



**SPORTS MEDICINE
ORTHOPEDIC
& SPINE CARE**

Valdosta Orthopedic Associates
3527 N Valdosta Rd, Valdosta, GA 31602
(229) 247-2290

Posterior Lumbar Interbody Fusion and Transforaminal Lumbar Interbody Fusion

Spinal fusion is a surgical procedure used to correct problems with the small bones in the spine (vertebrae). It is essentially a “welding” process. The basic idea is to fuse together the painful vertebrae so that they heal into a single, solid bone. Spinal fusion is a treatment option when motion is the source of the pain—the theory being that if the painful vertebrae do not move, they should not hurt.

This article focuses on two methods of fusing the lumbar (lower) spine—posterior lumbar interbody fusion and transforaminal lumbar interbody fusion; your doctor will talk with you about which method is appropriate in your situation. This article discusses only the surgical component of these two procedures.

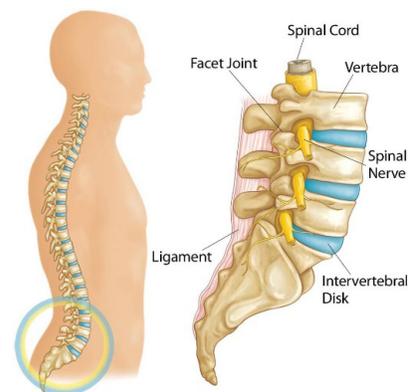
Interbody Fusion

An interbody fusion is a type of spinal fusion that involves removing the intervertebral disk from the disk space.

When the disk space has been cleared out, your surgeon will implant a metal, plastic, or bone spacer between the two adjoining vertebrae. This spacer, or “cage,” usually contains bone graft material. This promotes bone healing and facilitates the fusion.

After the cage is placed in the disk space, your surgeon may add stability to your spine by using metal screws and rods to hold the cage in place.

An interbody fusion can be performed using a variety of different approaches. Two common types are posterior lumbar interbody fusion and transforaminal lumbar interbody fusion.



In an interbody fusion, the intervertebral disk is removed.

Posterior Lumbar Interbody Fusion

In posterior lumbar interbody fusion (PLIF), your surgeon inserts the spacer or “cage” from the back of the spine. With this approach, your surgeon gains access to your spine by removing the bone (lamina) and then retracting the nerve roots to one side. Then the back of the intervertebral disk can be removed and a spacer inserted.

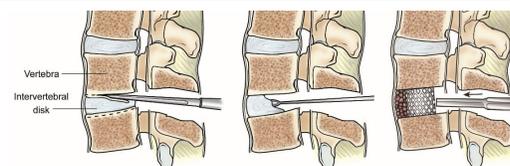
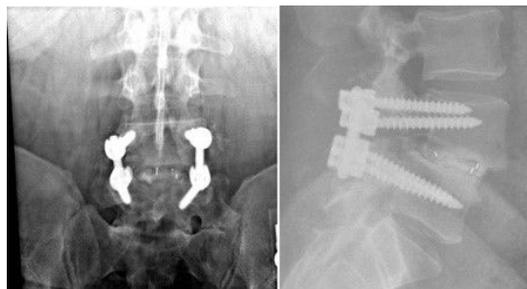


Illustration shows a PLIF procedure. The weakened intervertebral disk is removed. It is then replaced with a spacer or “cage.”

Transforaminal Lumbar Interbody Fusion

This technique is a variation of PLIF. In transforaminal lumbar interbody fusion (TLIF), your surgeon approaches the disk space slightly more from the side. The advantage of this approach is that it requires less movement of the nerve roots; thus, theoretically, it decreases the chance of nerve injury.



In these front and side views of a TLIF procedure, note the screws in the back of the vertebrae. The cage can only be seen by the white metal markers. Bone graft is in the disk space inside and around the cage.



(Left) An x-ray of a TLIF procedure. (Right) A CT scan of the same patient showing the healed fusion. Note that bone has grown through the cage, so the cage is not visible. The screws and rods used to stabilize the spine are still in place but cannot be seen from this angle.