



# Sacroiliac Joint Dysfunction Management and treatment

GETTING YOU BACK FROM INJURY FASTER

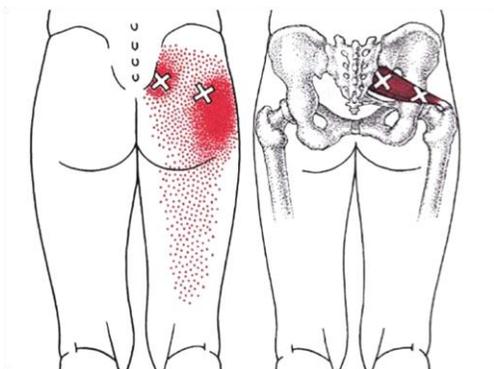
## Sacroiliac Joint

The sacroiliac joint (SIJ) is made up of the hip bones (ileum) and the sacrum. In order for a person to walk and function normally, this joint must have proper alignment and motion so that the forces of everyday activity can be dissipated to surrounding ligaments and musculature. Most of the motion of the SIJ occurs when rising from sitting to standing which is why this activity can often be painful with SIJ dysfunction. When there is dysfunction in this joint, whether from asymmetric motion, weakness, or injury, pain often refers to the buttocks, low back, lateral thigh, and groin. Due to the proximity of the SIJ to other low back pain generators and density of pain fibers arising in various distributions from L2-S3, SIJ dysfunction can often be mistaken for lumbar pain.

### Symptoms

- Pain that spreads into hips, buttocks, and/or groin; most commonly the buttocks and lateral aspect of thigh
- Sciatic-like pain in buttocks or back of thigh that can be described as sharp, stabbing, and hot, and may include numbness and tingling

- Stiffness and loss of motion in low back, hips, pelvis, and groin which may impede ability to ascend stairs or bend forward
- Worsened pain with loading SIJ, such as when climbing stairs, running, or lying on one side
- Instability in pelvis and/or low back which may cause a sensation of giving way when walking or changing position



### Causes and Risk Factors

- Activities that stress the SIJ such as contact sports, heavy lifting, high labor jobs
- Weakness in core and low back musculature that allows stress to accumulate with prolonged sitting or standing
- Anatomical variations such as leg length discrepancies or scoliosis that can cause unequal loading of pelvis and thus wear and tear on the SIJ
- Gait deviations, or impaired walking pattern, that further contribute to unequal loading and weakness
- Pregnancy which increases the hormone relaxin, leading to pain and instability

# 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, injection of anesthetic and corticosteroid from a physician may help temporarily relieve pain.

## Manual therapy

The goal of manual therapy at the SIJ is to regain the biomechanical alignment the hip bones (innominate) with the sacrum. A common mechanism of injury is suddenly stepping off a curb which pushes one side up relative to the other. As seen below, this is manually adjusted by pulling the leg to cause a downward force at the SIJ to help bring the affected side back in position. Another dysfunction, as seen in Figure 1, is rotation of the innominate which prevents the normal biomechanical rotation of the sacrum with movement. The rotation is adjusted by using muscle energy techniques, which allow the muscles on opposite sides of the hip to contract and subsequently relax to reduce pull on the bones.

In addition to this, physical therapists are able to decrease muscle tension in the psoas and piriformis which are commonly involved SIJ pain. In fact, tension in these muscles can often be the primary cause of pain.

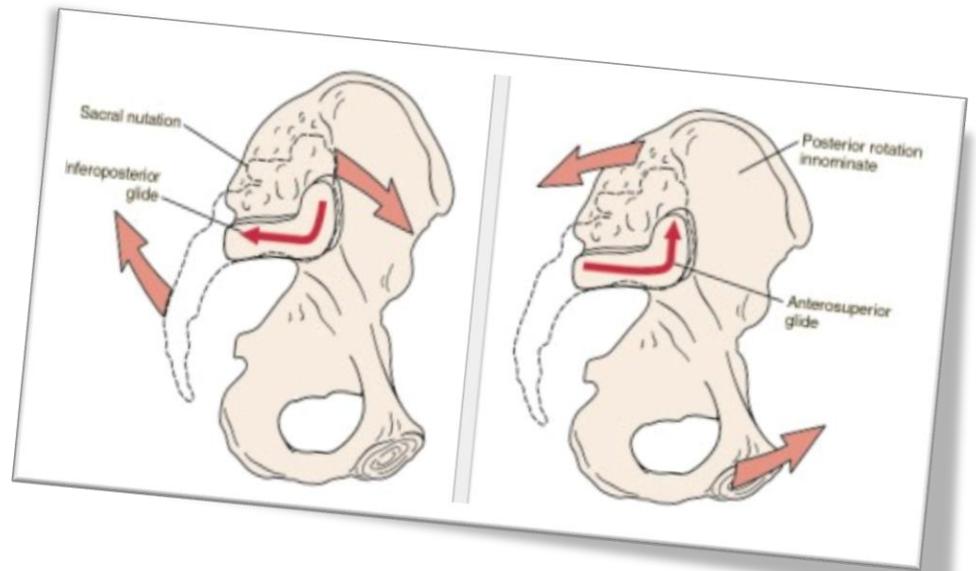


Figure 1 Rotation of innominate bone anteriorly (left) and posteriorly (right) on the sacrum

## Stretching

In order to continue to reduce muscle tension and spasms in these muscles, 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, and performed 2-3 times per day.



## Strengthening

It is important to strengthen surrounding musculature to decrease stress on the low back and provide increased support. The key muscles in a typical SIJ treatment plan include the abdominals, obliques, 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 should be core stability with emphasis on anti-rotational strength that progresses to stability maintained with rotation.



One of the muscles targeted is called the transversus abdominis, shown below. This muscle attaches to the transverse processes of the spine, and primarily works to stabilize the spine prior to movement.

