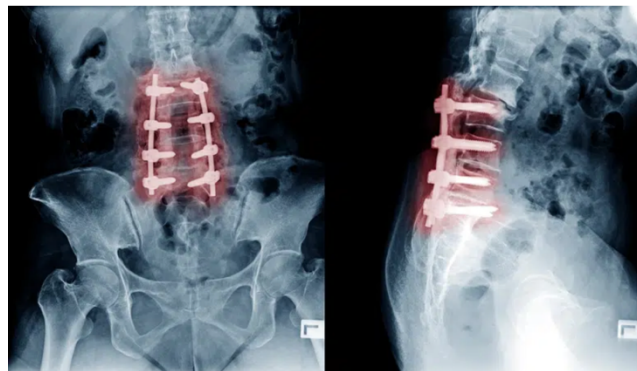


Posterior Lumbar Decompression & Fusion (PLDF), Explained

by Bishop Magehee, PA-S

Overview

A Posterior Lumbar Decompression & Fusion (PLDF) is a surgical procedure where Dr. Baker will remove some or all of the back portions of your lower back bones (called the Lamina and Facet Joints of your vertebrae), which have pinched your spinal cord and caused symptoms. This is performed through an incision on your back.



Once your spine has been decompressed, one or more special bone grafts is then inserted in between the two vertebrae where this removal occurs. This allows the two bones to fuse, and the fusion is stabilized with metal implants (as seen on the x-rays above). From here, the operation site is closed and sealed threefold: through stitches, staples, and gauze.

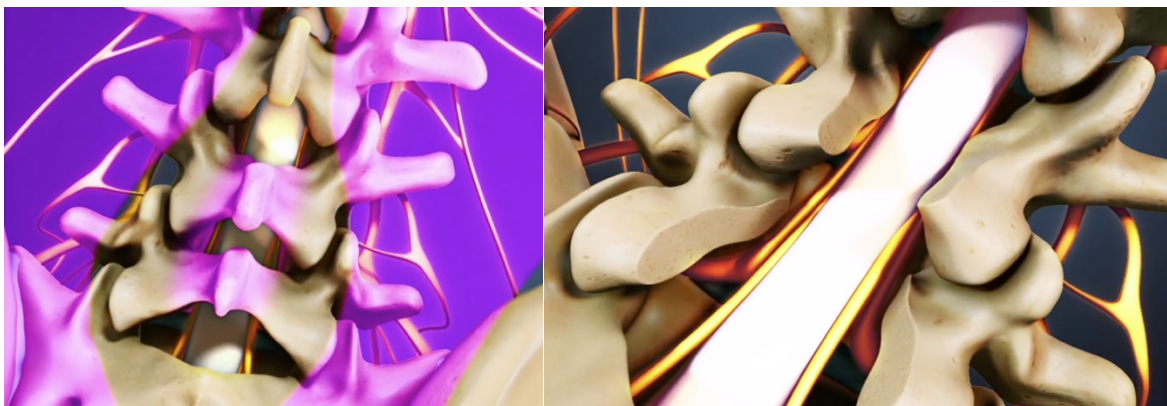
The Details

To understand what an PLDF is, we look to the meanings of each word in its name. Each half of the title tells us:

- 1) PL = *Where* the surgery happens, and
- 2) DF = *What* the surgery does

To start, the surgery is “Lumbar”, meaning it pertains to the lower back, and “Posterior”, meaning we approach the spine through the back—this is done because generally, this allows Dr. Baker to operate on the lumbar spine while avoiding all sorts of delicate organs, including large blood vessels, your colon, and your bladder.

And what about the “Decompression & Fusion”? Let’s start with the Decompression. When the joints of your lower back (called “facet joints”) enlarge, they can press into the space where



your spinal cord and nerve roots are found, pinching (or “stenosing”) them against another bony feature called the lamina. These laminae normally protect the spinal cord, but with stenosis can cause pressure to build in the spine and create symptoms. So, using specialized surgical tools, Dr. Baker will drill through and remove some or all of the laminae, as well as the connective ligaments and discs in your spine (as shown in the before and after depictions on the previous page). He may also shave down or remove the facet joints. All of this is done to relieve pressure on your spinal cord and treat your symptoms.

But what about the empty spaces left behind? This is where the “Fusion” comes into play: once the diseased lamina, facet joints, ligaments and discs are partially or completely removed, Dr. Baker inserts one or more special bone grafts into the space left behind. Each graft is housed inside a metal “cage” and is made with bone or a suitable substitute—if possible, Dr. Baker will use your own bone tissue harvested from the spine itself, as this drastically speeds up the spine’s natural healing process. This healing, which occurs in the weeks and months following surgery, creates a bony bridge between the two vertebral bones and fuses them together. This fusion ensures two things:

- 1) That the spinal cord and nerve roots remain decompressed, and
- 2) That the two vertebrae don’t grind against each other over time, causing symptoms of their own.

To assist the body with this fusion process, Dr. Baker will implant special rods over each fusion site, anchoring them with screws, as pictured to the right. This is done to keep the fusion graft stable as your body heals. To finish the procedure, the surgical site is closed with a combination of stitches and staples, and is finally sealed with a sterile gauze.

