



# Patient Information

## Anterior Lumbar Interbody Fusion



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## Patient Information

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This brochure will help you understand more about:

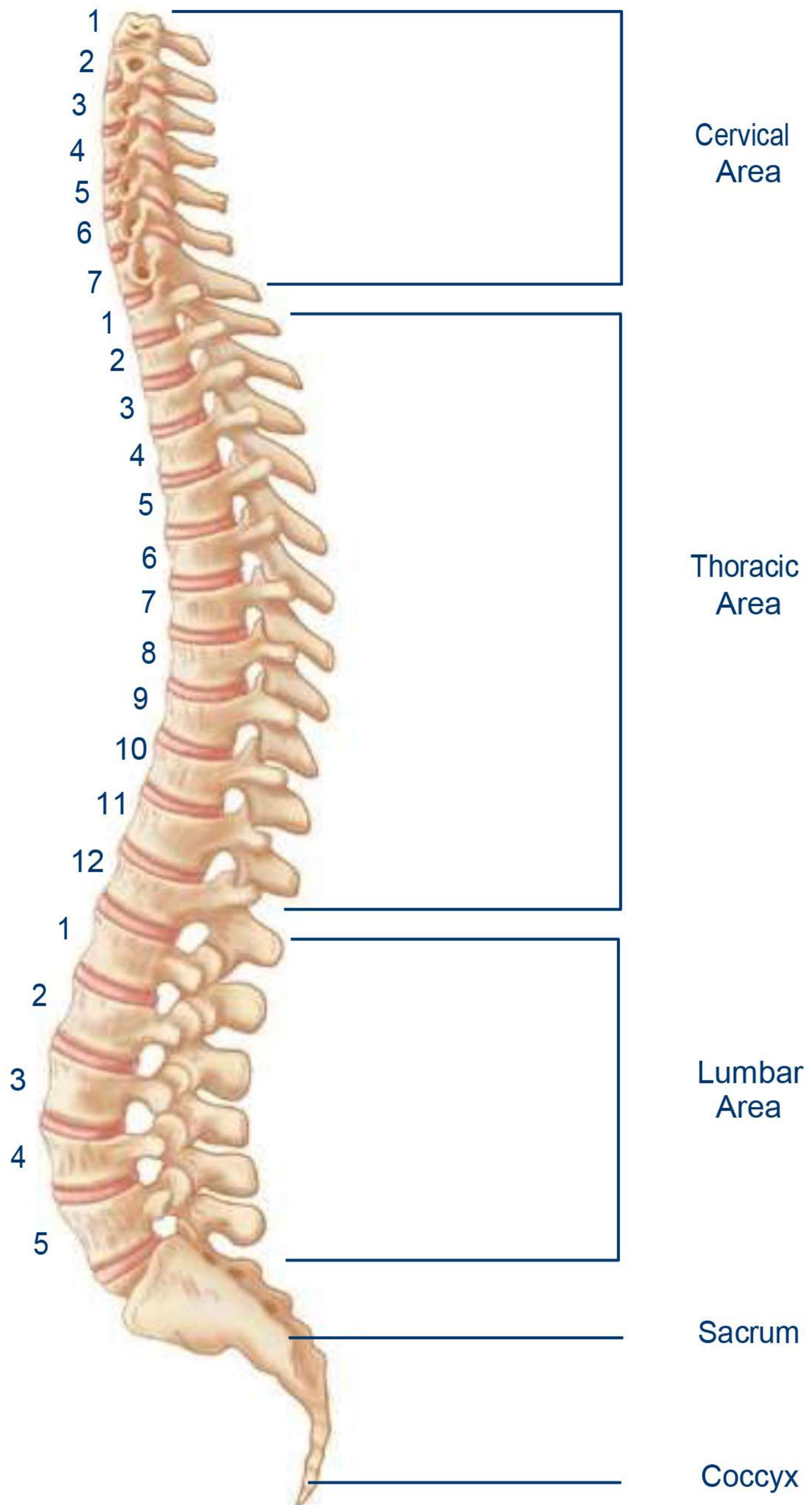
- General conditions of the spine
- Information about surgical treatment
- Anterior Lumbar Interbody Fusion (ALIF)
- What to expect from surgery

*The decision to receive medical treatment is individual to the patient and the patient's symptoms. The information presented within this brochure may not apply to your condition, treatment or its outcome, as surgical techniques vary and complications may occur. It is important to discuss the viability of this procedure with your physician to decide whether this treatment option is right for you.*

*This brochure is intended to be an educational resource only and is not meant to be a warranty, or to replace a conversation between a patient and their physician or member of their health care team. Please consult your physician for a complete list of indications, contraindications, warnings, precautions, clinical results and other important medical information that pertains to this procedure.*



# Anatomy of the Spine





## The Healthy Spine

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The spine is one of the most important structures in the human body. It supports much of the body's weight and protects the spinal cord, which carries information from the brain to the rest of the body. The spine is strong but flexible, allowing for a wide range of movements.

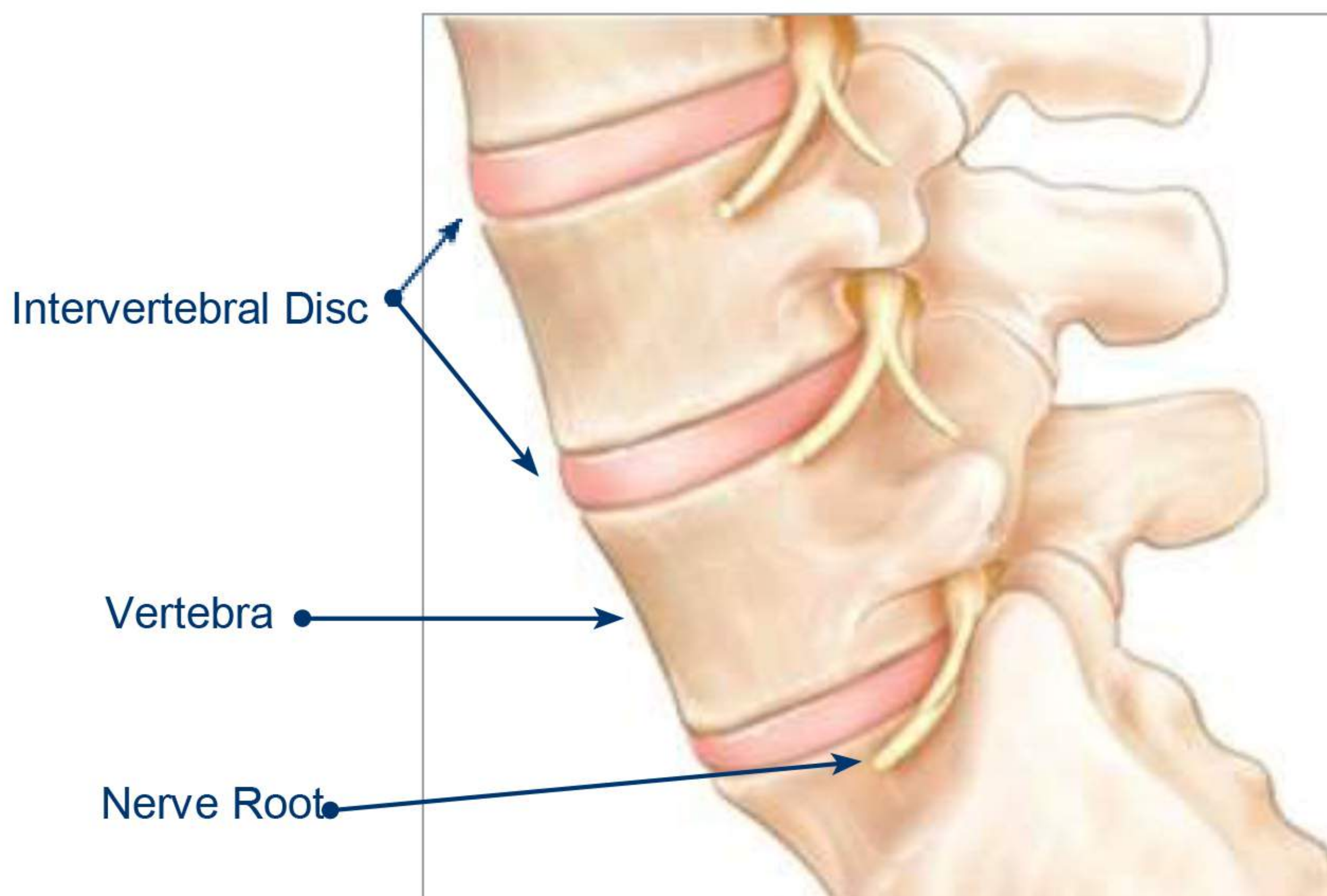
The spine is made up of vertebrae and is divided into three main sections:

- Cervical (7 vertebrae)
- Thoracic (12 vertebrae)
- Lumbar (5 vertebrae)

Below the lumbar spine is the sacrum, which is comprised of five fused vertebrae. At the end of the spine is the coccyx, or the tailbone.

The vertebrae bear the weight of the upper body and provide points of attachment for muscles and ligaments. They also protect the spinal canal and provide exit points for spinal nerves.

Individual vertebrae are separated by intervertebral discs, which act as cushions or shock absorbers between the vertebral bodies.



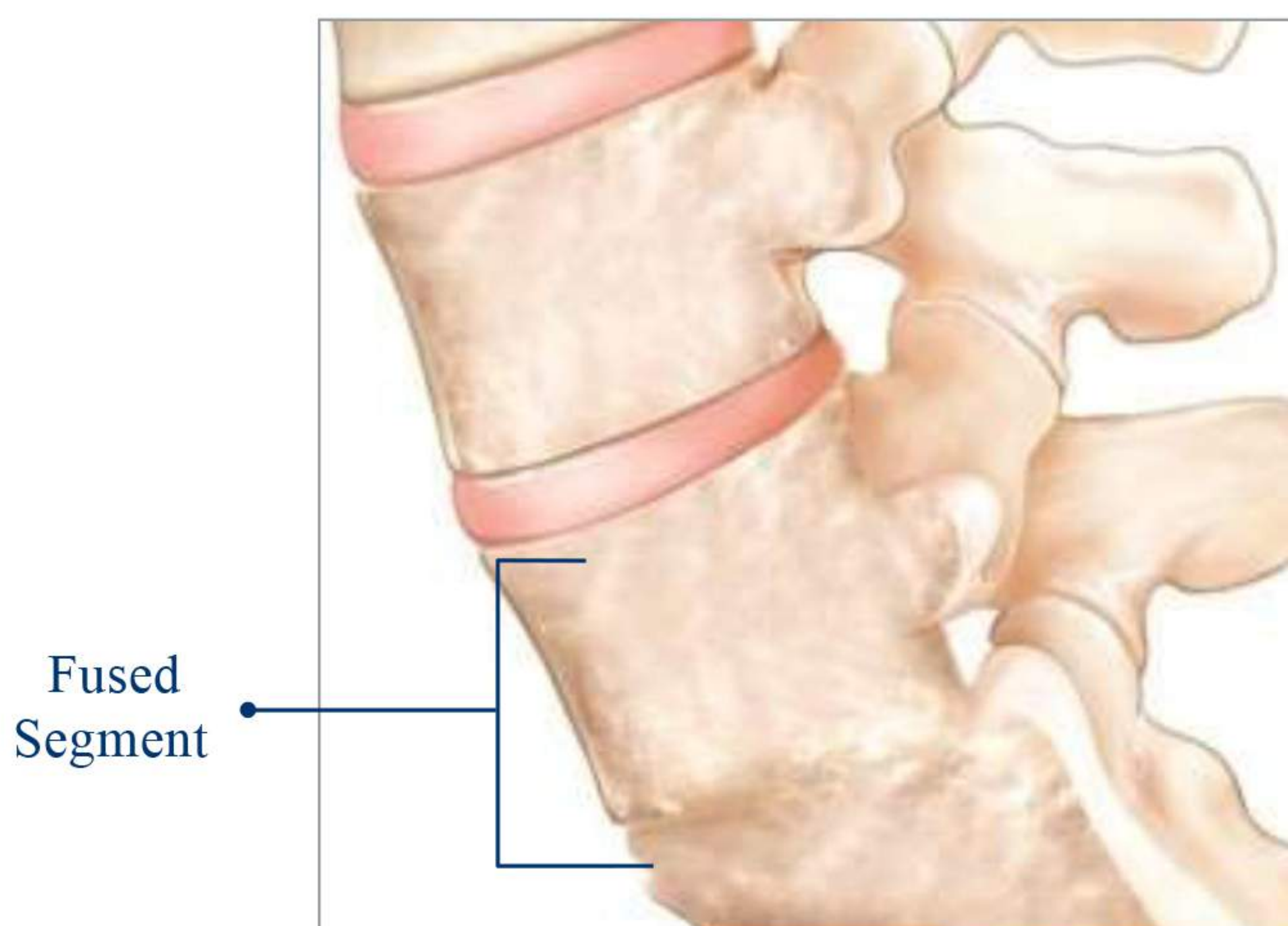


## General Treatment Options

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Symptoms due to spinal instability may be treated with non-surgical methods for as long as possible. These treatments include rest, ice or heat, weight control, exercise, physical therapy, medication and steroid injections.

If these non-surgical treatments do not bring relief after a period of time, your doctor may recommend surgical treatments to take pressure off the nerves that are causing pain by restoring alignment of the spine and/or the space between the vertebrae.



Surgical treatment involves removal of the affected discs and fusion (joining of two bones together) of the vertebral segments. Spinal fusion is accomplished by bone growth between the vertebrae, helping to minimize motion in the area, which may help reduce pain.

Depending on certain factors, the surgeon may decide to fuse using an anterior approach, which means an incision in the abdomen, or a posterior approach, which means an incision in the back. Sometimes the surgeon may use a combination of these two approaches.



## General Conditions of the Lumbar Spine

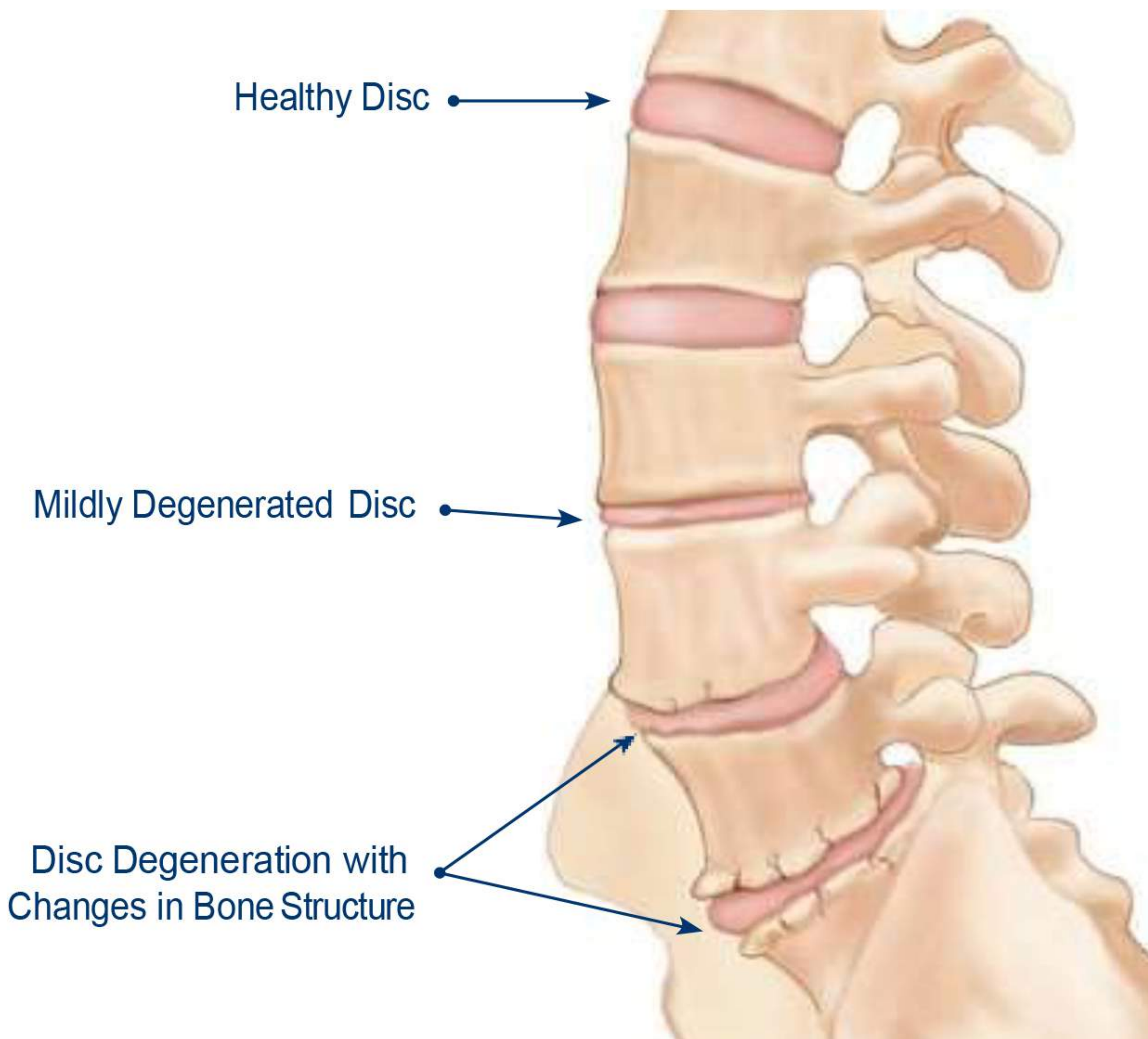
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### What is Degenerative Disc Disease?

Degenerative changes in the spine may cause instability and pain in your back. Degenerative Disc Disease (DDD) involves the intervertebral disc and is part of the natural aging process. DDD can also result from torsional (twisting) injury to the lower back.

In the normal spine, your discs act as a cushion between vertebrae. Over time the discs can lose flexibility, elasticity and height. When this happens, they lose their shock absorbing characteristics and can lead to abnormal motion or alignment of the spine, which may result in pain.

Symptoms of DDD include pain or numbness in the back or legs. This pain may increase with activities that involve bending, twisting or sitting for extended periods of time.





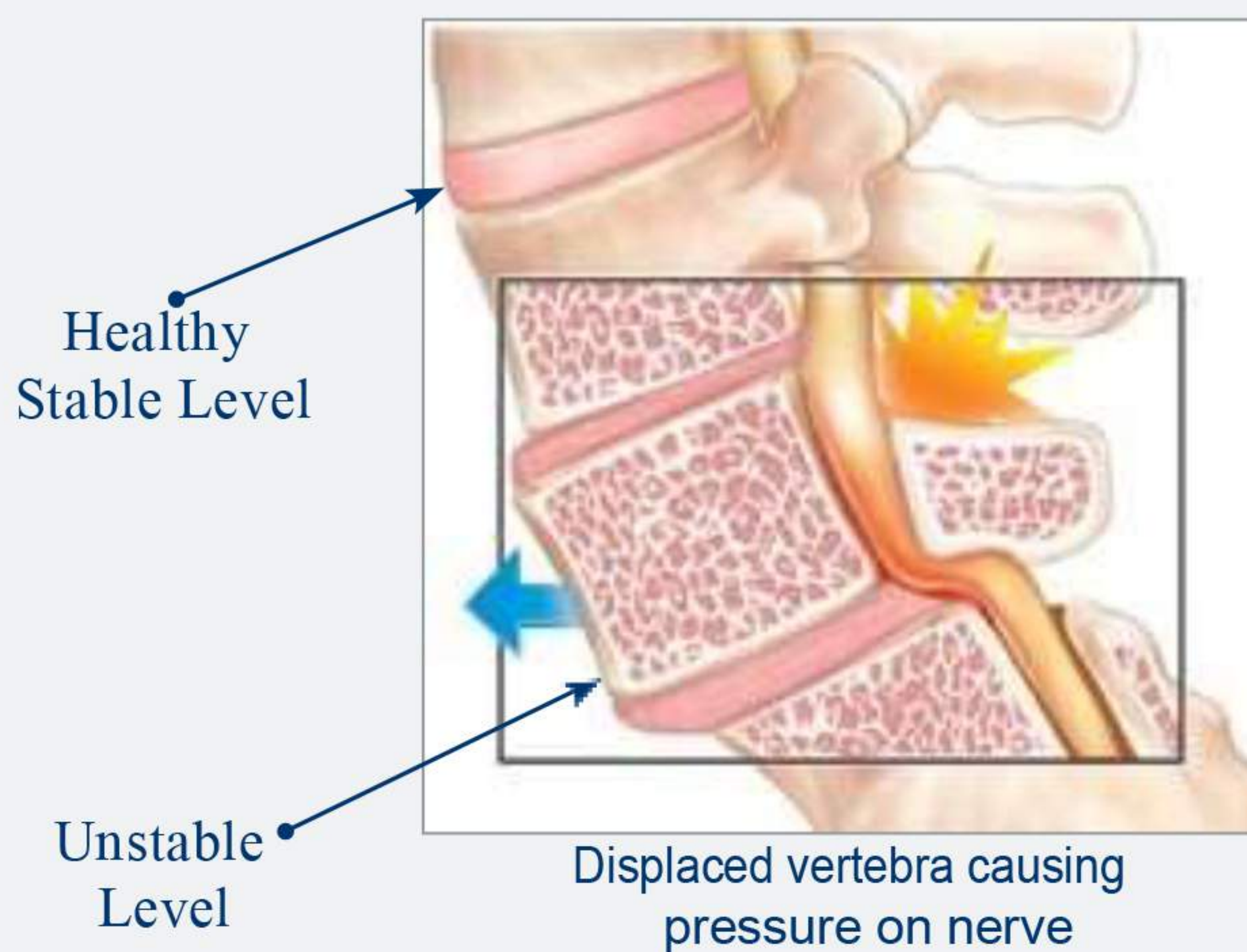
## What is Spondylolisthesis?

Spondylolisthesis is a condition in which one of the vertebrae slips forward or backward. If left untreated, this can lead to deformity of the spine and narrowing of the spinal canal.

Typical symptoms include low back pain, muscle spasms, thigh or leg pain, and weakness. Interestingly, some patients are asymptomatic and only learn of the disorder after spinal X-rays.



Normal spine segment



Healthy  
Stable Level

Unstable  
Level

Displaced vertebra causing  
pressure on nerve

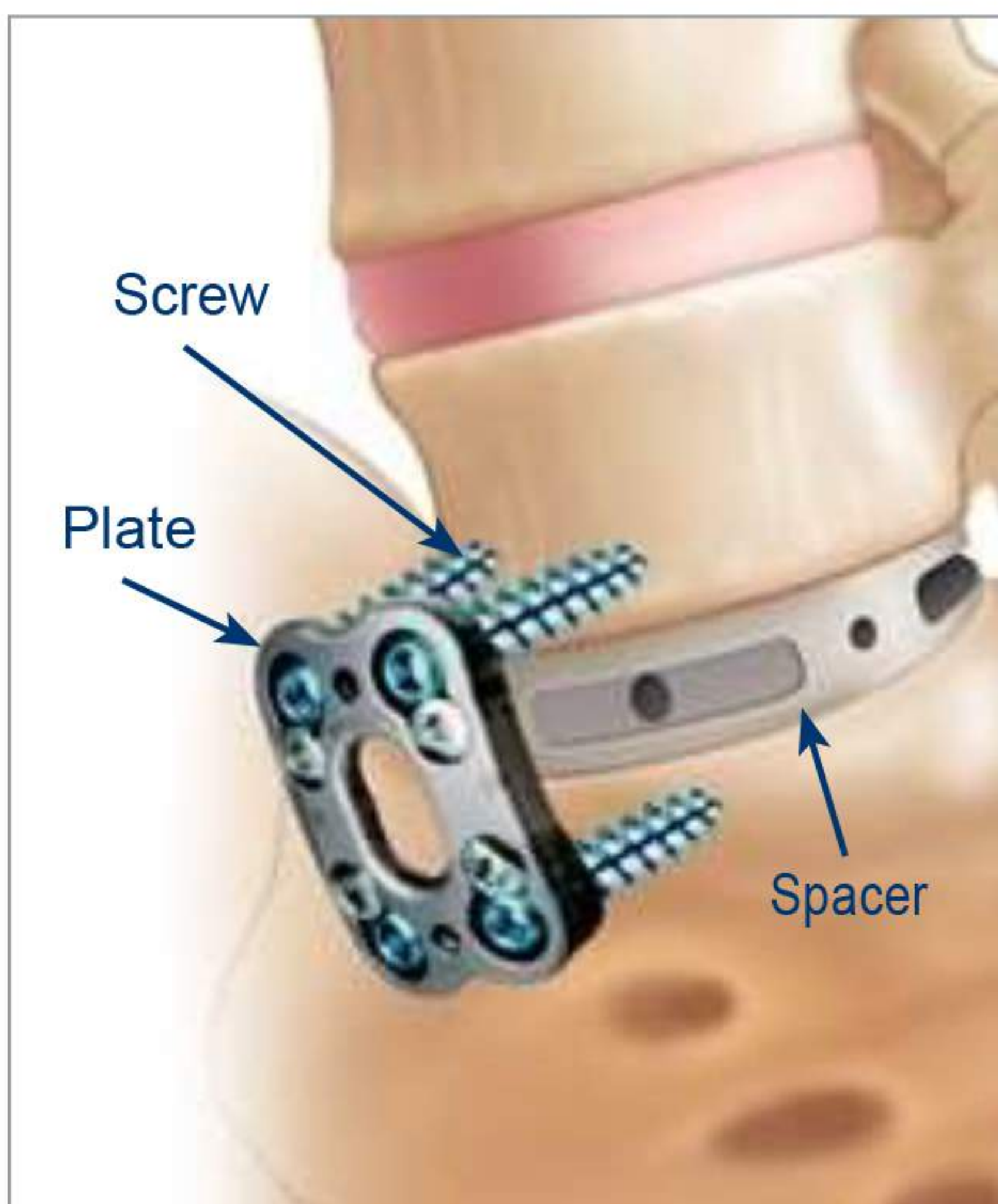


## What is Anterior Lumbar Interbody Fusion (ALIF)?

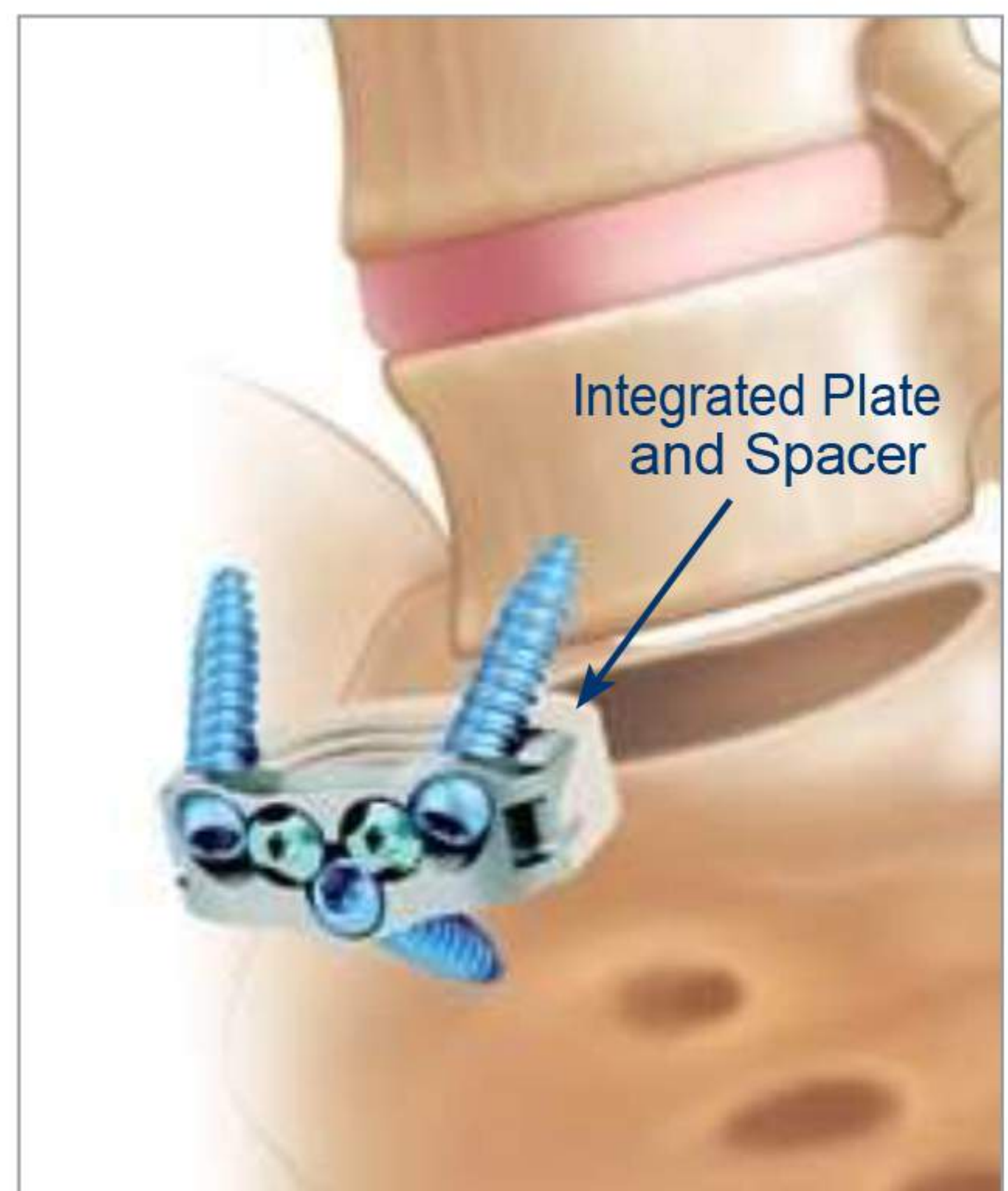
The primary goal of this procedure is to relieve pressure on either the nerve roots or spinal cord and/or treat a painful disc. The unhealthy disc is removed, using surgical instruments.



An interbody fusion implant may be inserted to fill the vacant disc space. A plate and screws, or an integrated plate-spacer and screws, may be used to hold the vertebrae in place while fusion (bones growing together) occurs.



Synthetic Spacer with Lumbar Plate and Screws



Integrated Plate-Spacer with Screws





## What Should Patients Expect During Recovery?

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Patients may notice improvement of some or all symptoms and pain from surgery may diminish between two to four weeks after surgery. However, recovery time varies between patients.

It is the surgeon's goal for the patient to return to normal activities as soon as possible. A positive attitude, reasonable expectations and compliance with post-surgery instructions all help to contribute to a satisfactory outcome.



## Contraindications, Complications, Warnings, and Precautions

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You may be contraindicated for this procedure if you have an infection, a congenital abnormality, are obese, pregnant, mentally ill, diabetic, suffer from rheumatoid arthritis, osteoporosis, or cancer.

As with any surgical procedure, complications may occur following the placement of this device. These can include but are not limited to early or late implant bending, breakage, failure, loosening, movement/migration, bone fracture, and allergic reaction to implant material.

Other general complications associated with any spinal surgical procedure include non-union or delayed union, pseudarthrosis, pain, second surgery, bleeding, early or late infection, spinal cord and/or nerve damage, incisional complication, scar formation, blood vessel damage, cardiovascular system compromise, respiratory problems, complications due to bone grafting, reactions to anesthesia, impotence, sexual dysfunction, paralysis, and death.

*This list does not include all possible contraindications, complications, warnings, or precautions. Please consult with your surgeon for additional information on this topic and how it applies to your particular medical condition.*





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