Your Guide to Common Spine Conditions and Treatments

The spine is made up of your neck and backbone. It allows your body to bend and move freely. As you get older, it is normal to have aches and pains. But injury, poor posture, wear and tear or disease such as arthritis can damage the spine.

To understand your back or neck problem, you must first learn how a healthy spine works.
The **Back Pain Center at Gwinnett Medical Center in Lawrenceville** offers a comprehensive, one-stop care option for people suffering from back pain. It takes the guesswork out of where to start and where to get answers, and it streamlines the process to make it faster and more convenient.

Our highly-skilled back and spine doctors and board certified physician assistants have special training and experience in back care and treatment. They work closely with other specialists, treating a full range of spine problems from simple strains and sprains to more complex problems, such as trauma and spine deformities, fractures and tumors.

Doctors can treat most spine problems without surgery. However, if you need surgery, our doctors at the Back Pain Center are distinguished and respected neurosurgeons who have performed thousands of complex spine procedures.

This booklet contains information to help you understand common spine conditions and treatments. It is intended to supplement the information you receive from your healthcare provider. This information should never be considered personal medical advice. Be sure to ask questions about anything you do not understand. If you still do not understand, ask again until you do.
How Your Spine Works

A healthy spine supports your body and lets it move freely. It starts at the base of your skull (where the head and neck meet) and runs down your back to your tail bone. The spine forms three natural curves and divides into five sections.

In a healthy spine, all of the parts work together making it strong and flexible. Ligaments along the spine and muscles in the neck, back and stomach hold the bones in place and help your body move, twist and bend.

A healthy spine supports your body and allows you to bend, twist and move.
Sections of the Spine

Five Sections of the Spine:

1. Cervical
2. Thoracic
3. Lumbar
4. Sacral
5. Coccyx
**Vertebrae**
Vertebrae are individual bones, stacked on top of each other, that make up the spinal column. They also help protect your spinal cord and nerves.

**Lamina**
The lamina is part of the vertebrae. It is the back bony wall of the spinal canal.

**Facet Joints**
Facet joints link vertebrae together, allowing you to bend forward and backward and turn from left to right.

**Discs**
Discs are pads of soft tissue that separate the vertebrae. They act like cushions between the bones, absorbing bumps and shocks as you bend and move.

**Spinal Canal**
The spinal canal is a tunnel created by the stacked vertebrae. It runs through the center of the spinal column.

**Spinal Cord**
The spinal cord is made of millions of nerves that carry information to and from your brain. It travels through the spinal canal.

**Nerves**
Nerves branch out from the spinal cord through small openings (foramen) on both sides of the vertebrae. These nerves help you control your body’s movement and allow you to feel sensations like heat and cold.
Understanding Spine Problems

There are many causes and types of back and neck problems. Birth defects and developmental changes, such as abnormal curving of the spine may cause problems. Aging can cause wear and tear on the discs and vertebrae, damaging the spine. A long history of smoking, trauma or strain from overuse, repetitive motion and poor posture also causes disc and bone problems.

Damage to the spine can cause pain in your neck, shoulders, back, and hips, and weakness and numbness in your arms and legs.
Upper Spine (cervical) problems can cause neck pain that may shoot into the middle of your back and head or into your shoulders, chest, arms and hands.

Middle Spine (thoracic) problems can cause middle back pain that may shoot into your chest or down into your upper thighs.

Lower spine (lumbar) problems can cause low back pain that may shoot into your buttocks, down your legs and into your feet.

Problems anywhere along the spine can cause pain and many different types of symptoms.
Common Symptoms

Common symptoms from spine problems range from muscle tension and pain to numbness or weakness in your arms or legs. The most common symptoms include pain that may:

- Appear suddenly, remain constant or come and go.
- Stay in one place or radiate to other parts of the body, such as arms and hands or legs and feet.
- Feel dull, burning or sharp and include weakness, numbness or tingling.

Call 911 or go to the Emergency Room if you have:

- Increasing leg weakness
- Trouble controlling your urine or bowels
- Sudden severe stomach and low back pain

Although rare, any of these symptoms may mean you have a medical emergency and need to seek help right away!

Strains and Sprains

Overuse or injury, such as lifting a heavy object or falling, may cause a strain or sprain.

You may have pain, swelling, and bruising if you stretch or tear the muscles, tendons or ligaments along your spine.
Disc Problems

Injury, aging or wear and tear can damage discs and cause spine problems. Discs act as cushions between the vertebrae and help stabilize the spine. A tough outer layer (annulus fibrosus) protects the soft, spongy center (nucleus pulposus).

Damaged discs can pinch or irritate and inflame (inflammation) nerves traveling from the spine into the arms or legs. Pinched and inflamed nerves can cause pain, burning, tingling or numbness.

Pinched nerves can cause shooting pain, burning, tingling or numbness.
Degenerative Changes

As the spine ages, discs lose some of the fluid that makes them spongy and soft (degeneration). Flat, dry discs lose their ability to move smoothly and absorb shock. The space between the vertebrae gets smaller, allowing the bones to rub against each other causing irritation and inflammation.

These degenerative changes can:

- Pinch or squeeze nerves causing pain.
- Increase your risk for injury to your spine.
- Cause bony growths (bone spurs or osteophytes) to form where the vertebrae rub together. Bone spurs can cause the opening of the spinal canal to narrow (stenosis). The narrowed spinal canal and bone spurs can press against nerves, causing pain.
**Bulging Disc**

A bulging disc happens when the disc’s soft, spongy center pushes out of its normal space. The bulge may press on or irritate a nerve and cause pain. The soft center remains inside of the tough outer layer.

**Herniated Disc**

A herniated disc (also called ruptured disc or slipped disc) happens when some of the soft, spongy center pushes out through a crack or tear in the tough outer layer. A herniated disc can irritate nerves causing pain, numbness or weakness in an arm or leg.

**Spondylolisthesis**

Spondylolisthesis can happen when worn or damaged discs allow vertebrae to slip forward. Slipping vertebrae can make stenosis worse and irritate nerves and joints.
Nonsurgical Treatments

Surgery is rarely needed to treat back pain. Most cases of back pain resolve in a few weeks with nonsurgical treatments. These include changing daily activities, participating in physical therapy, taking medication, receiving pain medication injections and alternative therapies such as acupuncture and chiropractic treatments.

Changing Daily Activities

Making some changes in your daily activities can make your back or neck feel better. Your doctor may recommend that you:

- Lose weight and quit smoking.
- Learn how to reduce the stress on your back or neck when bending, twisting, sitting and walking.
- Limit certain activities such as lifting and twisting.
- Improve your posture when sleeping, sitting and standing.
- Use back supports to relieve pain and keep your spine balanced.
- Manage other health conditions such a diabetes and rheumatoid arthritis.
Physical Therapy

Physical therapy can help relieve back and neck problems. A physical therapy program may include:

- Exercises that help build your strength and improve your mobility.
- Treatments that help reduce pain, such as electrical stimulation, ultrasound, massage and heat or cold.
- Education about ways to move and bend that protect your spine.

Medication

Your doctor may prescribe medication to help relieve pain, muscle spasms and inflammation. You may take some medicines by mouth and others by injection into joints or areas of the spine near painful discs and nerves.

Be sure to talk with your doctor about which medications work best for you.
Surgical Treatments

When nonsurgical treatments do not relieve your back or neck pain, your doctor may recommend surgery as the best option for you.

Some common surgical procedures include:

- Removing a portion of bone to widen a narrowed area of your vertebrae.
- Removing the herniated part of a disc that is pressing on a nerve.
- Removing an entire disc and fusing or locking the vertebrae together.
- Restoring a curved or twisted spinal column and then fusing or locking the corrected position in place.
- Fusing or locking slipped vertebrae together making the spine more stable.
- Replacing a damaged disc with an artificial disc.
We are grateful for the opportunity to serve you.

Thank You

for choosing Gwinnett Medical Center for your health care needs.

We are grateful for the opportunity to serve you.