

Spinal Fracture Overview - Bombay Spine Clinic

- Spinal Fracture

What Is It?

- A Spinal Fracture refers to a break or collapse of one or more vertebrae (spinal bones). Spinal fractures can occur due to trauma such as falls, road traffic accidents and sports injuries, or due to weakened bones from conditions like osteoporosis, infections or tumors.
- The severity of a spinal fracture can range from a minor stable fracture requiring conservative treatment to a complex injury causing spinal instability and neurological deficits.
- Prompt diagnosis is important because some spinal fractures may lead to deformity, chronic pain or spinal cord and nerve injury if left untreated.
- Common Symptoms

Symptoms vary depending on the location and severity of the fracture.

- Pain Symptoms
 - Sudden onset back pain
 - Neck pain following injury
 - Severe localized pain
 - Pain worsened by movement
 - Difficulty standing or walking
 - Pain while changing position
- Physical Signs
 - Tenderness over the spine
 - Muscle spasm
 - Visible spinal deformity
 - Height loss (in osteoporotic fractures)
- Neurological Symptoms
 - If nerves or the spinal cord are affected:
 - Tingling or numbness
 - Weakness in the arms or legs
 - Difficulty walking
 - Loss of balance
 - Bladder or bowel dysfunction

Causes & Risk Factors

- Traumatic Fractures
- Common causes include:
- Falls from height
- Road traffic accidents
- Sports injuries
- Direct impact injuries
- Osteoporotic Fractures
- Common in elderly individuals, particularly postmenopausal women.
- Even minor activities such as:
- Bending
- Lifting light objects
- Coughing
- may occasionally cause vertebral compression fractures.
- Pathological Fractures
- May occur due to:
- Spinal tumors
- Metastatic cancer
- Spinal infections
- Tuberculosis
- Metabolic bone disorders
- Risk factors include:
- Osteoporosis
- Advanced age
- Vitamin D deficiency
- Previous fractures
- Long-term steroid use
- High-energy trauma
- When Should You Seek Medical Advice?
- Medical evaluation is recommended if:
- Severe back or neck pain develops after an injury
- Pain persists despite rest
- Height loss is noticed
- Spinal deformity develops
- Pain significantly limits mobility
- Seek Immediate Medical Attention If:
- Weakness develops in the arms or legs

- Numbness occurs
- Walking becomes difficult
- Loss of bladder or bowel control develops
- Significant trauma has occurred
- These symptoms may indicate spinal cord or nerve injury and require urgent assessment.
- How Is It Diagnosed?
- Clinical Examination
- Your doctor will assess:
- Pain location
- Spinal alignment
- Neurological function
- Signs of instability
- X-Ray
- Often the first investigation performed.
- It helps identify:
- Vertebral collapse
- Compression fractures
- Alignment abnormalities
- MRI
- MRI is particularly useful for:
- Determining fracture age
- Assessing spinal cord compression
- Evaluating ligament injuries
- Detecting infection or tumors
- CT Scan
- CT provides detailed information about:
- Fracture pattern
- Bone anatomy
- Spinal stability
- It is often essential for surgical planning.
- Bone Density (DEXA Scan)
- May be recommended when osteoporosis is suspected.
- Blood Tests
- May be performed to evaluate:
- Infection
- Osteoporosis
- Metabolic disorders

- Tumors

Treatment Options

- Non-Surgical Treatment
- Many stable spinal fractures can be managed without surgery.

Treatment may include:

- Activity modification
- Pain management
- Bracing
- Physiotherapy
- Osteoporosis treatment
- Gradual rehabilitation
- The goal is to allow healing while maintaining spinal alignment and function.
- Surgical Treatment
- Surgery may be considered when:
 - Spinal instability is present
 - Significant deformity develops
 - Neurological compression occurs
 - Severe pain persists
 - Fractures involve multiple spinal columns
- Common procedures include:
 - Vertebroplasty
 - Injection of bone cement into the fractured vertebra.
 - Kyphoplasty
 - Balloon-assisted restoration of vertebral height followed by cement stabilization.
- Spinal Stabilization Surgery
 - Use of screws and rods to restore stability.
- Decompression Surgery
 - Performed when nerve or spinal cord compression is present.
- The choice of treatment depends on fracture type, stability and neurological status.

Frequently Asked Questions

- 1. What is a spinal fracture?
- A spinal fracture is a break or collapse of one or more vertebrae.
- 2. Can osteoporosis cause spinal fractures?
- Yes. Osteoporosis is one of the most common causes of vertebral compression fractures.

- 3. Are all spinal fractures serious?
- No. Some fractures are stable and heal without surgery, while others may require urgent intervention.
- 4. Can I walk with a spinal fracture?
- Some patients can walk, especially with stable fractures. However, evaluation is necessary to determine safety.
- 5. What is a compression fracture?
- A compression fracture occurs when the vertebral body collapses, often due to osteoporosis.
- 6. Do all spinal fractures require surgery?
- No. Many fractures can be managed successfully with conservative treatment.
- 7. What is Kyphoplasty?
- Kyphoplasty is a minimally invasive procedure used to stabilize certain vertebral compression fractures.
- 8. How long does recovery take?

Recovery varies depending on fracture severity, patient age and underlying bone health.

- 9. Can spinal fractures cause paralysis?
- Severe fractures involving spinal cord injury may lead to neurological deficits, including paralysis.
- 10. How can spinal fractures be prevented?
- Maintaining bone health through adequate calcium, vitamin D, exercise and osteoporosis treatment can significantly reduce fracture risk.
- Related Conditions
 - Osteoporosis
 - Kyphosis
 - Spinal Tumor
 - Spinal Tuberculosis
 - Spinal Infection
 - Lumbar Canal Stenosis
- When Should You Consult a Spine Specialist?
- If you develop severe back or neck pain following an injury, experience a sudden loss of height, have osteoporosis-related fractures or develop neurological symptoms, prompt evaluation by a spine specialist is recommended.
- Early diagnosis and appropriate treatment can help prevent deformity, neurological complications and long-term disability.
- Need Expert Advice?
- Book a consultation with Dr. Siddharth Katkade or upload your X-rays, CT scan or MRI 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.

