

Spondylolisthesis Overview - Bombay Spine Clinic

- Spondylolisthesis

What Is It?

- Spondylolisthesis is a condition in which one vertebra (spinal bone) slips forward over the vertebra below it. This can lead to instability of the spine and may cause compression of nearby nerves, resulting in back pain, leg pain or neurological symptoms.
- The condition most commonly affects the lower back (lumbar spine), particularly at the L4-L5 and L5-S1 levels. Spondylolisthesis may occur due to age-related degeneration, stress fractures, congenital abnormalities or previous spinal injuries.
- Not all patients with spondylolisthesis develop symptoms, and many cases are discovered incidentally during imaging studies.
- Common Symptoms
 - Patients may experience:
 - Low back pain
 - Stiffness in the lower back
 - Pain that worsens with standing or walking
 - Pain radiating into one or both legs
 - Sciatica-like symptoms
 - Tingling or numbness in the legs
 - Weakness in the legs
 - Tight hamstring muscles
 - Difficulty standing for prolonged periods
 - In severe cases:
 - Reduced walking distance
 - Balance problems
 - Progressive neurological symptoms

Causes & Risk Factors

- Spondylolisthesis can occur due to several reasons:
 - Degenerative Spondylolisthesis
 - The most common type, occurring due to age-related wear and tear of the spine.
 - Isthmic Spondylolisthesis

- Caused by a defect or stress fracture in a part of the vertebra known as the pars interarticularis.
- Congenital Spondylolisthesis
- Present from birth due to abnormal spinal development.
- Traumatic Spondylolisthesis
- Occurs following spinal injury.
- Pathological Spondylolisthesis
- Occurs due to infection, tumors or other diseases affecting the spine.
- Risk factors include:
 - Increasing age
 - Repetitive spinal loading
 - Certain sports involving hyperextension of the spine
 - Obesity
 - Family history
 - Degenerative spinal disease
- When Should You Seek Medical Advice?
- Medical evaluation is recommended if:
 - Back pain persists despite treatment
 - Leg pain develops
 - Numbness or tingling occurs
 - Walking becomes difficult

Symptoms progressively worsen

- Daily activities become affected
- Seek Immediate Medical Attention If:
 - Progressive weakness develops
 - Walking becomes significantly impaired
 - Bladder or bowel symptoms occur
 - Severe neurological symptoms develop
- How Is It Diagnosed?
- Clinical Examination
 - A detailed examination helps assess spinal stability, nerve involvement and functional limitations.
- X-Ray
 - X-rays are particularly useful for diagnosing spondylolisthesis and determining the degree of vertebral slippage.
 - Dynamic flexion-extension X-rays may be performed to assess spinal instability.
- MRI
 - MRI helps evaluate:
 - Nerve compression

- Disc degeneration
- Lumbar canal stenosis
- Associated soft tissue abnormalities
- CT Scan
- CT provides detailed information about bony anatomy and is especially useful in isthmic spondylolisthesis.
- Blood Tests
- Generally not required unless infection or inflammatory disease is suspected.

Treatment Options

- Non-Surgical Treatment
- Many patients can be managed successfully without surgery.

Treatment may include:

- Activity modification
- Physiotherapy
- Core strengthening exercises
- Posture correction
- Weight management
- Medications
- Lifestyle modifications
- The goal is to improve spinal stability, reduce symptoms and maintain function.
- Surgical Treatment
- Surgery may be considered when:

Symptoms persist despite adequate conservative treatment

- Significant nerve compression is present
- Progressive neurological deficits develop
- Spinal instability is demonstrated
- Quality of life becomes significantly affected
- Common surgical procedures include:
- Decompression Surgery
- Minimally Invasive Spine Surgery
- Instrumented Spinal Stabilization (Fusion Surgery)
- Decompression with Fusion
- The choice of procedure depends on the degree of slippage, instability and nerve compression.

Frequently Asked Questions

- 1. What does Spondylolisthesis mean?
- It means that one spinal bone has slipped forward over the bone below it.
- 2. Is Spondylolisthesis serious?
- Many patients have mild spondylolisthesis without symptoms. However, significant slippage can cause pain, instability and nerve compression.
- 3. Can Spondylolisthesis cause Sciatica?
- Yes. Compression of spinal nerves may result in leg pain, numbness or weakness.
- 4. Does every patient need surgery?
- No. Many patients improve with physiotherapy, exercise and other conservative treatments.
- 5. Can exercise help?
- Yes. Core strengthening and supervised rehabilitation are often beneficial.
- 6. What is spinal instability?
- It refers to abnormal movement between spinal segments that may contribute to pain or nerve compression.
- 7. Can Spondylolisthesis worsen over time?
- Some cases may progress, particularly if instability is present.
- 8. Is walking safe?
- In most cases, walking is encouraged and forms an important part of rehabilitation.
- 9. Can minimally invasive surgery be performed?
- Yes. Many patients may be candidates for minimally invasive stabilization procedures depending on their condition.
- 10. How is Spondylolisthesis different from a Slip Disc?
- A slip disc involves disc herniation, whereas spondylolisthesis involves forward slippage of one vertebra over another.
- Related Conditions
- Lumbar Canal Stenosis
- Sciatica
- Slip Disc (Disc Herniation)
- Mechanical Low Back Pain (Lumbago)
- Spinal Fracture
- Osteoporosis
- When Should You Consult a Spine Specialist?
- If you have persistent back pain, leg symptoms, walking difficulties or concerns regarding spinal instability, a consultation with a spine specialist can help establish the diagnosis and determine the most appropriate treatment plan.
- Early evaluation is particularly important when neurological symptoms or progressive weakness develop.
- Need Expert Advice?
- Book a consultation with Dr. Siddharth Katkade or upload your MRI/report for review through our Patient Resource Centre.

Need Clinical Evaluation or Second Opinion?

This educational document was prepared by **Dr. Siddharth Katkade**. For appointments or to share MRI scan reports for clinical review, call **+91 88507 73095** or consult at Byculla (E) / Khar (W) clinics.