

Safe and Effective Pain Control After Surgery for Children and Teens

facs.org/safepaincontrol



What are the goals of pain control?

The goals of pain control are to minimize pain, keep your child moving, help him or her resume normal activities, and help healing.

What is safe and effective pain control?

Safe pain control is the use of medication and other therapies to control pain with the least amount of side effects.

Your surgical team will work with you and your child to:

- **Screen** for current opioid use and risk for overuse
- **Use alternatives** to opioids whenever possible
- **Educate you** about:
 - Using the lowest dose of opioids for the shortest amount of time
 - **Safely storing and getting rid of any unused opioids**
 - Knowing and recognizing the signs of opioid overdose



From the operating room to home—your surgical team cares about your best recovery.

Why should I be concerned about opioid use in children and teens?



1 in 8 teens report trying opioids in high school recreationally.



60% of teens who use heroin started by misusing prescription opioids.¹

You can lower potential misuse—only use opioids for severe pain and dispose of any unused medications.

Safe and Effective Pain Control After Surgery for Children and Teens

How can I help my child feel better?

Your child's pain may be controlled with a combination of non-medication therapies and non-opioid medications. For complex procedures, your child's pain plan may also include opioids. After one to several days, the need for opioids will decrease. Use the guide below to help manage your child's pain.

	How Intense Is My Child's Pain?	What Can My Child Take to Feel Better?
Mild Pain	<ul style="list-style-type: none"> • My child hardly notices the pain, and it does not interfere with his or her activities. • My child notices the pain and it is distracting; he or she can still do their normal activities (sitting up, walking, standing, playing). • For non-verbal children: My child is relaxed, not crying, easily moves and changes positions, and has no other symptoms—just an occasional grimace. 	<p>Non-medication therapies</p> <p>+</p> <p>Non-opioid, oral medications</p> <p>You may give these to your child to control mild pain when needed</p>
Mild-to-Moderate Pain	<ul style="list-style-type: none"> • My child's pain is hard to ignore and is more noticeable even when resting. • Pain is interfering with my child's usual activities. • For non-verbal children: My child is frowning, moaning, doesn't want to play, has tense legs, is squirming and is crying but can be distracted. 	<p>Non-medication therapies</p> <p>+</p> <p>Non-opioid oral medications</p> <p>You may give these to your child on a schedule rather than as needed</p>
Severe Pain	<ul style="list-style-type: none"> • My child is focused on the pain and is not doing activities. • My child is groaning in pain, cannot sleep, and is unable to do anything. • For non-verbal children: My child has a rigid body, has tense legs or kicks, is crying continuously, and/or is difficult to comfort. 	<p>Non-medication therapies</p> <p>+</p> <p>Around-the-clock non-opioid medications</p> <p>+</p> <p>Short-acting opioids</p> <p>Call your child's surgeon if severe pain continues</p>

Adapted from the FLACC scale²

Keeping You Informed

- Pediatric patients who went home after minor orthopaedic procedures felt as much pain relief with ibuprofen as with oral morphine with fewer adverse events (39% had adverse events on ibuprofen vs. 69% on morphine).³
- 60% of postoperative pediatric hernia patients managed their pain by alternating ibuprofen with acetaminophen and did not need opioids.⁴

What are the most common pain control therapies and medications?

Non-Medication Therapies

	Therapy	Description
Mild Pain	Self-care	Ice, elevation, and rest
	Complementary therapies	Distraction with a book, game, videos, or movies; reassurance; and music
	Rehabilitation therapies	Physical therapy
	Exercise	Walking and normal play, unless specifically restricted by the surgeon

Non-Opioid, Oral Medications

	Medication	Common Side Effects*
Mild-to-Moderate Pain	Acetaminophen Decreases pain and fever <ul style="list-style-type: none"> • Children's Tylenol^{®5,6} • Tempra[®], Panadol[®], Aspirin-free Paracetamol[®] (found outside of the U.S.) • FeverAll[®] (suppository) 	Nausea, vomiting, constipation, itchy skin, and agitation. Follow package directions for dosing to avoid side effects. The dose of acetaminophen is based on your child's weight. Allow at least 4 hours between doses and do not give more than 5 doses in a day.
	Non-steroidal anti-inflammatory drugs (NSAIDs) Decrease pain, swelling, and fever <ul style="list-style-type: none"> • Ibuprofen (Advil^{®7}, Motrin^{®8,9}) 	Upset stomach (constipation or diarrhea), gas, heartburn, nausea, vomiting, and dizziness. Serious risks: Stomach bleeding or ulcers, heart attack, and stroke. For children who weigh less than 12 pounds or are less than 6 months old, ask your doctor if your child can take NSAIDs. Doses of ibuprofen are based on your child's weight. Ask your doctor if they will want you to give acetaminophen and an NSAID staggered at different times.

Opioids

	Medication	Common Side Effects
Severe Pain	Opioids¹⁰ Decreases severe pain—blocks pain signals in your brain and spinal cord <ul style="list-style-type: none"> • Hydrocodone with acetaminophen (Norco^{®11}, Vicodin^{®12}, Lorcet[®], Hycet[®]) • Hydromorphone (Dilaudid^{®13}) • Oxycodone (OxyContin^{®14}) • Oxycodone with acetaminophen (Percocet^{®15}, Endocet[®], Roxicet[®]) 	Dizziness, nausea (very common), headache, drowsiness, vomiting, dry mouth, itching, respiratory depression (very slow breathing), and constipation. For opioid-related constipation, you may give your child fiber-rich foods such as pear or prune juice, prunes, MiraLAX [®] , a stool softener, a suppository, or an enema, as directed by your surgeon. Serious risks: Prescription opioid risks include misuse, abuse, addiction, overdose (taking too much of the medication), and death from respiratory depression. In adults, we know that the risk of opioid addiction is rare when opioids are used for less than 5 days. FDA Contraindications and Warning: Children younger than 12 years of age should not take tramadol for their pain or codeine for their cough or pain (two types of opioid medications). ¹⁶ Also, tramadol should not be used for pain control after tonsil removal in children younger than 18 years. Both drugs are also not recommended in adolescents 12 to 18 years old and who are obese, have obstructive sleep apnea, or severe lung disease.

*Side effects reported in 3% or more of the patients in the study sample

Children with chronic pain or a history of prolonged opioid use will have an individualized plan for postoperative pain management.

How can opioids be used to safely manage my child's severe pain?

Your Child's Surgeon May:

- ✓ **Check** if your child is at a higher risk for opioid misuse. Some questions the surgeon may ask:
 - Does your child or a family member have a history of substance abuse or overdose?
 - Is your child currently taking an opioid medication?
- ✓ **Ask** if your child has depression or attention deficit hyperactivity disorder (ADHD). Teens with depression and children/teens with ADHD have a higher risk of developing a substance use disorder (SUD) or misusing drugs, so screening is always recommended.^{17,18} Treating these disorders helps lower SUD risk.
- ✓ **Review** your child's health history and other medications.

Your Child Should:

- ✓ **Take the lowest dose possible.**
- ✓ **Never take more medication than prescribed.**
- ✓ **Never take opioids with** antihistamines or sleep aids, sedatives or tranquilizers, anti-anxiety medications, muscle relaxers, cough medicines containing codeine, or another opioid. Combining these medications with opioids increases your child's risks of side effects.
- ✓ **Never mix alcohol with NSAIDs or opioids.**
- ✓ **Never crush pills.** This can speed the rate your child's body absorbs the opioid and cause an overdose.

Parents: Communicate often with your child about his or her pain. Watch for adverse events or signs of misuse.

Call 911 for an opioid overdose. Common signs of opioid overdose are small pupils, trouble breathing, and unconsciousness. **A child can die from an opioid overdose.**

Can I wait to fill my child's opioid prescription?

Yes, you can wait to see if your child has severe pain before filling his or her opioid prescription.

Talk with your child's doctor about this choice:

- Your child may not need the medications prescribed for opioid-related side effects (anti-nausea medication and laxatives).
- **Be prepared** with access to a 24-hour pharmacy in case your child's pain becomes severe in the middle of the night.
- Know that your child's prescription is good up to 7 days after it is issued.
- Check if your child was given a long-acting anesthetic (stops pain at the wound or surgical site). This may help control your child's pain for several days, and you may need fewer or no opioids.

How do I store and get rid of my child's leftover opioids?

For the safe storage of opioids:

- Store opioids in a secure location, preferably a locked cabinet or container
- Keep medication out of reach of children and pets
- Keep medication in its original container to avoid taking it by mistake
- Keep track of the location and number of pills or liquid in the bottle

Dispose of opioids as soon as they are no longer needed.

You can locate a drug take-back program or safe drop site near you by visiting the U.S. Drug Enforcement Administration at apps2.deadiversion.usdoj.gov/pubdispsearch. If there is no disposal site near you, flush or pour any unused liquid down the drain. Mix unused pills with coffee grounds or kitty litter in a plastic bag, and then throw it in the trash.

What are the risks of my child becoming addicted to opioids?

Anyone who takes prescription opioids can become addicted. However, long-term use is rare when opioids are only taken to manage severe, postoperative pain.²¹ Opioids block pain and may give a feeling of euphoria (feel high). Taking prescription drugs to feel high is a type of **prescription drug abuse**.

Addiction involves seeking out the drug despite negative effects on your health, family, and work. Children may develop **tolerance**, meaning that over time you might need higher doses to relieve their pain. Children can develop **physical dependence**, meaning their body gets used to taking opioids and may have withdrawal symptoms when the medication is stopped suddenly. Tolerance and physical dependence put them at a higher risk for an overdose.

Withdrawal symptoms can include trouble sleeping, anxiety, irritability, racing heartbeat, and headaches. Withdrawal symptoms can be managed with medication and by gradually decreasing (tapering) your child's opioid dose, but this should be guided by their doctor.

Check to see that your child's pain is decreasing over the days following surgery. Call your doctor if you think your child is misusing their pain medication, experiencing tolerance, or experiencing physical dependence.

For questions and resources to help you or a loved one cope with a substance use disorder, visit the Substance Abuse and Mental Health Services Administration website at [samhsa.gov](https://www.samhsa.gov) or call the 24-hour helpline at 1-800-662-HELP (4357).



Do not share opioids. 50% of people who abuse opioids, including high school students, get them from a friend or relative.¹⁹⁻²⁰

To find more information about the opioid epidemic, medication package labeling, and the references listed in the brochure, please visit:

facs.org/safepaincontrol

Reviewed August 2019 by:

ACS Patient Education Opioid Workgroup
Kathleen Heneghan, PhD, MSN
Tarra Barot, PhD

Special thanks to our collaborators:

Kenneth Azarow, MD, FACS
David Powell, MD, FACS
Hale Wills, MD, FACS

This brochure is produced in collaboration with the American Pediatric Surgical Association.



The printing of this brochure is partially supported from an ACS Foundation Education Grant from Pacira Pharmaceuticals, Inc.

Disclaimer: The American College of Surgeons (ACS) is a scientific and educational association of surgeons that was founded in 1913 to improve the quality of care for the surgical patient by setting high standards for surgical education and practice. The ACS endeavors to provide procedure education for prospective patients and those who educate them. It is not intended to take the place of a discussion with a qualified surgeon who is familiar with your situation. The ACS makes every effort to provide information that is accurate and timely, but makes no guarantee in this regard. The use of brand names in this document does not imply endorsement.