

FACT SHEET

Spondylolisthesis

What Is it?

- Occurs when the vertebrae's support system fails and one vertebrae slips forward out of alignment and remains out of position.
- It most commonly occurs between the fifth lumbar vertebrae and the sacrum, and occasionally between the fourth and fifth lumbar vertebrae.
- There are two common types of spondylolisthesis: isthmic and degenerative.
- Isthmic spondylolisthesis is related to the presence of spondylolysis (break or fracture in the arch in the posterior segment of the vertebra) and it occurs in the immature spine.
- Degenerative spondylolisthesis occurs in older individuals with degenerative changes, usually at the fourth or fifth lumbar vertebrae.
- Fracture, tumour and infection are rare causes.
- A change in position of the vertebrae may cause irritation to the nerve roots. The irritation can result in pain and weakness. The symptom pattern is similar to lumbar disc disease and sciatica, as both problems can be caused by spondylolisthesis.
- Spondylolisthesis can be an asymptomatic incidental finding on x-ray, or it can be symptomatic (painful). Why it becomes painful, at times has not been established.
- Spondylolisthesis is rarely work related except for high velocity trauma

How Is It Diagnosed?

History:

- The individual may note pain in the back, hip, and leg.
- Weakness of the leg, with a sense of dragging the leg or foot, may be present.
- The individual may be noticeably "sway-backed" (lordosis).
- Individuals may not be able to walk normally and stumble or drag their feet.
- Pain is aggravated with sitting and standing, while relieved with bed rest and bending over (flexion of the back).
- Leaning backward (back extension) increases the pain.
- If the injury is acute, the symptoms may be dramatic in onset.

What to look for:

- Decreased sensation and tendon reflexes with weakness of the lower leg muscles may be present.
- Palpation of the spine may reveal a "step off" or an abnormal space between the two vertebrae.
- Limited range of motion of the spine is often present.
- Extension of the spine (bending backwards) aggravates the symptoms.

What is the Expected Return to Work Time?

Medical Treatment	Surgical Treatment. Fusion, spinal. Individuals recovering from surgery may not be able to return to work for months or may be permanently disabled for some occupations.
Job Classification.....RTW Minimum – Maximum Sedentary Work.....0 days – 14 days Light Work.....0 days – 21 days Medium Work.....0 days – 42 days Heavy Work.....0 days – 63 days Very Heavy Work.....0 days – 91 days	Job Classification.....RTW Minimum – Maximum Sedentary Work.....42 days – 84 days (calendar days) Light Work.....56 days – 84 days Medium Work.....70 days – 112 days Heavy Work.....84 days – Indefinite Very Heavy Work.....84 days – Indefinite

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- Waddling gait may be present.
- “tight” hamstring muscles (limited excursion) are usually present.

Tests:

- Lumbar spine films taken in lateral view.
- Oblique views taken from both sides, to define the bony defect.
- X-rays with the back flexed and extended, to look for slipping with spine motion (which is rare).
- CT scan and/or MRI are used to evaluate the disc, spinal cord, nerve roots and the vertebra.
- EMG and nerve conduction studies are used to check nerve function.

How is it Treated?

With chronic conditions that cause intermittent symptoms:

- Abdominal muscle strengthening to support the spine.
- Education in body mechanics.
- Medication for pain.
- Support corset or brace.

With progressive nerve damage:

- Surgery may be required, directed at stabilizing and supporting the spine (spine fusion) to prevent further slippage of the vertebrae and removing (debridement) inflamed tissue away from the nerves.
- Physical therapy and rehabilitation is extensive in these cases.

What is the Predicted Outcome?

Individuals with progressive degenerative changes will continue to have intermittent symptoms. Surgery can be curative, but some individuals may gain only partial or intermittent relief. Individuals who have sustained an acute fracture with minimal slippage may completely recover when the fracture heals.

What are the Work Restrictions and Accommodations?

- Elimination of: overhead work that involves hyperextension of the back; unassisted heaving lifting; repetitive bending; pushing heavy objects.
- Some individuals may not be able to perform activities that require twisting at the waist.
- May require use of rigid corset (orthotic) to limit motion of spine.

What Are the Common Prescriptions?

- Anti-inflammatories
- Analgesics
- Possibly narcotics in the first 1-2 weeks post surgery.

*“A safe and timely return to work benefits the patient and his or her family by enhancing recovery and reducing disability.”
Canadian Medical Association*