

Spinal Infection Overview - Bombay Spine Clinic

- Spinal Infection

What Is It?

- A Spinal Infection is an infection involving the bones (vertebrae), intervertebral discs or surrounding tissues of the spine. These infections may be caused by bacteria, fungi or, less commonly, other microorganisms.
- Depending on the location of infection, spinal infections may be referred to as:
 - Spondylitis (infection of the vertebrae)
 - Discitis (infection of the intervertebral disc)
 - Spondylodiscitis (infection involving both the vertebrae and disc)
 - Epidural Abscess (collection of pus around the spinal cord)
- Although relatively uncommon, spinal infections are potentially serious conditions that require prompt diagnosis and treatment to prevent spinal instability, deformity and neurological complications.
- Common Symptoms

Symptoms may develop gradually or, occasionally, quite rapidly.

- Pain Symptoms
 - Persistent back pain
 - Neck pain
 - Pain that progressively worsens
 - Pain at rest
 - Night pain
 - Severe localized spinal tenderness
- Constitutional Symptoms
 - Fever
 - Chills
 - Night sweats
 - Fatigue
 - Loss of appetite
 - Unexplained weight loss
- Spine-Related Symptoms
 - Difficulty walking

- Muscle spasm
- Reduced spinal mobility
- Difficulty standing upright
- Neurological Symptoms
- If nerve roots or the spinal cord become compressed:
- Tingling or numbness
- Weakness in the arms or legs
- Difficulty walking
- Gait imbalance
- Bladder or bowel dysfunction

Causes & Risk Factors

- Spinal infections occur when microorganisms reach the spine through the bloodstream, direct inoculation or spread from nearby tissues.
- Common Causes
- Bacterial Infections
- The most common cause of spinal infections.
- Common organisms include:
- Staphylococcus aureus
- Streptococcal species
- Gram-negative bacteria
- Fungal Infections
- Rare but may occur in immunocompromised individuals.
- Post-Surgical Infections
- May occur following spinal surgery or invasive spinal procedures.
- Risk Factors
- Diabetes mellitus
- Chronic kidney disease
- Cancer
- Immunosuppression
- Long-term steroid use
- Intravenous drug use
- Malnutrition
- Advanced age
- Recent surgery
- Existing infections elsewhere in the body
- When Should You Seek Medical Advice?
- Medical evaluation is recommended if:

- Persistent back pain is associated with fever
- Pain worsens despite treatment
- Night pain develops
- Weight loss occurs
- Difficulty walking develops
- Recent spinal surgery has been performed
- You have significant medical comorbidities
- Seek Immediate Medical Attention If:
- Weakness develops
- Walking becomes difficult
- Severe neurological symptoms occur
- Bladder or bowel symptoms develop
- Severe infection symptoms are present
- These may indicate spinal cord or nerve compression requiring urgent intervention.
- How Is It Diagnosed?
- Clinical Examination
- Your doctor will assess:
- Spinal tenderness
- Neurological function
- Signs of infection
- General medical condition
- X-Ray
- Early infections may not be visible.
- Advanced disease may show:
- Disc space narrowing
- Vertebral destruction
- Spinal instability
- MRI
- MRI is the most important imaging investigation.
- It helps identify:
- Disc infection
- Vertebral infection
- Epidural abscess
- Neural compression
- Extent of disease
- MRI is highly sensitive for early diagnosis.
- CT Scan

- Useful for:
- Detailed bone evaluation
- Image-guided biopsy planning
- Blood Tests
- Important investigations include:
- ESR
- CRP
- Complete blood count
- Blood cultures
- These tests help identify inflammation and infection.
- Biopsy & Culture
- A biopsy may be required to:
- Confirm infection
- Identify the causative organism
- Guide antibiotic treatment

Treatment Options

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

Treatment may include:

- Intravenous antibiotics
- Oral antibiotics
- Antifungal medications (when indicated)
- Pain management
- Nutritional support
- Physiotherapy
- Activity modification

Treatment duration is often prolonged and may continue for several weeks or months depending on the infection.

- Surgical Treatment
- Surgery may be required when:
- Significant neurological compression develops
- Epidural abscess is present
- Spinal instability occurs
- Progressive deformity develops

- Conservative treatment fails
- Tissue diagnosis is required
- Common surgical procedures include:
- Surgical Debridement
- Decompression Surgery
- Abscess Drainage
- Spinal Stabilization Surgery
- Biopsy Procedures
- The choice of surgery depends on the severity and location of infection.

Frequently Asked Questions

- 1. What is a Spinal Infection?
- A spinal infection involves infection of the vertebrae, discs or surrounding spinal tissues.
- 2. Is a Spinal Infection serious?
- Yes. Untreated infections may cause spinal instability, deformity and neurological complications.
- 3. What causes spinal infections?
- Most commonly bacteria, although fungal and other infections may also occur.
- 4. Can spinal infections occur after surgery?
- Yes. Post-operative spinal infections are uncommon but recognized complications.
- 5. Is fever always present?
- No. Some patients may have spinal infections without significant fever.
- 6. Why is MRI important?
- MRI helps detect infection early and assess its extent.
- 7. Will I need antibiotics?
- Most spinal infections require prolonged antibiotic therapy.
- 8. Can spinal infections cause paralysis?
- Severe infections causing spinal cord compression may result in neurological deficits if untreated.
- 9. Is surgery always necessary?
- No. Many patients respond well to appropriate medical treatment.
- 10. When should I suspect a spinal infection?
- Persistent back pain associated with fever, weight loss, elevated inflammatory markers or recent surgery should raise suspicion.
- Related Conditions
- Spinal Tuberculosis (TB Spine)
- Spinal Tumor
- Spinal Fracture
- Myelopathy
- Osteoporosis

- Kyphosis
- When Should You Consult a Spine Specialist?
- If you have persistent back pain associated with fever, unexplained weight loss, elevated infection markers, recent spinal surgery or neurological symptoms, early specialist evaluation is strongly recommended.
- Prompt diagnosis and treatment can prevent spinal deformity, instability and permanent neurological complications.
- Need Expert Advice?
- Book a consultation with Dr. Siddharth Katkade or upload your MRI, CT scan or reports 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.