

**AN INTRODUCTION TO**

# NECK AND BACK PAIN

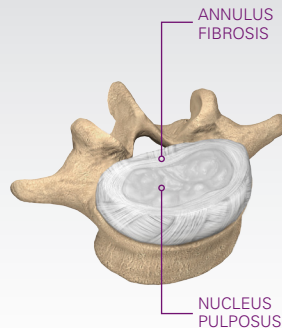
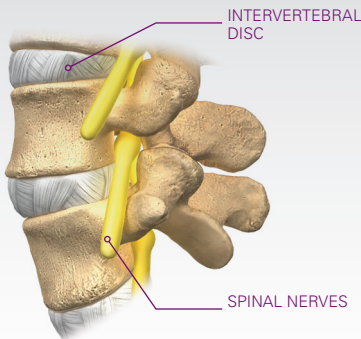
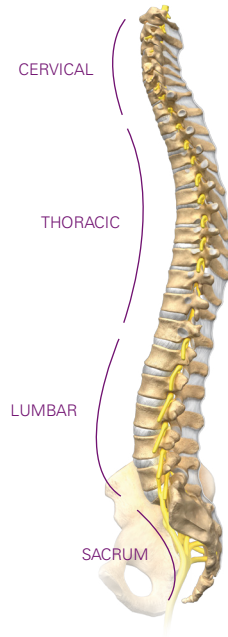
*This booklet provides general information on neck and back pain. It is not meant to replace any personal conversations that you might wish to have with your physician or other member of your healthcare team. Not all the information here will apply to your individual treatment or its outcome.*



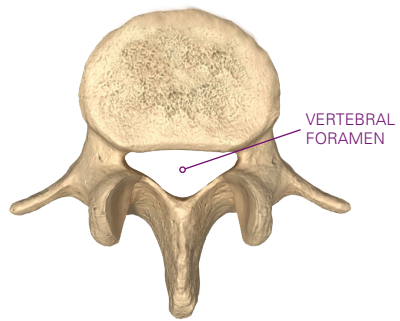
# About the Spine

The human spine is comprised 24 bones or vertebrae in the cervical (neck) spine, the thoracic (chest) spine, and the lumbar (lower back) spine, plus the sacral bones.

Vertebrae are connected by several joints, which allow you to bend, twist, and carry loads. The main joint between two vertebrae is called an intervertebral disc. The disc is comprised of two parts, a tough and fibrous outer layer (annulus fibrosis) and a soft, gelatinous center (nucleus pulposus). These two parts work in conjunction to allow the spine to move, and also provide shock absorption.



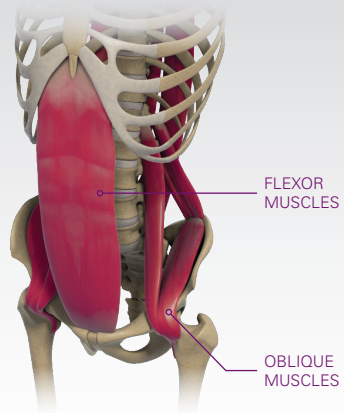
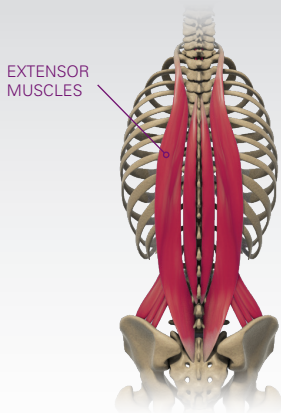
Each vertebrae has an opening through which spinal nerves travel (vertebral foramen). At each level of the spine, spinal nerves exit to both the left and right sides. This enables movement and feeling throughout the body.



The spine is surrounded by muscles which assist in movement.

These include:

- **Extensor muscles** are connected to the back of the spine and assist in standing and lifting.
- **Flexor muscles** are connected to the front of the spine and enable flexing, bending over, lifting, and arching the lower (lumbar) spine.
- **Oblique muscles** are connected to the sides of the spine and help rotate and maintain posture.



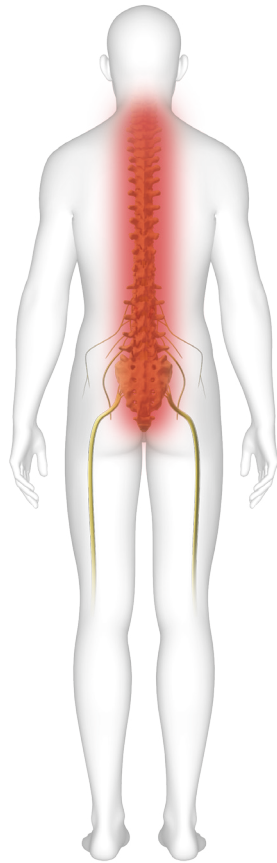
# About Back Pain?

When any of the anatomy of the spine, exiting nerves, muscles, or surrounding ligaments are not functioning properly, you may experience pain. This can include back, leg, and/or neck pain depending on the dysfunction.

The duration and intensity of back pain also varies. Pain can be displayed as the following:

- Constant, sporadic, or occur in response to certain positions or activities
- Dull, sharp, piercing, or burning
- Localized, or radiating from the neck or back into the arm or hand, or leg and foot

If you feel that you are experiencing any of these symptoms, you should consult a physician for an accurate diagnosis.



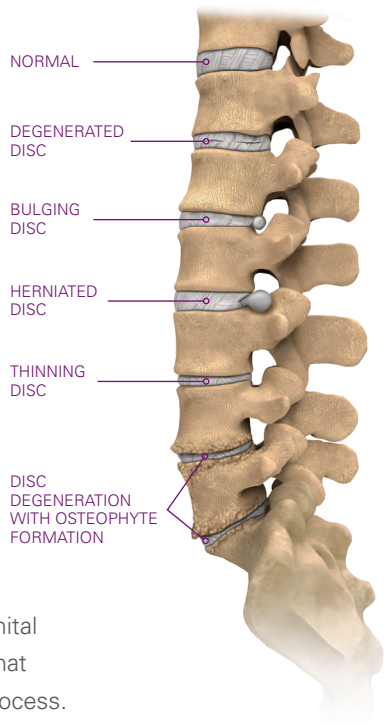
# What Causes Back Pain?

Back pain is typically a result of an injury or trauma, a disorder such as degenerative disc disease (DDD), a tumor, osteoporosis, or arthritis.

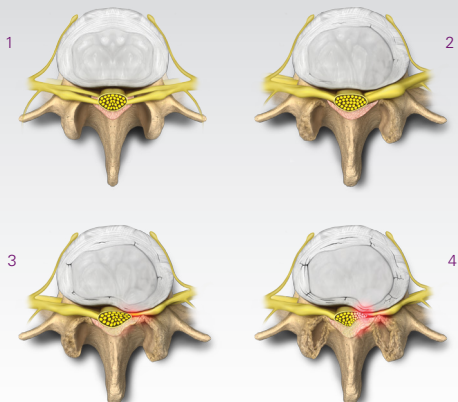
This can cause:

- Back, muscle, or ligament strain
- Spinal instability or scoliosis
- Bulging or herniated discs
- Spinal stenosis and bone spurs
- Spinal nerve impingement

The root cause of back pain may vary from complications during daily activities, a hereditary or congenital abnormality, or anatomical changes that take place during the natural aging process.



**Natural Aging Process**



## What are the Treatment Options?

An estimated 75 percent of Americans will experience back pain during their lifetime. A majority of patients with back pain do not require surgery and find pain relief from conservative methods.

Your doctor may recommend one or more of the following conservative treatments based on your individual diagnosis:

- Physical therapy and strengthening exercises
- Rest and restriction of physical activity
- Injections (corticosteroids) to help reduce the pain and swelling
- Medications and analgesics to reduce pain and swelling (typical medications include non-steroidal anti-inflammatory drugs, or NSAIDs)
- Application of heat and/or ice to help reduce pain, inflammation, and muscle spasms

If your symptoms do not improve with other methods and back pain continues to diminish your quality of life, your physician may suggest spinal surgery.



Learn more about neck and back pain  
Visit [www.nuvasive.com/conditions](http://www.nuvasive.com/conditions)

# Notes

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## RESOURCES

For more information about neck and back pain please visit:

**[www.nuvasive.com/conditions](http://www.nuvasive.com/conditions)**

If you would like to learn more about patient support and education for chronic back and leg pain sufferers and their loved ones, please visit:

**[www.thebetterwayback.org](http://www.thebetterwayback.org)**

*If you have any questions about neck and back pain or spine surgery in general, please call or see your physician, who is the only one qualified to diagnose and treat your spinal condition. This patient information brochure is not a replacement for professional medical advice.*

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