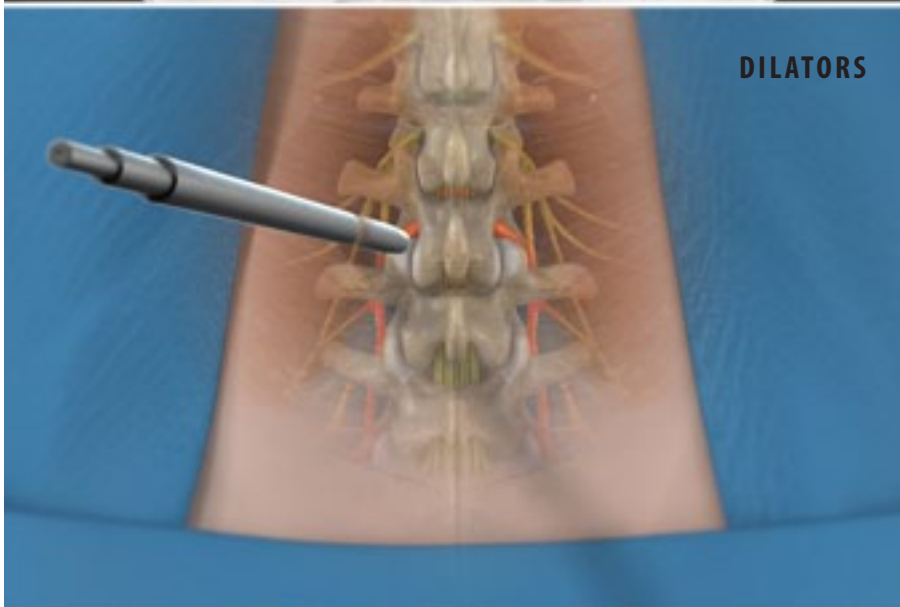
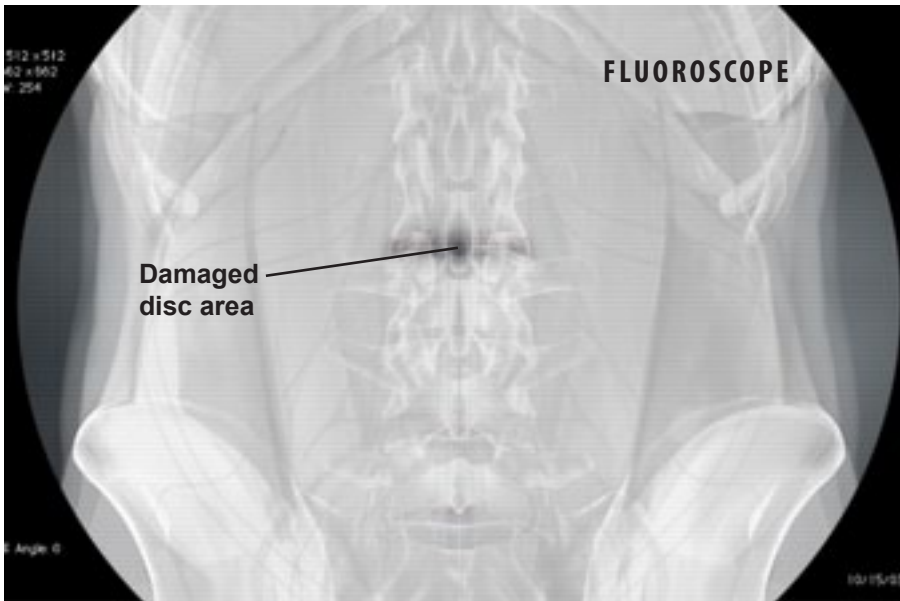




## Minimally-Invasive TLIF (Transforaminal Lumbar Interbody Fusion)



### Overview

This minimally invasive procedure is used to remove a degenerated disc to relieve the compression of nerve roots in the lumbar spine. It is performed through a small incision on the back.

### Preparation

After anesthesia has been administered and the patient is positioned face down, the surgeon uses a portable x-ray machine to identify the diseased vertebral level or levels. Then, the surgeon makes the smallest possible incision in the skin directly above the target level.

### Accessing the Vertebra

A series of dilators of increasing size are carefully passed through muscles and soft tissue using the guidance of the portable x-ray machine. The surgeon slides a tubular retractor over the dilators and removes the dilators, creating a working channel that leaves muscle tissue intact. This working channel allows the surgeon to access the target vertebra and painful nerve root in a way that minimizes incisional pain and scarring of the muscles.

### Disc Removed

The surgeon may use a microscope or endoscope to direct surgical instruments through the working channel. First, the surgeon removes bone at the rear of the vertebrae to create an opening. This opening will provide a clear route to the degenerated disc. The surgeon works through this opening to carefully remove the disc. Some of the disc wall is left behind to help contain the bone graft.



## Minimally-Invasive TLIF (Transforaminal Lumbar Interbody Fusion)

MICROSCOPE  
VIEW



### Bone Graft Inserted

An implant filled with bone graft is placed in the empty disc space. This lifts the vertebrae to the proper height, realigning the vertebral bones and relieving painful pressure from pinched nerve roots.

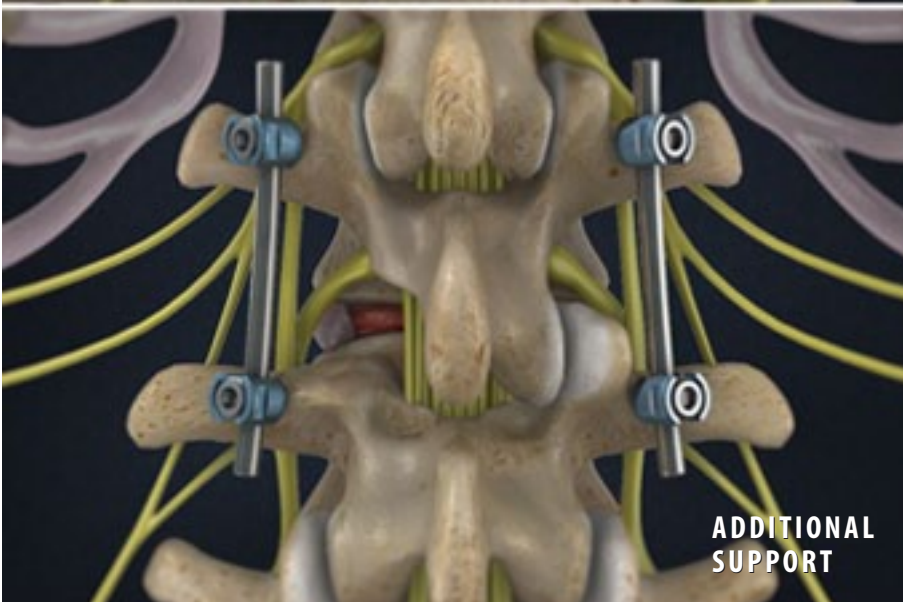
### Additional Support

The surgeon will also place fusion instrumentation for additional support, most commonly screws and rods. In some cases, these may be implanted on both sides of the spine. Bone graft may also be placed along the hardware. Over time, the bone graft will grow through and around the implants, forming a bone bridge that connects the vertebral bodies above and below. This solid bone bridge is called a fusion.

### End of Procedure

The instruments are removed, and the incision is closed and bandaged. Most patients are discharged from the hospital the following day and can return to their usual activity level within a few weeks of surgery. The patient may take pain medication to relieve incisional pain, but usually this is needed for less than one to two weeks.

IMPLANT  
INSERTED



ADDITIONAL  
SUPPORT