

## What Is a Minimally Invasive TLIF?

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Transforaminal Lumbar Interbody Fusion (TLIF) is a form of spine surgery in which the lumbar spine is approached through an incision in the back. Fusion is a means of stabilizing the spine by fusing two vertebrae together. The transforaminal approach accesses the disc through the space between the vertebrae.

Minimally invasive surgery employs a strong understanding of anatomy combined with radiographic imaging to treat spinal conditions without undue injury to the surrounding soft tissues. The technique permits the surgeon to gently separate the muscles surrounding the spine rather than cut through them. This technique may result in smaller scars, less pain and quicker recovery.

However, due to the complexity and technical challenges of minimally invasive surgery, the procedure itself may take a longer period of time to complete. It is important to understand the potential risks associated with minimally invasive surgery and conditions that may require standard “open” treatment, such as high-degree scoliosis, tumors and some infections. The decision to receive minimally invasive surgery should be individualized to the patient and the patient's symptoms. It is important to discuss with your physician whether minimally invasive surgery is right for you.

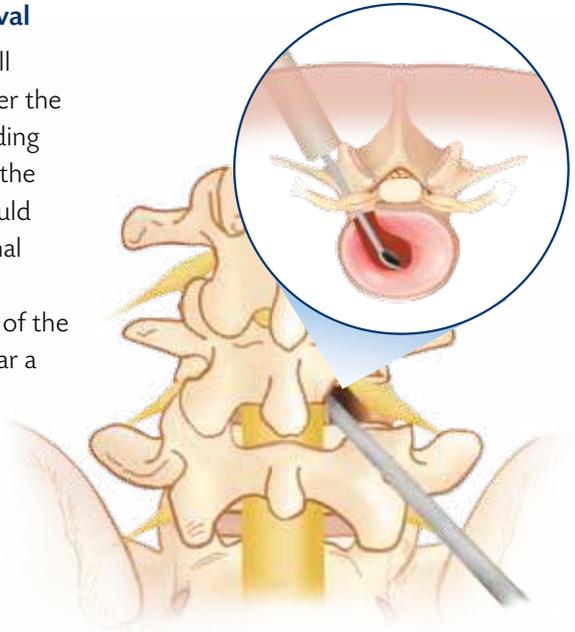


*Actual incision size may vary by procedure*

## How Is a Minimally Invasive TLIF Performed?

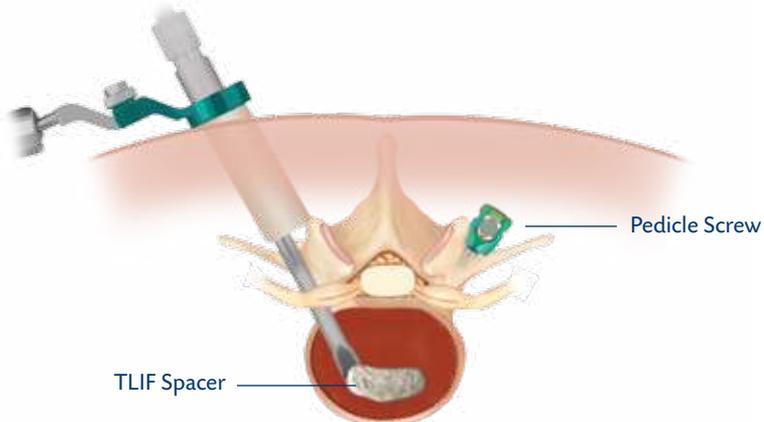
### Spinal Access and Bone Removal

First, the surgeon will make a small incision in the skin of the back over the vertebra(e) to be treated. Depending on the instrumentation used and the specific condition, the incision could be as small as 1 inch. In a traditional open TLIF, a 3 to 6 inch incision is typically required. A small section of the bone and disc are removed to clear a pathway for the interbody spacer.



### TLIF Spacer

An interbody spacer is inserted into the disc space to aid in supporting areas between the vertebrae where the disc has been removed. Its function is to stabilize the segment, which improves the overall alignment of the spine. This also provides more room for the nerves. The central chamber and surrounding area is packed with bone graft material to help promote bone growth between two vertebrae.



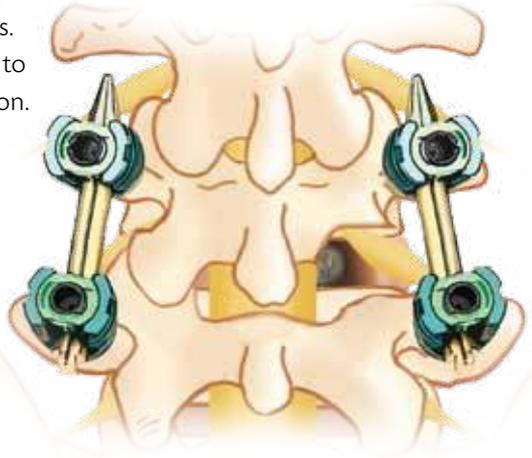
## Pedicle Screws/Rods

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With the goal of Minimally Invasive Surgery in mind, preparations are made to insert pedicle screws and rods which are used to screw the spinal column in place while fusion occurs.

The surgeon uses medical imaging to determine the precise screw location.

The screws are then inserted into the vertebrae to be fused (as shown on page 8). Bone graft may be added along the side of the vertebrae to stimulate fusion. The surgeon will then close the incision and move the patient into recovery.



## What Should I Expect with My Recovery?

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A minimally invasive procedure typically allows patients to get out of bed the day of the surgery and may be discharged the day after surgery. Many patients will notice improvement of some or all of their symptoms and pain from surgery may diminish between 2 to 4 weeks after surgery. However, recovery time varies between patients.

It is the surgeon's goal for the patient to eventually return to his/her pre-operative activities. A positive attitude, reasonable expectations and compliance with your doctor's post-surgery instructions may all contribute to a satisfactory outcome.

The field of Minimally Invasive Surgery will continue to expand. However, certain techniques are highly technical and require training. As is the case with any surgical procedure, complications may occur. Such complications can include inadequate decompression, nerve injury, infection or persistent pain. Please consult your physician for a list of indications, precautions, clinical results and other important medical information that pertains to a minimally invasive TLIF procedure.