BOMBAY SPINE CLINIC

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Spinal Trauma Surgery - Bombay Spine Clinic

- Fracture Fixation Surgery (Open / MIS)
- Surgery for Traumatic, Osteoporotic and Unstable Spinal Fractures

What Is This Surgery?

- Fracture Fixation Surgery is performed to stabilize fractured vertebrae and restore spinal alignment following trauma, osteoporosis, pathological fractures or spinal instability.
- Depending on the type and severity of the fracture, the procedure may be performed using:
- Open Spine Surgery
- Minimally Invasive Spine Surgery (MIS)
- Hybrid Techniques
- The goal of the surgery is to:
- Stabilize the fractured spine
- Protect the spinal cord and nerves
- Correct deformity
- Restore spinal alignment
- Relieve pain
- Enable early mobilization
- Prevent further neurological deterioration
- Specialized spinal implants such as pedicle screws, rods and occasionally cages are used to provide immediate stability while the fracture heals.
- Why Is This Surgery Performed?
- This surgery may be recommended for:
- Traumatic Spinal Fractures
- Burst Fractures
- Compression Fractures with Instability
- Fracture Dislocations
- Osteoporotic Fractures with Instability
- Pathological Fractures
- Neurological Deficits due to Fracture
- Progressive Spinal Deformity after Fracture
- Common symptoms that may lead to surgery include:
- Severe back pain

- Difficulty standing or walking
- Progressive spinal deformity
- Leg weakness
- Numbness
- Loss of balance
- Spinal instability
- Bowel or bladder dysfunction
- Neurological deficits following trauma
- Who Is A Suitable Candidate?
- You may be a suitable candidate if:
- ✓ Imaging confirms an unstable spinal fracture
- ✓ There is significant vertebral collapse
- ✓ Neurological symptoms are present
- ✓ Spinal alignment is compromised
- ✓ Conservative treatment is unlikely to provide adequate stability
- ✓ Progressive deformity is developing
- ✓ Early mobilization is important
- ✓ Quality of life is significantly affected
- How Is The Surgery Performed?
- Step 1
- The procedure is performed under general anesthesia.
- Step 2
- The patient is positioned according to the location of the fracture.
- Step 3
- Depending on the fracture pattern, the surgery may be performed through minimally invasive or open techniques.
- Step 4
- Pedicle screws are inserted into the vertebrae above and below the fracture.
- Step 5
- Rods are connected to restore alignment and stabilize the spine.
- Step 6
- If the spinal cord or nerves are compressed, decompression may be performed.
- Step 7
- In selected cases, vertebral body reconstruction or cage placement may be required.
- Step 8
- Bone grafting may be performed to facilitate long-term fusion.
- Step 9
- The wounds are closed and sterile dressings are applied.

- The duration of surgery depends on fracture complexity and the number of spinal levels involved.
- What Are The Advantages?
- Potential benefits include:
- Immediate spinal stability
- Protection of the spinal cord and nerves
- Early mobilization
- Improved pain control
- Restoration of spinal alignment
- Prevention of progressive deformity
- Faster rehabilitation
- Reduced risk of prolonged bed rest complications
- Improved functional recovery
- Better quality of life
- For suitable fractures, minimally invasive techniques may further reduce tissue damage and recovery time.
- What Are The Risks?
- Every surgical procedure carries certain theoretical risks and potential complications. However, every effort is made to minimise these risks through meticulous surgical planning, advanced technology and comprehensive patient optimisation.
- At Bombay Spine Clinic™, Fracture Fixation Surgery is performed using modern spinal instrumentation systems, advanced imaging guidance and minimally invasive techniques whenever appropriate. These technologies allow accurate implant placement and fracture stabilization while minimizing disruption to surrounding tissues.
- In addition, every patient undergoes a thorough pre-operative assessment. Depending on individual health requirements, this may involve evaluation and optimisation by physicians, cardiologists, anaesthetists and other medical specialists. This multidisciplinary approach helps improve surgical safety, recovery and overall outcomes.
- Potential risks that are discussed with patients include:
- Infection
- Bleeding
- Nerve injury
- Dural tear (CSF leak)
- Implant-related complications
- Screw loosening or failure
- Failure of fusion
- Persistent pain
- Adjacent segment degeneration
- Medical complications associated with trauma or major surgery
- Rare need for revision surgery
- Fortunately, the incidence of significant complications is low when surgery is performed for appropriate indications using modern spinal techniques.

- Preparing For Surgery
- Before surgery:
- Clinical evaluation
- MRI review
- CT scan review
- X-rays
- Blood investigations
- Medical fitness assessment
- Medication review
- Anaesthesia assessment
- Patients should inform their doctor regarding:
- Blood thinning medications
- Osteoporosis
- Diabetes
- Heart disease
- Previous surgeries
- Allergies
- Smoking history
- Smoking cessation is strongly encouraged as it improves fracture healing and fusion rates.
- What Happens During Hospital Stay?
- Day of Surgery
- Hospital admission
- Surgery

Recovery room observation

- Pain management
- Initial mobilization planning
- First 24–72 Hours
- Assisted walking
- Physiotherapy guidance
- Wound care
- Functional rehabilitation
- Discharge
- Most patients are discharged within:
- 3–7 days
- depending on fracture severity, associated injuries and overall recovery.

Recovery After Surgery

- Week 1
- Expected symptoms:
- Surgical site discomfort
- Improvement in fracture-related pain
- Walking encouraged under supervision
- Gradual increase in mobility
- Weeks 2–6
- Progressive walking programme
- Physiotherapy
- Follow-up consultations
- Return to basic daily activities
- 6 Weeks–3 Months
- Continued fracture healing
- Strengthening exercises
- Improved mobility and endurance
- Long-Term Recovery
- Fracture healing continues over several months. Most patients experience substantial improvement in pain, mobility and independence.
- Maintaining bone health, muscle strength and spinal fitness contributes to long-term success.

Frequently Asked Questions

- 1. Why do I need this surgery?
- Because your spinal fracture is unstable, causing pain, deformity or neurological symptoms that require stabilization.
- 2. Are there alternatives to surgery?
- Some stable fractures can be treated with bracing, medications and observation. Surgery is usually recommended for unstable fractures, neurological deficits or progressive deformity.
- 3. Will I have a large scar?
- The size of the incision depends on the fracture type and surgical approach. Many patients are candidates for minimally invasive techniques with smaller incisions.
- 4. How long will I stay in hospital?
- Most patients remain in hospital for approximately 3–7 days, depending on the complexity of the fracture and recovery.
- 5. When can I start walking after surgery?
- Most patients are encouraged to begin walking within 24–48 hours under supervision.
- 6. When can I start outdoor walking?
- Outdoor walking is generally started after approximately 1–2 weeks depending on comfort and recovery.

- 7. When can I travel after surgery?
- Short local travel is usually possible after 2–3 weeks. Long-distance travel is generally recommended after 6–8 weeks, depending on fracture healing.
- 8. When can I return to work?
- Typical timelines are:
- Work From Home (WFH): Approximately 3–4 weeks
- Office-Based Work: Approximately 6–8 weeks
- Light Physical Work: Approximately 8–12 weeks
- Heavy Manual Labour: Approximately 3–6 months
- 9. When can I drive, exercise, dance or resume sports?
- Driving is generally permitted after 4–6 weeks.
- Sports, gym workouts, dancing and high-impact activities are typically resumed after 3–6 months depending on fracture healing and your surgeon's advice.
- 10. What is the success rate of Fracture Fixation Surgery?
- When performed for appropriate indications, Fracture Fixation Surgery has a high success rate in restoring spinal stability, relieving pain and facilitating fracture healing.
- Most patients experience significant improvement in mobility and quality of life.
- 11. Will the screws and rods remain permanently?
- In most cases, spinal implants remain permanently and do not require removal. Implant removal is only considered in selected situations if clinically indicated.
- Myth vs Fact
- Myth:
- A spinal fracture always causes paralysis.
- Fact:
- Many spinal fractures do not cause paralysis. Early diagnosis and appropriate treatment help protect neurological function and improve outcomes.
- Myth:
- Spinal fractures always require prolonged bed rest.
- Fact:
- Modern fixation techniques allow many patients to mobilize early, reducing complications associated with prolonged immobilization.
- When Should I Contact My Surgeon After Surgery?
- Contact your surgeon if you experience:
- Fever
- Increasing wound discharge
- Severe back pain
- Progressive weakness
- Difficulty passing urine
- New numbness

- Significant wound swelling
- Sudden worsening of symptoms
- Related Conditions
- Burst Fracture
- Compression Fracture
- Osteoporotic Spine Fracture
- Fracture Dislocation
- Traumatic Spinal Injury
- Related Procedures
- Vertebroplasty / Kyphoplasty
- Spino-Pelvic Fixation Surgery
- Multilevel Laminectomy Decompression & Fixation (MLDF)
- Need Expert Advice?
- If you have sustained a spinal fracture or have been advised spine surgery after trauma, you may schedule a consultation or upload your MRI, CT scan or X-rays for specialist review.
- Dr. Siddharth KatkadeConsultant Spine Surgeon
- Bombay Spine Clinic™

> **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.
