



Low Back Pain Management and treatment

GETTING YOU BACK FROM INJURY FASTER

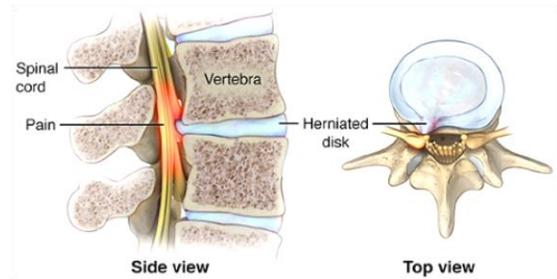
Low Back Pain

Low back pain (LBP) can originate from a variety of structures within the spine, and each source of pain will cause a specific set of symptoms. The two main dysfunctions of the lumbar spine are facet dysfunction, or disc herniation.

Facet pain can be caused by osteoarthritis, facet degeneration or injury, muscle spasms, or joint capsule scarring. Facet joints can become locked with movements such as a mild twist, awkward movement, or tripping.

Disc pain can occur with degenerative disc disease (DDD) or a herniated disc. DDD is a condition that normally occurs with age. Over time, the water content in the discs decreases, causing loss of flexibility and shock absorption capacity that leads to pain. A herniated disc is

when the material on the inside leaks out into the spinal canal, and comes in contact with a nerve root. This material causes inflammation and pain along the path of the nerve. Due to the similar pain referral patterns and proximity of the lumbar spine and sacroiliac joint, the two conditions can often present with similar symptoms. A skilled physical therapist will be able to help distinguish which of the various pain generators in the low back is the source of your pain. This will help us tailor manual therapy techniques and exercise to best relieve your pain.



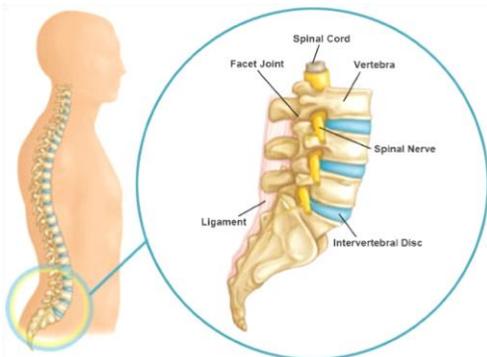
Symptoms

- Pain worsened by extension (leaning back) and relieved by flexion
- With disc dysfunction, pain may radiate into the gluteal region, back of the thigh (sciatica), and calf. You may also have symptoms of numbness, tingling, and one-sided weakness
- Facet pain usually presents as a dull ache or pinch on one or both sides of back, but typically doesn't radiate into leg.

Medical Management

As an adjunct to physical therapy, your doctor may suggest various medical interventions to help alleviate your pain as you work towards recovery. Although low back pain can be severe in nature, **narcotics (opioids)** are most often used for acute, severe pain such as that following an operation. Due to the addictive nature and unwanted side effects, these are not recommended for chronic pain. The following are some alternatives for pain management:

- Non-steroidal anti-inflammatories (NSAIDs)
- Steroid anti-inflammatory (prednisone)
- Epidural steroid injection
- Muscle relaxants
- Cryotherapy
- Surgical intervention



Physical Therapy

How we can help

While it is beneficial to rest the injured back for 1-2 days, any longer than that is not recommended, as it contributes to increased stiffness and deconditioning. Heat, ice, or medications directed for use by a physician may also be helpful at reducing inflammation and decreasing pain while the structures heal. Physical therapy management includes manual mobilization, stretching, strengthening, and aerobic conditioning to enhance blood flow to muscles so that oxygen and nutrients can contribute to healing. In the event that physical therapy does not improve functional status or decrease pain, epidural injection of anesthetic and corticosteroid from a physician may help temporarily relieve pain. In severe cases, failure of physical therapy to reduce pain may warrant surgical intervention.



Manual therapy

The goal of manual therapy at the lumbar is to optimize the position and motion of the vertebrae that may be stuck in place. This can be done through applying pressure to the immobile segment as you move into extension.



In some cases, SI joint dysfunction can occur with low back pain. In this case, there would be more manual therapy to muscles commonly involved with SI dysfunction. Some other techniques that may be used include cupping or trigger point dry needling. Cupping causes an increase in blood flow to muscles which helps with healing and reduction in tension.

Flexibility

In order to reduce muscle tension and spasms in the musculature surrounding the low back, your physical therapist will prescribe various stretches to perform daily. These stretches should be held for at least 45 seconds at a time to ensure adequate time for muscle fibers to

release, and muscles to relax. This should be repeated three times, 2-3 times per day. The muscles targeted will include the hamstrings, piriformis, and hip flexors as needed. This will help reduce tension placed through the spine that causes some of the imbalances mentioned earlier.

Strengthening

It is important to strengthen surrounding musculature to decrease stress on the low back and provide increased support. The muscles targeted in a typical exercise program for LBP include the abdominals, multifidus, and hip abductors. These muscles work in conjunction to properly dissipate forces and prevent excess rotation of the spine when performing functional activities. The main focus of these exercises will be core stability with emphasis on anti-rotational strength that progresses to exercises requiring maintenances of stability with rotational motion.



The multifidi are small muscles that attach to your vertebrae and are prime movers into rotation and act as important stabilizers. These muscles, along with the abdominal muscles, need to be strengthened equally so that forces can be dissipated with movement in any direction. One particular abdominal muscle, the transversus abdominis, attaches to the transverse processes of the spine, and primarily works to stabilize the spine prior to movement.

