

Scoliosis Surgery Overview - Bombay Spine Clinic

- Scoliosis Surgery
- Surgery for Spinal Curvature and Deformity Correction

What Is This Surgery?

- Scoliosis Surgery is performed to correct abnormal sideways curvature of the spine and restore spinal balance.
- Scoliosis is a three-dimensional deformity of the spine in which the vertebrae curve sideways and may also rotate. While mild curves can often be managed with observation or bracing, larger curves may continue to progress and can lead to cosmetic concerns, pain, imbalance and, in severe cases, breathing difficulties.
- The goals of surgery are to:
 - Correct spinal deformity
 - Prevent progression of the curve
 - Restore spinal balance
 - Improve posture and appearance
 - Relieve pain when present
 - Protect neurological function
 - Improve quality of life
- The procedure typically involves the use of specialized spinal implants such as pedicle screws, rods and bone grafts to gradually correct and stabilize the spine.
- Scoliosis Surgery is one of the most advanced forms of spinal deformity correction and requires detailed pre-operative planning and specialized expertise.
- Why Is This Surgery Performed?
 - This surgery may be recommended for:
 - Adolescent Idiopathic Scoliosis
 - Adult Degenerative Scoliosis
 - Congenital Scoliosis
 - Neuromuscular Scoliosis
 - Progressive Spinal Curvature
 - Severe Cosmetic Deformity
 - Coronal Imbalance
 - Truncal Shift
 - Painful Adult Scoliosis
 - Common symptoms that may lead to surgery include:

- Visible spinal curvature
- Uneven shoulders
- Rib prominence
- Waist asymmetry
- Back pain
- Poor posture
- Difficulty standing for long periods
- Progressive deformity
- Loss of balance
- In severe cases:
- Shortness of breath
- Reduced exercise tolerance
- Functional limitations
- Who Is A Suitable Candidate?
- You may be a suitable candidate if:
- ✓ The spinal curve is progressing
- ✓ Significant spinal deformity is present
- ✓ Bracing has failed to control curve progression
- ✓ Cosmetic concerns are substantial
- ✓ Pain is affecting quality of life
- ✓ Significant imbalance has developed
- ✓ Adult scoliosis is causing nerve compression or disability
- ✓ Surgery is expected to improve function and long-term spinal health
- How Is The Surgery Performed?
- Step 1
- The procedure is performed under general anesthesia.
- Step 2
- The patient is positioned on a specialized spinal surgery table.
- Step 3
- Advanced imaging and neuromonitoring systems are used throughout the procedure to improve safety.
- Step 4
- Pedicle screws are inserted into selected vertebrae along the curve.
- Step 5
- Specialized rods are attached to the screws.
- Step 6
- The spinal curve is gradually corrected using modern deformity correction techniques.
- Step 7

- Spinal balance and alignment are carefully assessed.
- Step 8
- Bone grafts are placed to achieve long-term spinal fusion.
- Step 9
- The wound is closed and sterile dressings are applied.
- The duration of surgery depends on the severity of the curve and the number of vertebral levels requiring correction.
- What Are The Advantages?
- Potential benefits include:
 - Correction of spinal deformity
 - Prevention of further curve progression
 - Improved posture
 - Improved spinal balance
 - Better cosmetic appearance
 - Improved self-confidence
 - Reduced pain
 - Improved walking endurance
 - Better quality of life
 - Long-term spinal stability
- In appropriately selected patients, scoliosis surgery can provide life-changing improvements in posture, confidence and function.
- 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™, Scoliosis Surgery is performed using modern deformity correction systems, advanced spinal instrumentation, intraoperative imaging and neuromonitoring technology. These tools help maximize correction while protecting the spinal cord and nerves throughout the procedure.
- In addition, every patient undergoes a detailed pre-operative assessment. Depending on individual health requirements, this may involve evaluation and optimisation by physicians, cardiologists, anaesthetists, pulmonologists and other specialists. This multidisciplinary approach helps improve surgical safety and overall outcomes.
- Potential risks that are discussed with patients include:
 - Infection
 - Bleeding
 - Dural tear (CSF leak)
 - Nerve injury
 - Spinal cord injury
 - Implant-related complications

- Loss of correction
- Failure of fusion
- Adjacent segment degeneration
- Persistent pain
- Rare need for revision surgery
- Fortunately, modern technology, neuromonitoring and careful surgical planning have significantly improved the safety of scoliosis surgery.
- Preparing For Surgery
- Before surgery:
 - Clinical evaluation
 - Standing scoliosis X-rays
 - MRI scan (when indicated)
 - CT scan (if required)
 - Blood investigations
 - Medical fitness assessment
 - Pulmonary evaluation (if required)
 - Anaesthesia assessment
- Patients should inform their doctor regarding:
 - Previous spinal surgery
 - Heart disease
 - Respiratory disorders
 - Bleeding disorders
 - Allergies
 - Current medications
- What Happens During Hospital Stay?
- Day of Surgery
- Hospital admission
- Surgery

Recovery room observation

- Pain management
- Neurological monitoring
- First 24–72 Hours
- Assisted mobilization
- Physiotherapy guidance
- Breathing exercises
- Wound care
- Functional rehabilitation

- Discharge
- Most patients are discharged within:
- 4–7 days
- depending on the complexity of surgery and recovery.

Recovery After Surgery

- Week 1
- Expected symptoms:
- Surgical site discomfort
- Improved posture
- Walking encouraged under supervision
- Gradual increase in mobility
- Weeks 2–6
- Progressive walking programme
- Return to routine daily activities
- Follow-up consultations
- Improvement in stamina
- 6 Weeks–3 Months
- Continued rehabilitation
- Strengthening exercises
- Improvement in confidence and function
- Long-Term Recovery
- Fusion continues over several months.
- Most patients experience substantial improvement in posture, balance, appearance and quality of life.
- Regular exercise, good posture habits and follow-up visits contribute to long-term success.

Frequently Asked Questions

- 1. Why do I need scoliosis surgery?
- Because your spinal curvature is progressing, causing significant deformity, imbalance, pain or functional limitations that may worsen over time.
- 2. Are there alternatives to surgery?
- Yes. Observation, physiotherapy and bracing may be appropriate for selected patients. Surgery is usually considered when the curve is large, progressive or causing significant problems.
- 3. Will I have a large scar?
- The incision length depends on the size and location of the curve. Your surgeon will discuss the planned approach and scar placement in detail.
- 4. How long will I stay in hospital?
- Most patients remain in hospital for approximately 4–7 days.

- 5. When can I start walking after surgery?
- Most patients begin assisted walking within 24–48 hours after surgery.
- 6. When can I start outdoor walking?
- Outdoor walking is generally started after approximately 1–2 weeks depending on recovery.
- 7. When can I travel after surgery?
- Short local travel is usually possible after approximately 2–3 weeks. Long-distance travel is generally recommended after 6–8 weeks.
- 8. When can I return to work or school?
- Typical timelines are:
- School or College: Approximately 4–6 weeks
- Work From Home (WFH): Approximately 3–4 weeks
- Office-Based Work: Approximately 6–8 weeks
- Physical Work: Approximately 3–6 months
- 9. When can I drive, exercise, dance or resume sports?
- Driving is generally permitted after 6 weeks.
- Sports, dancing, gym workouts and high-impact activities are usually resumed after 4–6 months depending on recovery and fusion progress.
- 10. What is the success rate of Scoliosis Surgery?
- When performed for appropriate indications, scoliosis surgery has a high success rate in correcting spinal deformity, preventing curve progression and improving quality of life.
- Most patients experience significant improvement in posture, balance, confidence and overall function.
- 11. Will the curve come back after surgery?
- The corrected portion of the spine is fused and stabilized. Recurrence of the treated curve is uncommon when a solid fusion is achieved.
- Myth vs Fact
- Myth:
- Scoliosis always causes severe disability.
- Fact:
- Many individuals with scoliosis live normal, active lives. Surgery is recommended only for selected patients where the benefits outweigh the risks.
- Myth:
- Scoliosis surgery makes the spine completely rigid.
- Fact:
- Only the affected spinal segments are fused. Most patients return to normal daily activities and maintain excellent overall function.
- When Should I Contact My Surgeon After Surgery?
- Contact your surgeon if you experience:
- Fever
- Increasing wound discharge

- Progressive weakness
- Difficulty walking
- Severe pain
- New numbness
- Difficulty passing urine
- Sudden worsening of symptoms
- Related Conditions
- Scoliosis
- Adolescent Idiopathic Scoliosis
- Adult Degenerative Scoliosis
- Congenital Scoliosis
- Coronal Imbalance
- Related Procedures
- Kyphosis Surgery
- Spino-Pelvic Fixation Surgery
- Multilevel Laminectomy Decompression & Fixation (MLDF)
- Need Expert Advice?
- If you have been diagnosed with scoliosis, have concerns about a spinal deformity, or would like a second opinion regarding your X-rays, MRI or treatment plan, you may schedule a consultation or upload your imaging studies for specialist review.
- Dr. Siddharth Katkade Consultant 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.