How Spondylolisthesis Can Cause Back Pain

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What is Spondylolisthesis?

Most people who complain of back pain never go to their doctor right away. They self-medicate by trying massage, taking over-the-counter painkillers and even changing their mattresses. But not all back pains are created equal. While sometimes these remedies may work, some cases of back pain are more severe, with causes varying from heart problems to spinal abnormalities, like spondylolisthesis. What is spondylolisthesis?

Derived from the Greek words “spondylo” (spine) and “listhesis” (to slide down and incline), spondylolisthesis occurs when a vertebra (usually in the lumbar area) slips forward or backward, resulting in mild to severe pain in the back and legs.

Approximately 4% to 6% of the American population suffer from spondylolisthesis. Majority of the cases involve the lumbar spine (lower back), but it also may occur in the neck and mid to upper back.

People with spondylolisthesis often have decreased quality of life because they can no longer withstand prolonged walking or standing.

If you or a loved one is suffering from persistent back pain, this guide will help you confirm if it is caused by spondylolisthesis as well as recommend available treatment options.

What Causes Spondylolisthesis?

Spondylolisthesis is caused by either the natural wear and tear of the structures supporting the vertebrae (degenerative) or by a stress fracture affecting the lumbar spine (spondylolytic).

Degenerative spondylolisthesis commonly affects women older than 50 years old. As we age, the disks that serve as a shock absorber between vertebrae tend to shrink and bulge. This is aggravated by the weakening of the ligament (ligamentum flavum) that keeps the vertebrae together. As a result, one of the vertebrae on either side of the disk slips forward over the vertebra below it. This slippage usually occurs at one of two levels of the lumbar spine (L3 to L4 and L4 to L5) and leads to narrowing of the spinal canal (spinal stenosis). Stenosis can put pressure on the spinal cord, which explains why people with degenerative spondylolisthesis report of having back pain and leg discomfort.

Spondylolytic spondylolisthesis, meanwhile, is often attributed to a stress fracture in the lumbar area that can occur as early as adolescence. For lack of symptoms, the fracture is often taken for granted.

The injury usually occurs in an area of the lumbar vertebrae called pars interarticularis. When only a fracture exists, the condition is called spondylolysis. However, as the damage progress well into adulthood, one of the vertebrae starts slipping forward, after which the person begins to report symptoms typical of spondylolisthesis.

Spondylolytic spondylolisthesis is more common among middle-aged men. The slippage typically occurs between L5 and S1 or in the anterior and inferior sloping of the L5-S1 junction.

How Does Spondylolisthesis Lead to Back Pain?

Patients with spondylolisthesis only visit their doctors once the slipped vertebra starts pressing on spinal nerves. The compression is manifested by low back pain as well as numbness and tingling sensation that radiate to the legs.

The symptoms are relieved by bending forward or sitting forward, during which the spinal canal opens up. On the other hand, the pain worsens when the person walks or stands.

In severe cases, visible changes in the person's posture may occur. Kyphosis or excessive outward curvature of the spine, a condition also known as hunchback, occurs when spondylolisthesis is left untreated.

Those with spondylolytic spondylolisthesis may report of similar pain or no symptoms at all. X-rays may show a fracture they are not aware of. If the pain does occur, it is usually in the back and legs associated with prolonged standing or walking.

When Should You See a Doctor?

A visit to your doctor is recommended if:

- The pain in your back, thighs and buttocks has become persistent and stopped responding to typical remedies.
- The back starts showing excessive outward curvature.

To confirm the diagnosis, the physician will check your medical history and perform a series of physical examinations.

You may be requested to lie down on the examination table as the doctor lifts your legs or pushes different areas of your back and legs. Patients with spondylolisthesis often find these simple movements painful.

Since the symptoms of spondylolisthesis are similar to spinal stenosis, the doctor may also request imaging procedures, like x-rays, a CT scan and an MRI to confirm the diagnosis.

X-rays can show the presence of slippage as well as other abnormalities, such as bone spurs. CT scans provide cross-section images of your spine while an MRI gives more detailed images of the muscles, nerves, disks and the spinal cord to assess the extent of the condition.

What Are the Treatment Options for People With Spondylolisthesis?

Non-surgical methods are recommended for people who experience pain but can still perform daily activities. These may include one or all of the following:

- **Physiotherapy:** involves strengthening and stretching exercises that aim to improve the range of motion of the back and hamstrings.
- **Medications:** analgesics and non-steroidal anti-inflammatory drugs (NSAIDs) can relieve pain if taken regularly.
- **Back braces:** these prevent the spine from developing excessive outward curvature. However, some doctors don't recommend using it all the time due to reports that it may lead to weaker spine.
- **Steroid injections:** these are performed around the nerves not more than three times per year. Although it relieves pain and numbness, it doesn't offer therapeutic effect to relieve leg weakness.

If the above treatments prove to be ineffective, surgery is considered.

Patients who are potential candidates for surgery are those who can no longer walk, stand, or perform daily tasks due to extreme pain. Those who don't have improved symptoms after at least six months of non-surgical treatments are also offered this option.

The surgery is performed under general anesthesia. Depending on the severity of the condition, the surgeon would open up the spinal canal (laminectomy). They may or may not remove the intervertebral disc and fuse the affected vertebrae together using screws, rods, or a piece of your own bone (spinal fusion).

Recovery from the procedure may take one week within the hospital and a few more months in your home where the activities you can perform are limited.

The Takeaway

Spondylolisthesis may invoke fear among the patients and their families. However, the symptoms can easily be managed through non-surgical treatments. In case these don’t work, surgery may be recommended.

Before you decide to put yourself under the knife, you have to know the potential risks of the procedure, as well as the recovery period you need to go through afterward.

Possible surgical complications may include:

- Deep vein thrombosis as a result of a blood clot in the legs.
- Infection of the surgical wounds.
- Damage of the spinal cord or nerves resulting in paralysis or loss of bowel and bladder control.

Due to these possible post-op complications, it is essential to discuss and weigh all your options with the doctor thoroughly. There’s nothing worse than going through a surgery to relieve the symptoms only to come out of the operating room in worse condition than before.