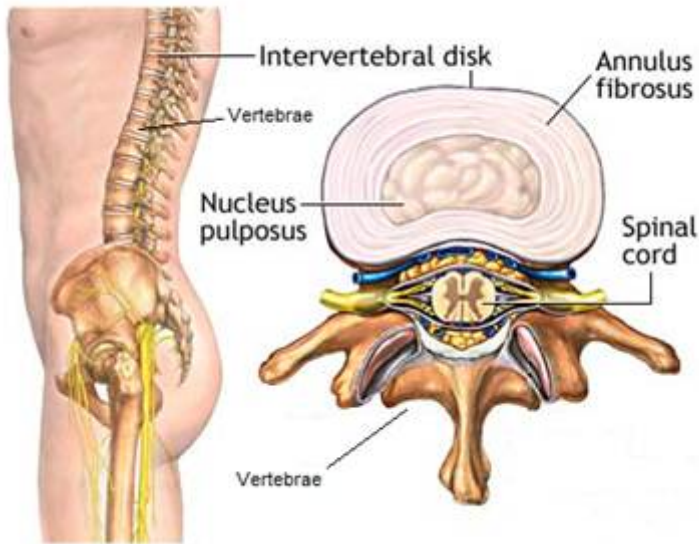


Low Back Pain and Disc Injuries

Many people who suffer for either acute severe low back pain or chronic low back pain have some version of a disc injury. If the disc has healed or even surgically was repaired they may still have back pain because of how the injury healed. The point of this article is to give the reader an up to date understanding of disc injuries and what the research is showing is the best way to heal short and long term.

Lets talk about the disc and how it is injured.



In the picture above you will see the parts of the disc, the main components of the disc are the nucleus pulposus and the annulus. The nucleus is like a water balloon and the annulus would be like cardboard. When you push on one part of the of the water balloon the fluid moves away from pressure.



The annular fibers (cardboard) are stiff and hold the nucleus (water balloon) in place. If you flex/ bend enough times you will force the water balloon to tear through the cardboard. Research has shown that these tears will usually occur over a period of time from a repetitive motion. On some occasions it may happen all at once. Initially you can tear through the inner annular rings and feel no pain. Pain will be felt when the rings toward the outside of the disc are torn because they have nerves attached to them.

The nerves that surround the disc are like mini sensors and when they are activated you will feel pain. In the picture on right you will see the nerves are on the outside of the disc so tears to the inner fibers don't usually register pain. If the movement that creates the initial tear continues then it will usually cause the tears to grow until the nerves are disturbed. See below

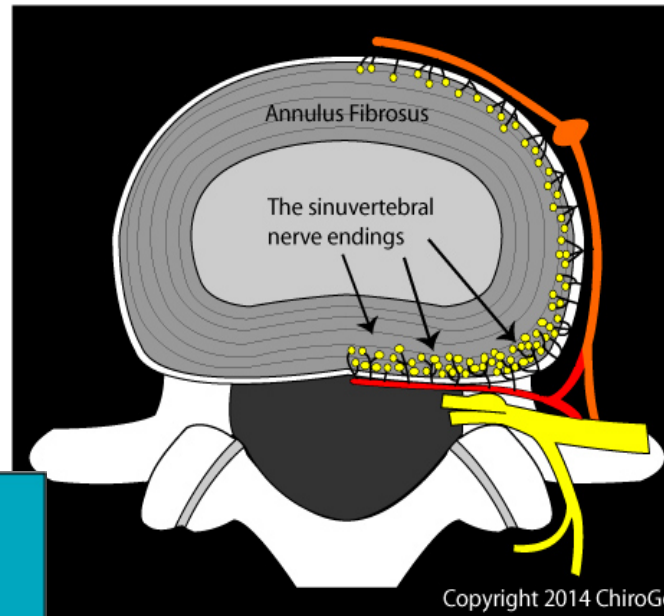
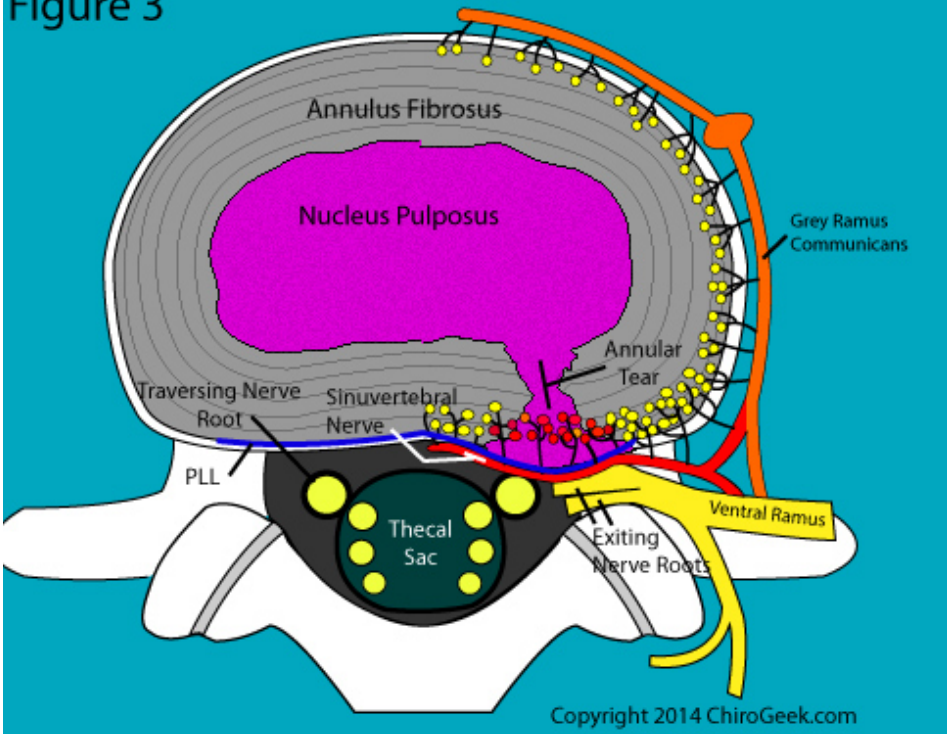


Figure 3

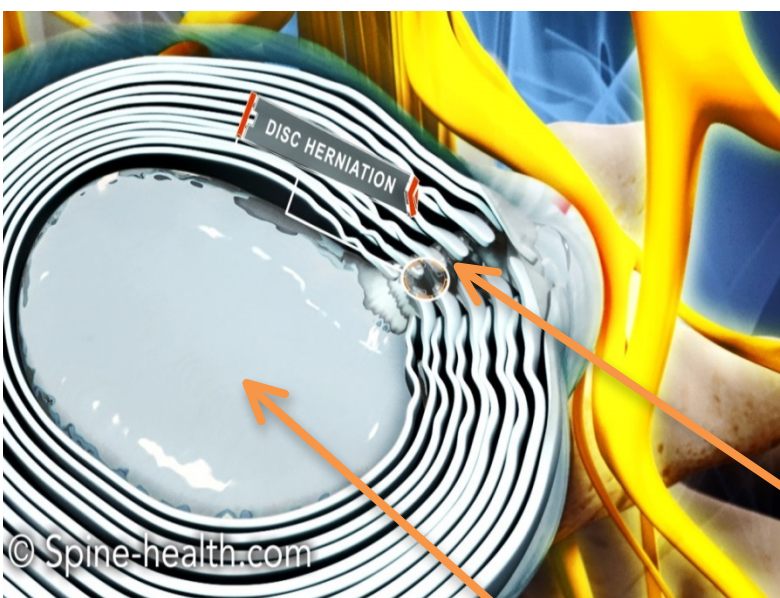


If the tear is big enough it will cause the disc to bulge out onto the large nerve root. This is when patients complain of pain into the arm or leg.

As you can see the pain can come from the damage done to the disc, but pain can also come from inflammatory chemicals that leak out of the torn annular fibers and nucleus. These chemicals can irritate the nerves in the disc and the large nerve roots causing pain. Treatment for

a disc is 2 fold first decrease the pain coming from the inflammatory chemicals and the irritated nerves. Once that is done then the use manual methods to take the mechanical cause of the injury away. Finally you must strengthen the muscles that will protect the injured disc or it will not heal. If you have question give our office a call 310-998-5800

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Annular tear

Nucleus