

Minimally Invasive Lumbar Fusion (MIS TLIF) — Patient Guide



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What to expect before, during, and after your transforaminal lumbar interbody fusion surgery

What is a Minimally Invasive Lumbar Fusion (MIS TLIF)?

A Minimally Invasive Transforaminal Lumbar Interbody Fusion (MIS TLIF) is a procedure used to stabilize the spine and relieve pressure on nerves. Through a small incision, the surgeon removes a damaged disc and places a spacer (cage) filled with bone graft between the vertebrae. Screws and rods are then added to hold the spine in proper alignment while the bones fuse into a single solid structure. The minimally invasive approach causes less muscle disruption, resulting in less pain and faster initial recovery compared to traditional open surgery.

Why is MIS TLIF Performed?

- Treat spinal instability from spondylolisthesis (vertebra slipping forward).
- Relieve nerve compression causing leg pain, numbness, tingling, or weakness.
- Correct degenerative disc disease or collapsed discs.
- Stabilize the spine after decompression for severe spinal stenosis.
- Improve spinal alignment in certain deformities.

Benefits & Goals



- Smaller incision and less muscle disruption.
- Reduced postoperative pain and blood loss.
- Shorter hospital stay — often 1–2 nights.
- Faster early recovery compared to open fusion.
- Improved stability, alignment, and nerve function.

Risks & Possible Complications

While MIS TLIF is generally safe, all surgeries carry some risks:

- Infection, bleeding, or blood clots (DVT/PE).
- Nerve irritation or injury causing temporary or permanent leg symptoms (rare).
- Failure of the bones to fuse (nonunion).
- Hardware issues such as loosening or breakage.
- Persistent back or leg pain despite surgery.
- Adjacent segment degeneration over time (wear and tear at levels above or below the fusion).
- Spinal fluid leak (dural tear).

Before Surgery: How to Prepare

7–10 Days Before Surgery

- Stop taking medications on the 'Medications to Avoid' list, especially NSAIDs and blood thinners.
- Discuss all medication changes with your prescribing doctor before stopping anything.

1–3 Days Before Surgery

- Arrange transportation and someone to assist you at home for the first few days.
- Prepare your home by clearing walkways and setting up a comfortable recovery area.

Night Before / Day of Surgery

- Follow fasting (NPO) instructions carefully — no food or drink after midnight unless instructed.
- Shower as directed. Avoid lotions or creams near the surgical site.
- Bring your ID, insurance card, and medication list.
- Leave jewelry and valuables at home.



- Avoid nicotine products completely — they slow bone healing and increase complication risks.

Day of Surgery: What to Expect

- You will meet with your surgical and anesthesia team for review.
- A small incision is made in your lower back, and tubular instruments are used to minimize muscle disruption.
- The damaged disc is removed, and a spacer (cage) filled with bone graft is inserted between the vertebrae.
- Screws and rods are placed for stabilization.
- The incision is closed, and a dressing is applied.
- Patients will begin walking the same day and increase walking the following morning.
- Surgery can be done same day or possibly 1 night.

After Surgery: The First Weeks

Pain & Medications

- Expect incision site soreness and muscle stiffness that improve over time.
- Leg pain may persist temporarily due to nerve inflammation but usually improves gradually.
- Your team will provide a multimodal pain management plan to reduce narcotic use.
- Avoid NSAIDs unless approved by your surgeon, as they may interfere with bone fusion.

Walking & Activity

- Walk frequently starting the day of or after surgery — short, frequent walks are encouraged.
- Avoid bending, lifting more than 10 lbs, or twisting ('no BLT') for at least 6 weeks.
- Climb stairs carefully as needed.
- Sleep in any comfortable position, using pillows for support.

Incision Care

- Keep the incision clean and dry.



- You may shower once cleared by your surgeon. Pat dry gently.
- Do not scrub the incision or apply creams or ointments.
- No soaking in baths, pools, or hot tubs for 6 weeks.

Return to Work & Activities

- Desk work: typically 2–4 weeks depending on comfort and recovery.
- Light duty or moderate physical work: 4–6 weeks.
- Heavy labor or strenuous activity: 8–12+ weeks with surgeon clearance.
- Driving: resume when off narcotics and able to move safely, usually 2–3 weeks post-op.
- Sexual activity: typically safe after 2 weeks, avoiding uncomfortable positions.

Follow-Up Schedule

- First visit: approximately 2 weeks after surgery to check the incision and early healing.
- Second visit: around 6 weeks to evaluate progress and discuss activity advancement.
- Additional visits at 3 months, 6 months, and as needed to monitor fusion progress with X-rays.

When to Call the Office Immediately

- Fever over 101.5°F (38.6°C) or chills.
- New or worsening leg weakness, numbness, or tingling.
- Increasing redness, swelling, or drainage at the incision site.
- Severe, unrelieved pain not controlled by medication.
- Signs of a blood clot: calf pain/swelling, sudden shortness of breath, or chest pain.
- Loss of bladder or bowel control.

Frequently Asked Questions

How long does it take for the bones to fuse?

Fusion is a gradual process that can take several months to fully solidify. X-rays at follow-up visits will help monitor the progress.

When can I return to work or exercise?



Desk jobs may resume in 1–4 weeks, light activity in 4–6 weeks, and strenuous activity only after your surgeon's clearance.

Will I need a brace?

Most patients will not require a brace. Your surgeon will tell you if it is needed and how long to wear it.

Will the screws or rods set off airport detectors?

Most modern spinal hardware does not trigger alarms, but it is possible. If asked, simply explain you have surgical implants.

