Lumbar Spondylolisthesis

What is Lumbar Spondylolisthesis?

Normally, the bones of the spine (the vertebrae) are neatly stacked on top of one another. Ligaments and joints support the spine. Spondylolisthesis alters the alignment of the spine. In this condition, one of the spine bones slips forward over the one below it. As the bone slips forward, the nearby tissues and nerves become irritated and painful.

What does the condition feel like?

An ache in the low back and buttock areas is the most common complaint in patients with spondylolisthesis. Pain is usually worse when bending backward and may be relieved by bending the spine forward.

Spasm is also common in the low back muscles. The pain can be induced due to mechanical causes. Mechanical pain is caused by wear and tear on the parts of the spine. When the vertebra slips forward, it puts a painful strain on the disc and facet joints.

Slippage can also cause nerve compression. Nerve compression is a result of pressure on a nerve causing symptoms that include numbness, tingling, slowed reflexes, and muscle weakness in the lower body.

How do doctors diagnose the problem?

Diagnosis begins with a complete history and physical exam. The doctor will ask questions about the symptoms and the problem is affecting the daily activities. The doctor will also want to know what positions or activities make the symptoms worse or better.
Next the doctor performs a medical examination and checks the posture and the amount of movement in the low back. The doctor carefully observes which back movements cause pain or other symptoms. Skin sensation, muscle strength, and reflexes are also tested.

Doctors will usually order X-rays of the low back. The X-rays are taken to see which vertebra is slipping and how far it has slipped.

If more information is needed, the doctor may order a CT scan. This is a detailed X-ray that lets the doctor see slices of the body's tissue.

The doctor may also require a magnetic resonance imaging (MRI) scan. The MRI machine uses magnetic waves rather than X-rays to show the soft tissues of the body. It can help in the diagnosis of spondylolisthesis. It can also provide information about the health of nerves and other soft tissues.

**What treatment options are available?**

- **Nonsurgical Treatment**

  When the vertebra hasn't slipped very far, doctors begin by prescribing nonsurgical treatments. In some cases, the patient's condition is simply monitored to see if symptoms improve.

  Medications may be prescribed to help ease pain and muscle spasm.

  The doctor may ask the patient to you rest his/her back by limiting their activities. This is to help decrease inflammation and calm muscle spasm. The patient may need to stop sports for a while as well as other strenuous activities in order to speed up the healing process.

  If the symptoms persist after a period of rest, the doctor may ask the patient to wear a rigid back brace or cast for two to three months. Keeping the spine from moving can help ease pain and inflammation.

  Some patients who continue to have symptoms are given an epidural steroid injection treatment (ESI). Steroids are powerful anti-inflammatories, meaning they reduce pain and swelling.

- **Surgery**

  Surgery is used when the slip is severe and when the symptoms are not relieved with nonsurgical treatments. The main types of surgery for spondylolisthesis include:

  - Laminectomy
  - Posterior fusion with instrumentation
Posterior lumbar inter-body fusion

What to expect from recovery?

- **Nonsurgical Rehabilitation**

  Nonsurgical treatment for spondylolisthesis commonly requires physical therapy. The doctor may recommend sessions with a physical therapist a few times each week for four to six weeks. In some cases, patients may need a few additional weeks of care.

  The first goal of treatment is to control symptoms. The therapist works with the patient to determine positions and movements that ease pain. Treatments of heat, cold, ultrasound, and electrical stimulation may be used to calm pain and muscle spasm.

  As patients recover, they gradually advance in a series of strengthening exercises for the abdominal and low back muscles.

- **After Surgery**

  Rehabilitation after surgery is more complex. Patients who have surgery for spondylolisthesis usually stay in the hospital for a few days afterward.

  Some surgeons require patients to wear a rigid brace or cast for up to four months after fusion surgery for spondylolisthesis.

  After lumbar fusion surgery for spondylolisthesis, patients must normally wait four months before beginning a rehabilitation program. This delay is needed to give the fusion a chance to start healing. Patients typically need to attend therapy sessions for six to eight weeks and should expect full recovery to take at least 12 months.

  Ideally, patients are able to return to their previous activities. However, some patients may need to modify or stop certain activities to avoid future problems.