

MEDICAL MONDAYS | News Notes

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TOPIC: BACK PAIN 101

AdvancedHEALTH : Advanced Ortho & Spine

January 23, 2017

News Notes via www.webMD.com

[Understanding Back Pain : The BASICS](#)

We've all had back problems from time to time. The hurt can stem from sore muscles, ligaments and tendons, herniated discs, [fractures](#), and other problems.

There's a lot riding on your spinal column. It's your body's main structural support. It keeps you stable enough to stand upright but flexible enough for movement. [The spine](#) is actually a stack of 24 individual bones called vertebrae.

A healthy spine is S-shaped when viewed from the side. It curves back at the shoulders and inward at the neck and small of the back. It houses and protects your spinal cord, the network of nerves that transmit feeling and control movement throughout your entire body.

What Causes Back Pain?

Injuries from contact sports, accidents, and falls can cause problems ranging from minor muscle strains, to herniated discs, to [fractures](#) that cause severe damage to the spinal column or cord.

Also, we often bring on our back problems through bad habits, such as:

- Poor posture
- Overexerting yourself at work or while playing
- Sitting incorrectly at the desk or at the steering wheel
- Pushing, pulling, and lifting things carelessly

Sometimes you feel the effects right away. But in many cases, back problems develop over time.

One of the more common [types of back pain](#) comes from straining the bands of muscles surrounding [the spine](#). Although such strains can occur anywhere along the spine, they happen most often in the curve of the lower back. The next most common place is at the base of the neck.

Sometimes your back might ache for no clear reason. That's called nonspecific backache. It may be caused by weakened muscles that can't handle everyday walking, bending, and [stretching](#). In other cases, [back pain](#) may come from an injury involving pulling or twisting or some kind of overuse or repetitive damage.

[Pregnancy](#) commonly brings on [back pain](#), too. Hormonal changes and [weight](#) gain put new kinds of stresses on a pregnant woman's spine and legs.

Spine-Related Problems

[Back pain](#) often happens because something is off in the way your spinal joints, muscles, discs, and nerves fit together and move. Your doctor can check to see if you have:

- **Herniated or slipped discs:** If your doctor mentions this, the soft tissue in the discs between your joints has come out. It's usually caused by wear and tear. Herniated discs can [cause pain](#) in your lower back or hip because the nerves there are pressed.
- **Bulging discs:** These protrude, or "bulge," but not as much as with a [herniated disc](#). You don't usually have symptoms with this. You'll feel it if it pushes on a nerve root, though.
- **Degenerative disc disease:** The discs, or "shock absorbers" between your spine's vertebrae, shrink or tear. That causes the bones to rub together. This may happen as you get older.
- **Inflammation and wear of the [sacroiliac joint](#):** This lies where your spine and pelvis come together. It doesn't move much, but it's important because it moves the load of the upper body to the lower body. Swelling and wearing away of the joint cartilage can happen after an injury, because of [arthritis](#), infection, or even [pregnancy](#).
- **Spinal stenosis :** If you have this, your spinal canal has narrowed. That adds pressure on your spine and nerves. As a result, your legs and shoulders probably feel numb. This happens to many people older than 60.
- **Cervical radiculopathy :** This is a [pinched nerve](#). It's usually caused by a [bone spur](#) or a herniated disc.
- **Spondylolisthesis:** A bone in [the spine](#) slips forward and out of place, typically in the lower back. The degenerative form of this condition is [arthritis](#), which weakens the joints and ligaments keeping [the spine](#) aligned. It can cause a disc to move forward over a vertebra.
- Accidents and Injuries
- Car accidents, falls, muscle sprains, strains, and [fractures](#) are also [causes of back pain](#). Injuries can lead to some of the physical problems, but some can cause pain all on their own.
- **Spine or vertebral fractures:** A break to your spine can be caused by a hit to the back, a fall, or if you have [osteoporosis](#), a condition that weakens your bones.
- **Sprains and strains:** Injuries to ligaments, muscles, and tendons that support the spine and its joints can lead to back pain. This often happens when you lift something and twist at the same time. It can also happen because of car accidents and [sports injuries](#).
- **Spasms:** You can get these when muscles and tendons are torn in your lower back. They usually happen when you're weightlifting or playing sports.

Lifestyle Triggers

Back pain can be brought on by things you do -- or don't do -- in your day-to-day life, like:

- Slouching at your desk
- Lifting heavy objects
- Being [overweight](#)
- Not [exercising](#)
- [Smoking](#)
- Wearing high heels

Other Causes

Back pain can also be caused by medical conditions like:

- **Arthritis:** This is a joint disease that causes stiffness, swelling, and [inflammation](#).
- **Osteoarthritis** : This degenerative joint disease happens when your cartilage and bones break down. This most often affects people from middle age onward.
- **Ankylosing spondylitis** : This is a type of arthritis that affects your joints and ligaments along the spine.
- **Scoliosis, or curvature of the spine:** This is usually something you have from birth. If there's pain, it typically starts in mid-life.
- **Pregnancy:** The [weight](#) you gain when you're expecting can strain your back.
- **Tumors:** In rare cases you can get them in your back. They're usually spread by a [cancer](#) that started somewhere else in your body.

CERVICAL SPINE:

Cervical Disc Surgery: Disc Replacement of Fusion?

Cervical disc disease is caused by an abnormality in one or more discs -- the cushions -- that lie between the neck bones (vertebrae). When a disc is damaged -- due to [arthritis](#) or an unknown cause -- it can lead to [neck pain](#) from [inflammation](#) or [muscle spasm](#). In severe cases, pain and numbness can occur in the arms from pressure on the cervical nerve roots.

Surgery for cervical disc disease typically involves removing the disc that is pinching the nerve or pressing on the spinal cord. This surgery is called a **discectomy**. Depending on where the disc is located, the surgeon can remove it through a small incision either in the front (anterior discectomy) or back (posterior discectomy) of the neck while you are under anesthesia. A similar technique, **microdiscectomy**, removes the disc through a smaller incision using a microscope or other magnifying device.

To close the space that's left when the disc is removed and restore [the spine](#) to its original height, patients have two options:

- Artificial cervical disc replacement
- Cervical fusion

In 2007, the FDA approved the first artificial disc, the Prestige Cervical disc, which looks and moves much like the real thing but is made of metal. Since then, several artificial cervical discs have been developed and approved. Ongoing research has shown that the artificial disc can improve neck and arm pain as safely and effectively as cervical fusion while allowing for range of motion that is as good or better than with cervical fusion. People who get the artificial disc are often able to return to work more quickly as well. The surgery to replace the disc, however, does take longer and can lead to more [blood](#) loss than with cervical fusion. It's also not known how the artificial discs will last over time. People who get an artificial disc can always opt for cervical fusion later. But if a patient has cervical fusion first, it's not possible to later put an artificial disc in the same spot.

Not everyone is a candidate for the artificial disc, however. Those with [osteoporosis](#), joint disease, infection, [inflammation](#) at the site, or an [allergy](#) to stainless steel may not be candidates for disc replacement surgery.

With **cervical fusion** surgery, the surgeon removes the damaged disc and places a bone graft (which is taken either from the patient's hip or from a cadaver) in the space between the vertebrae. The bone graft will eventually fuse to the vertebrae above and below it. A metal plate may be screwed into the vertebrae above and below the graft to hold the bone in place while it heals and fuses with the vertebrae. Discectomy with cervical fusion can often help relieve the pain of spinal disc disease. The only caveat is that after the surgery, many people find that they lose some degree of movement in their neck.

Risks of Cervical Disc Surgeries

Although cervical disc surgery is generally safe, it does have a few risks, including:

- Infection
- Excessive bleeding
- Reaction to anesthesia
- Chronic neck pain
- Damage to the nerves, spinal cord, [esophagus](#), or vocal cords
- Failure to heal

Recovering From Cervical Disc Surgery

You'll likely be able to get up and move around within a few hours of your cervical disc surgery and then either go home from the hospital the same day or the following morning. You'll feel some pain in the area operated on, but it should ease over time.

The fusion can take anywhere from three months to a year to become solid after surgery, and you could still have some symptoms during that time. Your doctor might recommend that you wear a cervical collar to support your neck for the first four to six weeks. You may help speed the process by eating a [healthy diet](#), getting regular [exercise](#), and practicing good posture. Check with your surgeon to see what activity level is right for you before starting any [exercise](#) after surgery.

LUMBAR SPINE: [What Is Spinal Stenosis?](#)

[Spinal stenosis](#) is a condition, mostly in adults 50 and older, in which your spinal canal starts to narrow. This can [cause pain](#) and other problems.

Your [spine](#) is made up of a series of connected bones (or “vertebrae”) and shock-absorbing discs. It protects your spinal cord, a key part of the central nervous system that connects the [brain](#) to the body. The cord rests in the canal formed by your vertebrae.

For most people, the stenosis results from changes because of [arthritis](#). The spinal canal may narrow. The open spaces between the vertebrae may start to get smaller. The tightness can pinch the spinal cord or the nerves around it, causing [pain](#), tingling, or numbness in your legs, arms, or torso.

There’s no cure, but there are a variety of nonsurgical treatments and exercises to keep the pain at bay. Most people with spinal stenosis live normal lives.

Causes

The leading reason for spinal stenosis is arthritis, a condition caused by the breakdown of cartilage -- the cushiony material between your bones -- and the growth of bone tissue.

[Osteoarthritis](#) can lead to disc changes, a thickening of the ligaments of the [spine](#), and [bone spurs](#). This can put pressure on your spinal cord and spinal nerves.

Other causes include:

- **Herniated discs.** If the cushions are cracked, material can seep out and press on your spinal cord or nerves.
- **Injuries.** An accident may fracture or inflame part of your spine.
- **Tumors.** If cancerous growths touch the spinal cord, you may get stenosis.
- **Paget’s disease.** With this condition, your bones grow abnormally large and brittle. The result is a narrowing of the spinal canal and nerve problems.

- Some people are born with spinal stenosis or diseases that lead to it. For them, the condition usually starts to cause problems between the ages of 30 and 50.

Symptoms

Spinal stenosis usually affects your neck or lower back. Not everyone has symptoms, but if you do, they tend to be the same: stiffness, numbness, and [back pain](#).

More specific symptoms include:

- **Sciatica.** These shooting pains down your leg start as an ache in the lower back or buttocks.
- **Foot drop.** Painful leg weakness may cause you to “slap” your [foot](#) on the ground.
- **A hard time standing or walking.** When you’re upright, it tends to compress the vertebrae, causing pain.
- **Loss of bladder or bowel control.** In extreme cases, it weakens the nerves to the bladder or bowel.
- If you’re having symptoms, you might want to talk them over with your doctor. If you’re having a loss of bladder or bowel control, call your doctor at once.

Treatment

Your doctor may start off with nonsurgical treatments. These might include:

- **Medication:** Common pain remedies such as [aspirin](#), [acetaminophen \(Tylenol\)](#), [ibuprofen \(Advil, Motrin\)](#), and [naproxen](#) can offer short-term relief. All are available in low doses without a prescription. Other medications, including muscle relaxants and anti-[seizure](#) medications, treat aspects of spinal stenosis, such as [muscle spasms](#) and damaged nerves.
- **Corticosteroid injections:** Your doctor will inject a [steroid](#) such as [prednisone](#) into your back or neck. Steroids make [inflammation](#) go down. However, because of side effects, they are used sparingly.
- **Anesthetics:** Used with precision, an injection of a “nerve block” can stop pain for a time.
- **Exercise:** You can improve your flexibility, strength, and balance with regular activity. Your doctor may recommend a physical therapist to help you.
- **Assistive devices:** You might get [braces](#), a corset, or a walker to help you move about.

Surgery

Some people have severe cases. They struggle to walk or have issues with their bladder and bowel. Doctors may recommend surgery for these people. Procedures such as [laminectomy](#) and laminoplasty create space between the bones so [inflammation](#) can go down.

Surgery carries its own risks. You should have a talk with your doctor about how much it can help, recovery time, and more before taking that step.

Many patients also try nontraditional therapies, including [chiropractic](#) and [acupuncture](#). Again, be sure your doctor knows if you're trying a nontraditional approach.