.
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- **Itching caused by one of the pain medicines.** Your child may have this side effect from the epidural medicine or any other strong pain drugs that he may receive. Itching can be reduced with other medicines such as diphenhydramine (Benadryl®). The itching itself does not always mean there is an allergy to one of the pain medicines.

- **Problems urinating.** Most patients with epidural catheters also will have a urinary catheter to prevent this problem.

- **Nausea and vomiting.** This may be caused by surgery and general anesthesia (medicine to help the child sleep through surgery). These symptoms should lessen with time. The Pain Team will order a medicine that can reduce nausea. The drug can be given to your child if needed.

- **Feeling very drowsy.** This may be a warning sign that your child is receiving too much pain medicine. It also can cause your child’s breathing to become too slow or shallow. The staff can correct this problem by stopping the pump for a short time and arousing your child to be sure that he is breathing well. Sometimes your child may not take deep breaths, especially while sleeping. The staff may need to give him more oxygen.

- **Skin irritated by the tape that holds the epidural in place.** The tape is needed to make sure the epidural does not pull out on accident. If you know your child’s skin reacts to certain kinds of tape, tell the doctor who talks to you about placing the epidural catheter.

Other side effects relate to the catheter rather than the medicines used. These rare side effects include infection, bleeding, and headache. The nurse will watch your child for early signs of these problems.

**Could my child still have pain?**

Yes. It is called breakthrough pain. If your child is old enough, the staff will ask him to use a pain scale to describe how much pain he is having. For different age groups, different pain scales are used. To learn more about the pain scale, see the handout “Do you know… What you can do to help your child in pain.”

When your child has breakthrough pain, the nurse might give more pain medicine through your child’s IV. The Pain Team also might increase the amount pain medicine given by epidural.

**While my child has the epidural, can he move his legs and get out of bed?**

One goal of giving pain medicine this way is to allow your child to move his legs. Your child may get out of bed with help if the surgeon or other doctors say it is OK. Remember: Please call the nurse or physical therapist into the room the first time your child gets out of bed. Take care to keep any part of the tubing from being caught or pulled when moving your child.
When should I call for the nurse?

You should call your child’s nurse:

- If your child seems to be in pain;
- If the epidural catheter comes out or has come apart from the pump tubing;
- If the dressing is loose;
- If you see fluid collecting under the dressing;
- If your child seems to be too sleepy or hard to wake up;
- If your child has a change in breathing pattern;
- If your child complains of itching or feels sick to his stomach;
- If your child wants to turn or get up; or
- If you have questions or concerns.

How will I know if my child is doing well with the catheter?

The nurse and the Pain Team will be looking at these things to make sure your child is doing well with the epidural catheter:

- Your child’s pain level
- How he breathes and the oxygen level on the pulse oximeter (a machine that measures the amount of oxygen in the blood)
- How the tape on the dressing is holding to his skin
- The connections of all parts of the infusion system
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At times, they will ask your child to move his legs. This is important to make sure the medicines and catheter are not causing any serious side effects.

What type of dressing will it have?

The epidural catheter will have a clear dressing over it. From the dressing, a small tube will be taped along your child’s back and over one (1) shoulder. You will not need to change the dressing. If the edges become loose or the other tape becomes loose, please tell your child’s nurse.

How else can I help my child?

Feel free to ask the staff for help. They are here 24 hours a day for you and your child. The nurses, physical therapists, occupational therapists, psychologists, and Child Life specialists can tell you some easy ways to help your child cope with fears or pain. Simple things that distract your child will help, such as reading stories, blowing pinwheels, listening to music, coloring, and massages. You and the nurse will soon discover what works best for your child.

Are there risks to epidural infusions?

Every type of pain relief medicine has its own risks. During the informed consent process, the staff talked to you about the risks and benefits of using the epidural infusion for your child. These risks include:

- Temporary loss of feeling and no use of certain body parts;
- Odd feelings and pain;
- Bleeding inside the insertion site that may push on nerves and spinal cord, causing an injury;
- A drop in blood pressure; and
- Infection.

If you have questions or concerns about the epidural, please talk to your child’s doctor or anesthesiologist. There is a small risk that the needle used to place the epidural catheter can enter the spinal space instead of the epidural space. If this occurs, the child may have a headache for a few days. There is a very low risk of infection or bleeding around the tube, in some rare cases it can cause nerve damage.

How long can the epidural be used?

Most often, the epidural catheter will remain in place for 2 to 5 days. At that point, your child will be able to relieve his pain by taking medicines by mouth. If he cannot swallow the pain medicines, the nurse will give them by IV.
How will the catheter be removed from my child?

Taking the catheter out of the back is fairly painless. The nurse will use adhesive removal pads to make the tape come off easier. After the catheter is removed, the nurse will place a self-stick bandage on the site. The bandage needs to stay in place for one (1) day.

Can my child have the type of pump that allows him to press a button for more pain relief?

Your child may have a pump that will allow him to give himself extra doses of pain medicine through the epidural catheter along with the constant infusion of pain medicine. By pushing the boost button on this pump, he would not have to wait for the nurse to give him more pain medicine. The pump is set up to give him exactly the right dose of medicine. It will only allow your child to have the boost if enough time has gone by since his last dose. The medicine will take about 10 minutes to start working. Only your child should press the button. Before your child can use the boost button, the staff will need to teach him how to use it. A nurse will teach your child when he can and cannot push the boost button.

The pump will store details about the pain medicine your child receives. It will also tell the doctors and nurses how many times he pushes the button. So, it is important for your child to only push the button if he needs the pain medicine. He should not test the button to see if it works or otherwise play with the pump.

Questions?

If you have questions or concerns about your child having an epidural catheter for pain relief, please talk to the doctor or nurse.