

About Spinal Surgery

(An Overview)

What is spinal surgery?

Many people have back pain. Back pain can have many causes:

- Accidents or other major injury.
- Normal aging.
- Some diseases and conditions.
- Wear and tear.
- Poor body mechanics (poor posture when sitting, standing and lifting).

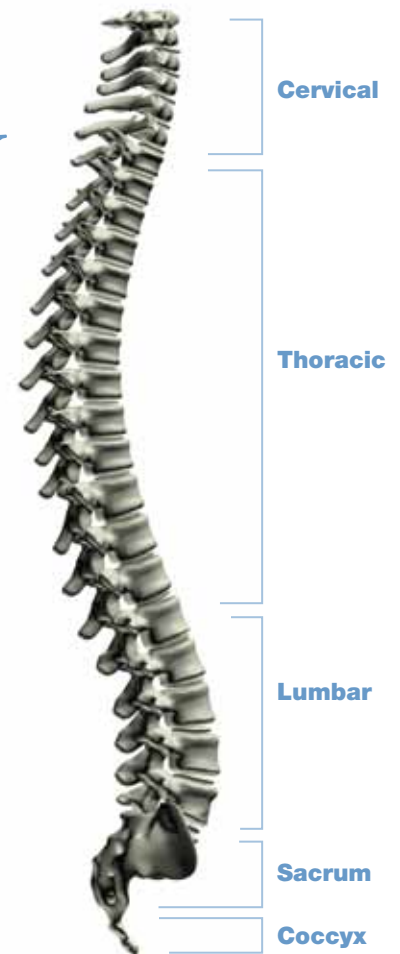
Damage to any part of your spine, especially activities that put pressure on your nerves, can cause pain, numbness and/or weakness. This leads many people to see a doctor who specializes in the back and spine.

Many back problems can be eased by conservative treatment. But if conservative treatment has not helped, back surgery might be the answer.

Anatomy of the Back

The **spine** consists of the backbones (called *vertebrae*), intervertebral *disks* and the *spinal cord*.

- The **vertebrae** are the 24 bones that are stacked on top of each other from the bottom of the skull to the pelvis. The column running through the centers of all the vertebrae is called the **spinal canal**.
- The **lamina** is the thin part of the vertebrae that forms a protective arch over the spinal cord.
- In between these bones are the intervertebral **disks**, which are soft pads of tissue with a spongy center. Each disk helps soak up any stress put on the back as you move. They let the vertebrae – and your spine – move with flexibility.
- The **spinal cord** is a collection of nerves which starts at the base of the brain and runs through the spinal canal.



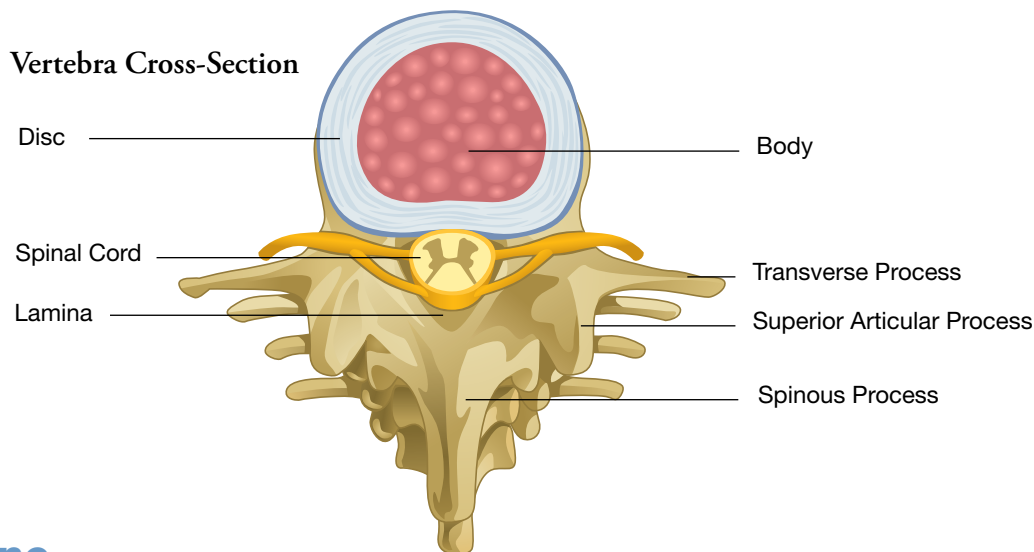
Your spine is separated into several regions. The curves include:

- **cervical** spine
- **thoracic** spine
- **lumbar** spine

Two other regions in your lower spine that consist of several fused vertebrae. These vertebrae do not move:

- **sacral** (sacrum)
- **coccygeal** (coccyx) or tailbone

You also have **muscles** in your abdomen, hips and legs that reduce tension in your back and add support to your spine.



Types of Spine Surgeries

Depending on the location and type of your pain or injury, there are different types of surgeries.

Discectomy

In a discectomy, your surgeon removes a portion of a disc to ease pressure on a nerve and allow more room for the nerve to heal. It is usually done through a small incision in your back.

There are different types of discectomies. They vary with how the surgeon removes the disc and how much is removed:

- With a **classic discectomy**, the surgeon enters through your back, removes some or all of the lamina (part of the vertebra), and then removes the portion of the disc causing the problem.
- A **microdiscectomy** is very similar to the classic, although the surgeon uses a microscope to better see the operating area.

- In a **percutaneous discectomy**, the surgeon uses X-ray images and a video screen to see the disc. In these cases, bone doesn't need to be removed. A percutaneous discectomy can usually be done without staying in the hospital overnight.

Laminectomy

As some people get older, some of the joints of the spine enlarge causing narrowing of the spinal canal. This is called "spinal stenosis." In a laminectomy, the surgeon removes the part of the vertebrae that forms the arch over the spinal cord. This creates more space in the spinal canal and relieves the pressure on the nerves. Sometimes parts of the disc or bone spurs are removed if they are pressing on the nerve as well. Depending on the surgery, the incision may be two to six inches long.

Fusion

A spinal fusion permanently connects two or more bones in your spine. A small piece of bone ("bone graft") is used to fuse the vertebrae together. The graft comes from your own bones or from a donor bone bank.

The grafts may be set on the sides of the vertebrae or between the vertebrae to fuse the disc space. A spinal fusion helps keep your spine stable and provides extra support.

In some fusion surgeries, special rods and screws or "cages" may be used to provide extra stability. In rare cases, these supports can be removed after the fusion is complete. This surgery is done through an incision in your back. This type of surgery may take many hours.