

Pain Management Following Surgery

About Pain

Pain can have many different causes. Treatment of an illness or a surgical procedure can cause pain. Many children and parents worry about pain after a procedure. This is a normal concern. How much pain your child will feel and for how long will depend on the child and type of surgery that was done. At Children's Memorial Hospital we care very much about the comfort of children after surgery and will do everything possible to minimize discomfort. Our goal for our patients and its affiliate facilities is to have access to safe and appropriate pain relief.

After surgery, pain is a normal body reaction. However, severe pain can slow recovery and have other unwanted effects. Untreated pain can cause:

- Anxiety
- Irritability
- Depression
- Exhaustion
- Slower healing rate

Therefore, pain should be treated as soon as possible.

When your child hurts, it is important that he/she feels a sense of control over the pain. The more you know, the better you will be able to help your child manage the pain. It is important for you to understand the kind of pain your child is having, what influences the pain, and the best way to help him cope. This way, you can help him learn skills that will help reduce his pain.

If your child is feeling pain, it is also important that you tell your doctor or nurse as soon as possible. With treatment, most pain can be easily reduced. If the doctor is having a hard time relieving the pain, a special group of people at Lurie Children's – the Pain Service – can help. They can be called at any time, day, or night, to help treat the pain.

What does pain look like?

If your child is in pain, he/she may do one or more of the following:

- Complain of pain
- Hold or protect the part that hurts, or point to it when asked, "Where does it hurt?"
- Become quiet, shows little interest in usual activities
- Have trouble going to sleep, not sleep well, or sleep a lot
- Eat and drink less than usual
- Become restless or unusually agitated
- Become irritable, angry, whine, or have difficulty being calmed
- Kick his legs, or pull legs up to stomach
- Frown, moan, or cry
- Not want to move at all

You know your child better than anyone, so tell the doctor or nurse if your child is acting differently than normal. Your doctor and nurse will ask your child to tell how much they are hurting by using one of these three pain scales:

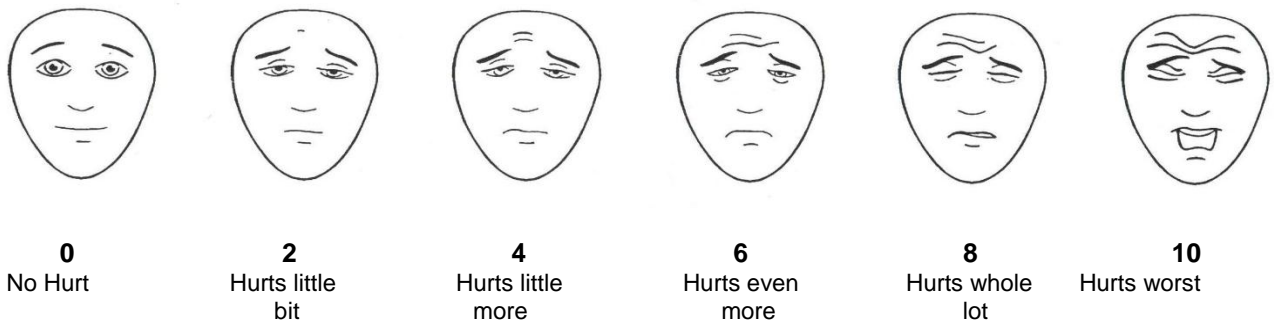
1. FLACC pain scale (ages 0-3 years):

FLACC Scale

Category	Scoring		
	1	2	3
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers; occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging, being talked to, distractible	Difficult to console or comfort

2. FACES pain scale (ages 3-8 years):

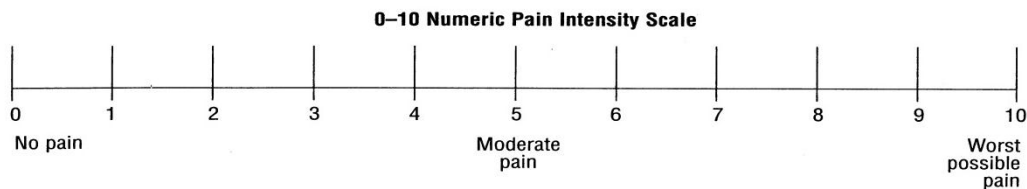
Faces Pain Scale – Revised (FPS-R) - Usually used for children 3 to 8 years old



Hicks CL, von Baeyer CL, Spafford P, von Klorlaar I, Goodenough B, The Faces Pain Scale – Revised: Toward a common metric in pediatric pain measurement. *Pain* 2001, 93:173-183.
 From the *Pediatric Pain Sourcebook*. Original copyright ©2001. Used with permission of the International Association for the Study of Pain and the Pain Research Unit, Sydney Children’s Hospital, Randwick NSW 2031, Australia. Version : 24 Sep 2001

3. VAS pain scale (ages 8 years and up):

Number Scale– Usually used for children 8 years and older



Adapted from Jacox, A., Carr, D.B., Payne, R., et al. Clinical Practice Guideline Number 9. Rockville, MD: US Department of Health and Human Services, Agency for Health Care Policy and Research; 1994.AHCPR publication 94-0592.

What can you do to help your child in pain?

- Hold his hand or give him a hug (physical contact can help calm your child)
- If possible, remain with your child until the pain is controlled
- Talk about the positive steps that are being taken to reduce his pain
- Help your child do something to make the pain go away
- Keep your own anxiety under control and remain calm
- Support your child's way of coping

Methods of pain control

If your child is going to be admitted after surgery, there are several options to manage post-operative pain. After surgery, your child will need pain medications to help keep him comfortable.

1. Your child's pain medication may be administered by a special pump called Patient Controlled Analgesia (PCA). This PCA is managed by the Pain Service Team.

How does a PCA pump work?

- This pump is directly connected to your child's IV. This gives you, your nurse, or your child the option to provide direct pain relief when it is needed. This way you don't have to call the nurse for pain medication.
- The PCA pump has a special button you push when your child has pain. Safety features are put into place to make sure your child doesn't get too much medicine.
- Your child's pain management team will decide which medication will be used with the PCA pump. The medication administered will either be Dilaudid, Morphine, or Fentanyl.
 - Be sure to tell your doctors and nurses if you know your child is allergic to one of these medications.
- The amount of medication your child receives will be based on his body size, age and history of using pain medication. The PCA is programmed to give a specific amount of medicine at certain intervals.
- The pain medicine can be given with the following settings:
 - A "demand" or "button" dose delivers a small dose when your child presses the button.
 - A "lockout" time is also set to allow the demand (button) dose to work before another dose can be given. If your child pushes the button during the lockout, the pump will not give another dose.
 - A "continuous" or "background" infusion may also be programmed to give a small continuous amount of pain medicine even if your child does not push the button.

At least once a day the Pain Service team will evaluate the amount of times your child pushes the button and his pain score. By looking at this information, the amount of medication may be increased or decreased, depending on your child's need.

If you think your child is not getting enough pain relief with the PCA, or if you have any questions regarding a PCA pump, please talk with your child's medical team or have your nurse page the Anesthesia Pain Service.

Side Effects of PCA may include:

- Itchiness
- Excessive drowsiness
- Confusion or hallucinations/bad dreams
- Nausea/vomiting

- Slow or shallow breathing
- Difficulty urinating
- Constipation
- Startling

Usually these symptoms will go away over time or by reducing the dose of the pain medicine. However, our goal is to manage pain first and treat side effects if they continue. Side effects can be managed by other medications, switching medications, or by adding different pain medications while decreasing PCA settings.

How Does An Epidural Work?

Another way we can help to alleviate pain is by inserting an epidural catheter in to the back during surgery.

- An epidural catheter is a small tube placed through the skin in a space between the bones of the spine and the spinal cord.
 - An anesthesiologist or surgeon places the catheter during surgery after your child is asleep. 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.
 - One end of the catheter is in the epidural space, the space just outside the spinal cord.
 - The other end of the catheter is then connected to a pump, where your child is given small amounts of pain medicine at all times.
 - The medicine directly blocks the pain message sent by the nerves to the brain.
 - This catheter allows the numbing pain medication to be administered continuously. This catheter is usually left in for three to four days and then removed.
- Most children cannot feel the catheter or the medicines administered through the catheter. When medicines are directed to the pain nerves, not all of the drug goes to the brain where it works to block the feeling of pain. For this reason, epidural medicines may control the pain and will not make your child too sleepy.
- Your doctor may prescribe two types of medicines in the epidural catheter. Your child may have one or both types:
 - Local anesthetics (numbing agents)
 - Opioids (narcotics)

The anesthesiologist and the Pain Management team will decide how much pain medicine your child needs by age, body size, type of surgery, and history of previous pain medication exposure.

Side Effects of epidural infusions may include:

- Numbness/Tingling
- Weakness
 - These effects are usually felt in the legs, feet, or buttocks, causing them to feel heavy. Most often, these feelings lessen over time.
- Itching
- Difficulty urinating/constipation
- Nausea/vomiting
- Feeling drowsy
- Irritation around the area where the tape holds the epidural in place

Numbness in the area where your child is experiencing pain is helpful in reducing his pain. Sometimes the numbness can travel down to the legs, causing a decrease in sensation where movement is limited to the effected extremity. Slowing the infusion rate or changing the medicines used will reduce this side effect.

One goal of giving pain medicine using an epidural infusion is to allow your child to move his legs. Your child may get out of bed with your help if the surgeon or other doctors say it is OK.

Remember: 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.

Call your nurse if:

- Your child seems to be in pain
- The epidural catheter comes out or has come apart from the tubing
- The dressing is loose or there is fluid collecting under the dressing
- Your child seems too sleepy or hard to wake up
- Your child has a change in breathing pattern
- Your child complains of itching or feels sick to his stomach
- Your child wants to turn or get up
- You have any questions or concerns

Most often, the epidural catheter will remain in place for 3-4 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, or is not taking in food, the nurse can administer pain medications by IV after the epidural is removed.

Helpful Hints

- If your child has a PCA, you may need to remind him to push the button if he complains of pain or if he is about to do an activity that may cause him pain.
- These activities include, but are not limited to:
 - Getting out of bed
 - Coughing or deep breathing
 - Having a dressing change done
 - Using medicines for mouth care
- After he pushes the button, wait a few minutes for the pain medicine to work.
- Do not encourage him to push it for any reason other than pain.

Important: The button should not be used to make your child sleep or be less anxious.

Push the button only if your child is awake and his behavior or words tell you he is hurting and cannot push the button himself.

Other Forms of Pain Relief

If, for some reason, an epidural cannot be used, a nerve or wound catheter pump might be used for pain relief. This pump attaches to a thin soft catheter placed into the skin near a nerve or into a surgical incision where local anesthetic is continually released to numb the area of surgery/procedure.

Precautions

- If a nerve block catheter has been placed in your child's lower legs, your child must be assisted in getting out of bed or walking. The lower leg may be weak from the nerve block and your child could fall if he tries to get out of bed or walk without assistance.

- Your child may feel weak for 24 hours after the catheter is removed; continue to provide assistance to your child during this time.

Side effects

- The medicine in the nerve/wound catheter pump can cause side effects that can be treated or reduced. Report the following side effects to your child's medical team as soon as possible:
 - Inability to move an extremity where a nerve block catheter is placed
 - Redness, itching, or swelling at the catheter site
 - Drainage from the catheter site
 - Ringing in the ears,
 - Metallic taste in mouth
 - Numbness in the lips
 - Slurred speech

Other information

- If your child's pain is not relieved by a nerve/wound catheter pump infusion alone, additional pain medicine can be given through a PCA or by mouth.
- When your child's pain improves, the nerve/wound catheter pump medicine dose will be stopped.
- Normally the catheter stays in for 3-4 days. But if needed, pain medication can still be given by IV or by mouth while the catheter is in-place

Concerns

The chance of becoming addicted to the pain medicine in the PCA or epidural is very rare. As your child's pain improves, the PCA or epidural pain medicine dose will be reduced and then stopped. If needed, pain medicine can still be given by mouth.

We look forward to meeting you and working with you after your surgery. Anesthesia Pain Team coverage is 24 hours a day. If your child needs help with pain management while on a PCA, Epidural, or Stryker Pump please have your nurse page the person on-call from the Anesthesia Pain Team. Effective pain relief will help your child feel better and help him recover sooner.

The information included in this document is for informational purposes only and is not intended to substitute in any way for medical education, training, treatment, advice, or diagnosis by a healthcare professional. A qualified healthcare professional should always be consulted before making any healthcare-related decision.