

CONTROLLING PAIN AFTER MAJOR SURGERY



Options for Delivering Pain Relief

For patients who have surgery, pain relief is an important part of recovery. Pain that is well controlled can result in faster healing and fewer complications. A number of factors might influence pain-control choices. These include the kind of surgery, how severe the pain might be, and how long it might last. A patient's medical history is also important.

Pain can be controlled by several kinds of medicines, which act in different ways. Local anesthetics can numb an area of the body. You may have had a local anesthetic on a visit to the dentist. Nonsteroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, can reduce mild to moderate pain. For severe pain, strong opioids, such as morphine, may be needed. Pain relief is often best when different drugs are used together.

Pain medicines can be given in a number of ways. You might get pills that you take by mouth. Taking pills right after surgery may not be possible. In that case, medicines can be injected into a muscle or into a vein. They can also be injected close to nerves or the spinal cord. This chart focuses on options for pain control right after major surgery. Your doctor may use one or more of these options until you can take medicines by mouth.

Epidural Options

In epidural analgesia (pain relief), pain medicines are injected into an area of your spine called the epidural space. This area is between the covering around the spinal cord and the bones of the spine. Studies have shown that epidural analgesia provided better pain relief after surgery than medicine delivered through a vein or through injection into a muscle or under the skin.

Single Epidural Injections

A variety of opioid pain relievers and other medicines can be given by epidural injection. The choice of medicine depends on a variety of factors. No opioid, however, is better than morphine in relieving pain.

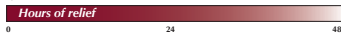
Conventional Epidural Morphine

Provides up to 24 hours of relief



When injected, conventional epidural morphine can provide up to 24 hours of pain relief. Conventional epidural morphine can be injected through a needle or through a small tube called a catheter. The catheter can be left in your back so more medicine can be given if you do not get enough pain relief at first or so pain medicine can be given beyond 24 hours. The catheter can also be connected to an infusion pump that can provide a continuous dose of pain medicine.

DepoDur[®] (morphine sulfate extended-release liposome injection)
Provides up to 48 hours of relief, without an indwelling epidural catheter



DepoDur provides up to 48 hours of pain relief after surgery with a single epidural injection of morphine. Because the morphine is released gradually, DepoDur gives you extended pain relief during the time when pain may often be worst.

Since relief with DepoDur lasts up to 48 hours, you do not need an epidural catheter for continuous pain-relief medicine. Patients who need blood thinners after surgery can typically receive them without the delays associated with an indwelling epidural catheter.

For the contraindications and most common side effects of DepoDur, please see Important Safety Information on the back page.

A copy of the DepoDur patient brochure can be found in the pocket on the next page.

Continuous Epidural Infusion

An epidural infusion provides a continuous dose of pain medicine through an epidural catheter that is connected to an infusion pump. An anesthesiologist or pain specialist will order the dose that should be given. The pump is then programmed to deliver that dose. Epidural infusions can be programmed to deliver a variety of medicines.

Patient-Controlled Epidural Analgesia (PCEA)

PCEA helps give you control over your pain. You can deliver small amounts of pain medicine as you need it by pushing a button connected to an epidural pump. The pump delivers the medicine through your epidural catheter. With PCEA, you do not have to ask a nurse for each dose of medicine.

The PCEA system is programmed to deliver a single dose of medicine within a set time, for example 10 minutes, when you push the button. The pump will not respond if you press the button more than once in the time period. This helps prevent you from getting too much medicine, which can be dangerous.

Intravenous (IV) and Intramuscular (IM) Options

IV pain medicine is delivered through a small tube, called a catheter, that is put into a vein in your hand or arm. This catheter can also be used to provide fluids, anesthetics, or antibiotics.

IM pain medicine is given by injection into a muscle.

IV analgesia offers better and faster drug delivery than medicine injected into a muscle. This means you may get faster pain relief.

Intermittent IV/IM Injections

Pain relievers can be injected into an indwelling IV catheter by a doctor or nurse. These kinds of injections are often called bolus doses. They can be given at set times throughout the day. They can also be given “as needed,” when you ask for them. IV analgesia eliminates the discomfort of regular injections into the muscle or under the skin.

Some pain relievers can also be injected into a muscle. Like IV injections, IM injections can be given at set times throughout the day. They can also be given “as needed,” when you ask for them.

Continuous IV Infusion

A continuous dose of pain medicine is delivered through an IV catheter that is connected to an infusion pump. The pump is programmed to deliver the desired dose. The infusion is usually started after pain has first been controlled with IV injections.

IV Patient-Controlled Analgesia (IV PCA)

IV PCA helps to give you control over your pain. It is like PCEA, but without an epidural catheter. You can give yourself small fixed doses of medicine as you need it by pushing a button connected to an IV pump. With IV PCA, you decide when you need pain medicine, and you do not have to ask a nurse for each dose.

The PCA system is programmed to deliver a single dose of medicine within a set time, for example 10 minutes. If you press the button more than once within that time, the pump will not respond. This gives each dose time to work before another dose is given. It also helps to prevent you from getting too much medicine, which can be dangerous.

Nerve Blocks

A nerve block provides pain relief to a specific area of your body, such as your arm or leg. Your anesthesiologist injects an anesthetic around the nerves related to the area of your surgery.

If you should need a short period of pain relief, the doctor may give you a single shot. For longer pain relief, the anesthesiologist may place a catheter into the area and deliver a continuous infusion of pain medicine. Nerve blocks may be given before surgery and may be used with other medicines to minimize pain and side effects.

All of these medical techniques and the medicines used with them have potential benefits and risks. Be sure to discuss them with your doctor or anesthesiologist.



Important Safety Information

DepoDur is contraindicated in patients with known hypersensitivity to morphine or the product components and those patients with respiratory depression, acute or severe bronchial asthma, upper airway obstruction; those who have or are suspected of having paralytic ileus, head injury, or increased intracranial pressure; and those who are in circulatory shock.

DepoDur is not intended for intrathecal, intravenous, or intramuscular administration. Administration of DepoDur into the thoracic epidural space or higher has not been evaluated and therefore is not recommended. Once DepoDur has been administered, no other medication should be administered into the epidural space for at least 48 hours.

As with all opioids, the most serious side effect of DepoDur is respiratory depression, especially in elderly and debilitated patients and in those with compromised respiratory function. Current recommendations advocate that all patients receiving neuraxial opioids be monitored for adequacy of ventilation, oxygenation, and level of consciousness.¹ Monitoring should continue for the duration of therapeutic effect. Patients receiving DepoDur should be monitored for 48 hours.

The most common adverse events (greater than 10%) were decreased oxygen saturation, hypotension, urinary retention, vomiting, constipation, nausea, pruritus, pyrexia, anemia, headache, and dizziness.

DepoDur is a Schedule II controlled substance and is subject to abuse and diversion.

Please see accompanying full Prescribing Information.

Reference: 1. American Society of Anesthesiologists Task Force on Neuraxial Opioids. Practice guidelines for the prevention, detection, and management of respiratory depression associated with neuraxial opioid administration. *Anesthesiology*. 2009;110(2):218-230.



[®]DepoDur is a registered trademark of Pacira Pharmaceuticals, Inc.
©2009 EKR Therapeutics, Inc. All rights reserved. DEP09-208 10/09