

## **What are the risks of Continuous Epidural Analgesia?**

Less than 1% of the time, the needle may enter the space around the spinal cord. Your child may have a bad headache if this happens. It is easily treated. An infection may occur at the place where the tube is, but this is rare. There is an extremely small chance of damage to the nerves when the tube is inserted.

### **What happens after the epidural catheter is removed?**

The epidural catheter will be removed from your child's back by the APS anesthesiologist or the pain nurse. They will check for signs of skin infection and place a Band-Aid over the epidural catheter insertion site. Remove the Band-Aid after 3 or 4 hours. If your child has any numbness or weakness, it should disappear within 6 hours.

Once you are home, the risk of serious infection or nerve injury following epidural removal is rare. However if your child develops any of the following: contact the Acute Pain Service (APS) anesthesiologist immediately by phoning 604-875-2345 and asking for the APS anesthesiologist on call (on-call service available 24 hours a day 7 days a week):

- Severe back pain
- Leg weakness
- Redness, swelling or pain at the epidural insertion site
- Numbness, tingling or pain in either leg
- Difficulty with peeing or bowel movements

The APS anesthesiologist will ask you several questions to determine if you should bring your child to the Emergency Department. If you have any other questions regarding your child's epidural or management of pain during their hospitalization, please call the APS nurse clinician, Monday through Friday, 8 am to 4 pm, at 604-875-2345; ask the operator to page the APS nurse clinician.

Please talk to your child's nurse or doctor about any concerns you have. Ask questions.

Tell us about your child's usual behaviour when in pain. At this hospital we believe parents are partners in caring for a child. We want to share what we know with you and have you share what you know and see with us.

The Family Resource Library at BC Children's Hospital has more information about pain. The library is on the 2nd floor of the Ambulatory Care Building. It has an interactive computer program as well as books and pamphlets about pain. You can also access the Family Resource Library online at [www.bccchildrens.ca/frl](http://www.bccchildrens.ca/frl)

*Developed by the health care professionals of the Acute Pain Service with assistance from  
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# **Continuous Epidural Analgesia (CEA)**



**4480 Oak Street, Vancouver BC, V6H 3V4**  
**604-875-2345**  
**1-888-300-3088**  
**[www.bccchildrens.ca](http://www.bccchildrens.ca)**

## **What is Continuous Epidural Analgesia?**

Continuous epidural analgesia or CEA is a way of giving pain medicine that acts directly on the nerves. The medicine is delivered into an area around the spinal cord by a computerized pump that controls the timing and dose. The spinal cord is the “nerve cable” which links the body to the brain. An epidural is recommended by your anesthesiologist (a specialist in pain control) for pain control after major surgery when other pain control methods may be less effective.

## **How does it work?**

After your child is put to sleep with an anesthetic, and before the operation starts, the anesthesiologist doctor places a thin plastic tube into the epidural space just outside the spinal cord (see diagram). The tube is taped in place on the back so that your child can lie in any position without disturbing the tube. The tube is connected to the pump and the computer is set to deliver the right dose at a steady rate.

The most common pain medicine given in this way is hydromorphone. Other medicine may be added, such as a local anesthetic which blocks pain and feelings of heat, cold and pressure. The medicine is started during the surgery and given for as long as it is needed after the operation, usually 3-4 days.

## **Is it safe?**

CEA is a safe method of giving pain medicine. The anesthesiologist decides on the correct pain medicine dose and the nurse sets the computerized pump. Nursing staff will watch your child and the equipment to make sure that there are no problems. A nurse and anesthesiologist who specialize in pain management in children will visit your child daily.

## **Will it control the pain?**

CEA provides excellent pain relief, especially for pain after surgery in the chest and the parts of the body below the chest. It blocks the pain while using low doses of medicine. This means that your child can be out of bed and moving about sooner, which is good for healing.

Your child’s comfort is an important part of the care we give. The nurse caring for your child will look for any signs of pain. Tell the nurse or the doctor if you think the child is in pain. The doctor may decide to change the medicine dose.

This method of pain control works well for most children. If, for any reason, pain cannot be controlled in this way, the doctor or nurse will discuss other pain control options with you.

## **How long will pain medicine be given in this way?**

Typically, CEA will be used until your child’s pain can be controlled by swallowed medicine.

## **Are there side effects?**

Any medicine used to control pain can have side effects. Common side effects are:

- Nausea and/or vomiting
- Itching
- Dizziness and drowsiness. Help your child sit or turn in bed. Do not let your child get out of bed until the anesthesiologist says it is OK.
- Difficulty emptying the bladder. Because of this, a catheter (plastic tube into the bladder) is usually put in place in the operating room. This will drain the urine until the epidural medicine is no longer needed.
- Weakness and numbness (loss of feeling) or tingling in the buttocks (bum) and legs. This sometimes happens if medicine to block feelings of heat, cold or pressure is being used. Your child’s strength and normal feeling should return within hours after the dose is reduced. Because children may not move around in the normal way, the lower body feels a bit numb. The nurse will shift your child’s position every few hours to prevent problems that may come from lying in the same position for too long.
- Difficulty breathing. If this happens, the anesthesiologist will change the dose of the medicine.
- Lowered blood pressure. If this happens, the anesthesiologist will change the dose of the medicine.

The nurse will watch your child carefully for any signs of these side effects. They can all be treated. Talk with the doctor or nurse if you are concerned about possible side effects.