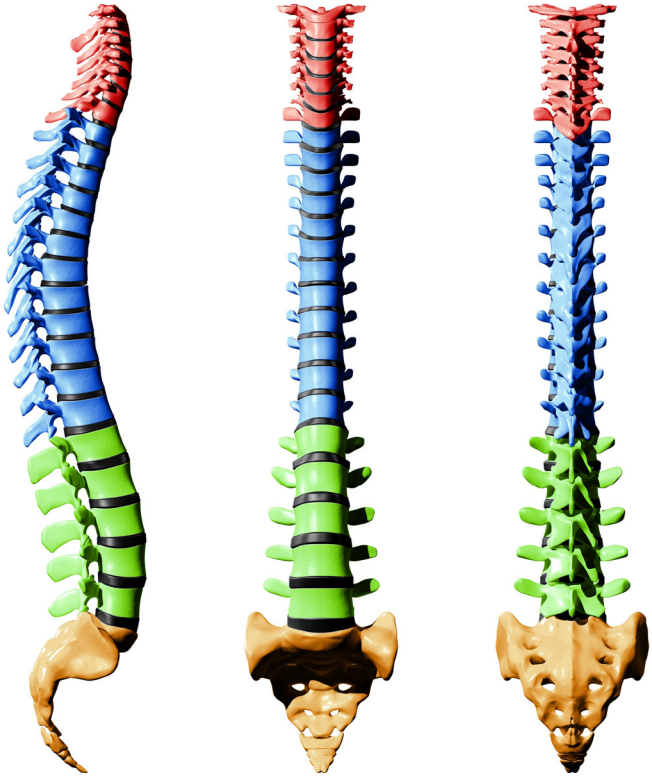
The Spine & Spine Surgery



A healthy spine forms an S-shape from the neck to the lower back:

- The cervical spine (or neck) has 7 vertebrae – C1-C7
- The thoracic spine (or chest) has 12 vertebrae–T1-T12
- The lumbar spine (or lower back) has 5 vertebrae–L1-L5

Your spine is made of bones called vertebrae. In between these bones are discs, soft cushions that act as "shock absorbers" for the spine. The spine protects your spinal cord, which is the nerve center of the body.

The lumbar spine is the hardest working part of your spine because it carries the most weight and moves the most.

The discs between the vertebrae can wear down over time due to injury or aging. Without these "shock absorbers", pressure on the nerves of the spine can cause pain in the lower back and/or legs. Bone spurs may form and narrow the space through which the nerves pass. This may also lead to nerve irritation and pain.

Your doctor has recommended that you have spine surgery to relieve the pressure on your spinal nerves. Surgery is needed when rest, medication, physical therapy, and/or exercise has not relieved your pain or improved your ability to carry out daily functions.

6 Common Spine & Disc Problems

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Degenerative Disc Disease

Degenerative disc disease is a condition in which the discs in your spine have been damaged or worn down due to aging or wear-and-tear.

Each disc has a spongy center surrounded by tough outer rings. When a disc weakens, the outer rings may not be able to contain the material in the center of the disc. When this material bulges against, or squeezes through, a weak spot or tear in the outer rings, it creates pressure against the nerve, causing pain in your back and/or legs.

Bulging and Ruptured Discs

With a bulging disc, bone surfaces begin to rub against each other. This causes inflammation and pain. Bone spurs (calcium deposits) can also form, causing pain.

When a disc is ruptured (herniated), the spongy center squeezes through the tough outer rings, putting pressure on the nerves. Bulging and ruptured discs can cause severe pain.

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Arthritis

Arthritic bone surfaces begin to rub against each other. When this occurs, inflammation and bone spurs can form, causing pain. As bone spurs continue to grow, increased narrowing of the area through which nerves pass causes even more pain.

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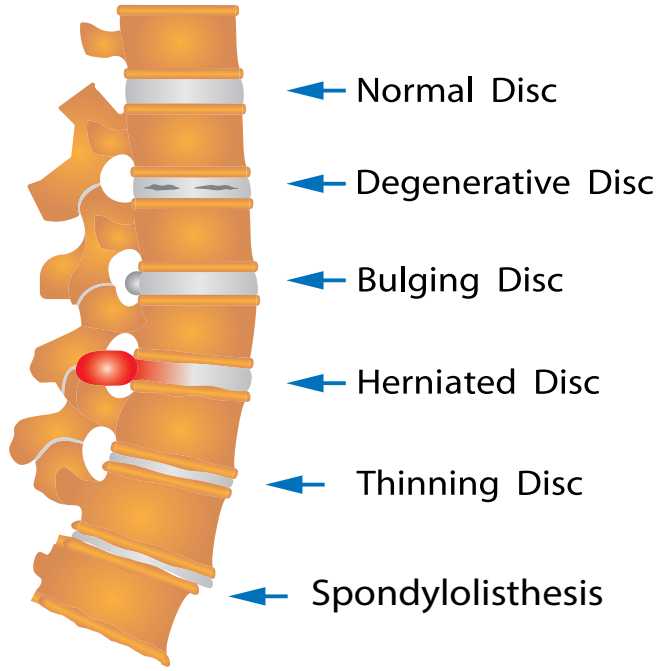
Spinal Instability

As the discs wear out and flatten, the vertebrae can slip back and forth. This slipping can cause the outer rings of the discs to stretch, causing pain, but also, more important, decreasing the protection for the spinal cord. Instability may also result from trauma or muscle paralysis.



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Spinal Stenosis

Spinal stenosis is the narrowing of the canal where the spinal cord and nerves pass through. This may be caused by bony growth and/or bulging of the disc. This often occurs as we age. The narrowing creates pressure on the spinal cord and nerves, which may cause swelling, pain, numbness, tingling, or weakness.

Spondylolisthesis

Spondylolisthesis is a slippage of one vertebra, causing the spine to be out of alignment. This misalignment can pinch the nerves and cause pain.

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