

Regional Anesthesia

Regional anesthesia makes a specific part of the body numb to relieve pain or allow surgical procedures to be done. Types of regional anesthesia include spinal anesthesia (also called **subarachnoid block**), epidural anesthesia, and nerve blocks. Regional anesthesia is often used for orthopedic surgery on an extremity (arm, leg, hand, or foot), for female reproductive surgery (gynecological procedures and cesarean section) or male reproductive surgery, and for operations on the bladder and urinary tract. Epidural **analgesia** (pain relief) is commonly used to ease the pain of labor and childbirth but can also be used to provide anesthesia for other types of surgeries. **Anesthesiologists** are doctors with specialized education in the medical management of patients who are having operations or procedures, including providing anesthesia and relieving pain. **Certified registered nurse anesthetists** are registered nurses who have additional education in administering anesthesia.

General anesthesia is the state of unconsciousness produced by medications for operations and procedures. For some operations, general anesthesia is the only option available. Also, some patients, because of their medical conditions, may not be able to receive regional anesthesia.

SPINAL ANESTHESIA

- After carefully preparing the skin on the lower back with an antiseptic solution, local anesthesia is injected into the skin to numb the area.
- An extremely small needle is placed through the skin, soft tissue, and ligaments surrounding the spine until it reaches the **subarachnoid space**, which is where **cerebrospinal fluid** (CSF) is found. A small amount of local anesthetic specifically designed to go into the CSF is given, and the needle is taken out.
- Numbness usually starts at the feet and moves upward. The spread of numbness is determined by many things, including the amount and type of local anesthetic given, the patient's height, and the position of the patient once the medication is given.

EPIDURAL ANESTHESIA

- Epidural anesthesia is similar to but not the same as spinal anesthesia.
- For epidural anesthesia, a larger needle that does not reach the CSF is used, and a catheter is placed through that needle into the epidural space.
- Using the catheter, longer-term anesthesia and pain relief can be obtained.
- Complications from both spinal and epidural anesthesia are rare. They include difficulty breathing and bleeding or infection where the needle is inserted. Medication for both spinal and epidural anesthesia is given only under monitored conditions.

PERIPHERAL NERVE BLOCKS

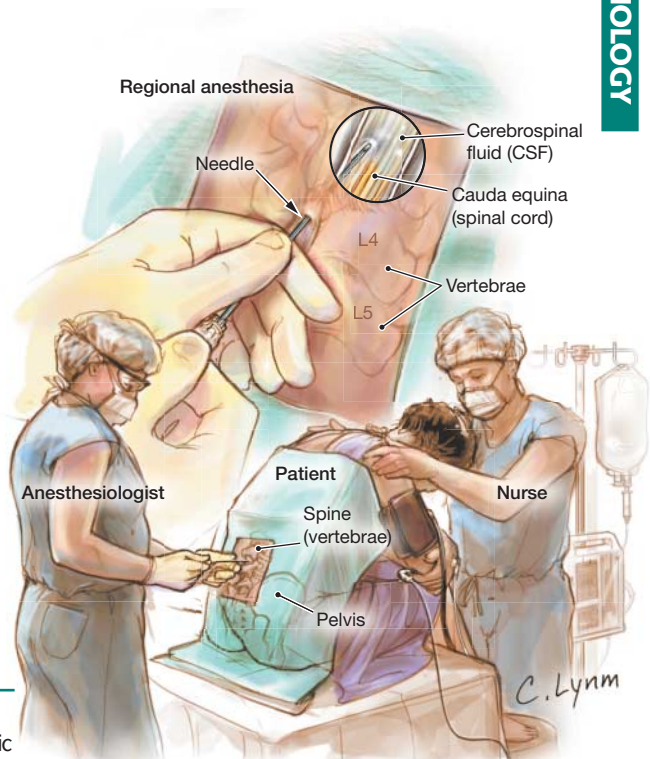
Nerves start in the spinal cord and travel to different body parts. These nerves may be blocked at several points along their paths. This can provide pain relief as well as blocking **motor function** (the ability to move). Local anesthetic solution is given as close to the nerve as possible without entering the nerve itself. Locating nerves is made easier using a nerve stimulator or a portable ultrasound device. Single injections or catheters may be used, depending on the purpose of the nerve block.

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- American Society of Anesthesiologists
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- American Society of Regional Anesthesia and Pain Medicine
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- European Society of Regional Anaesthesia & Pain Therapy
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Sources: American Society of Anesthesiologists, American Society of Regional Anesthesia and Pain Medicine, European Society of Regional Anaesthesia & Pain Therapy

