

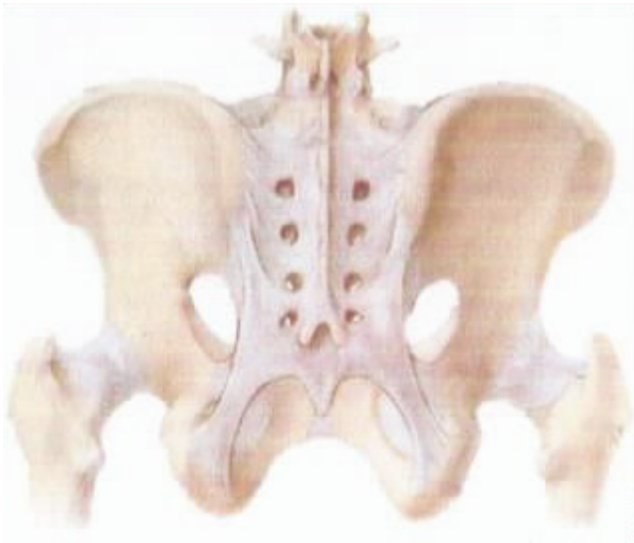
SACROILIAC JOINT DYSFUNCTION AND LOW BACK PAIN

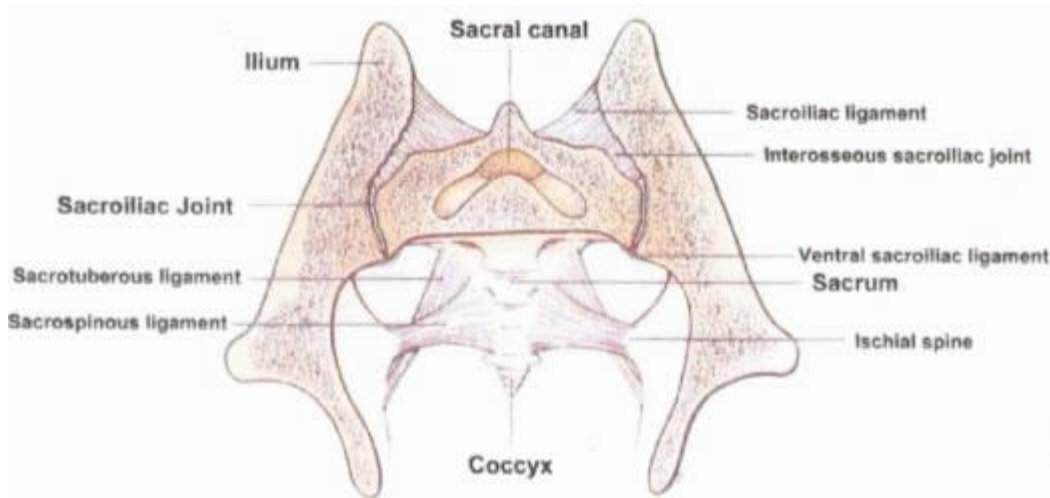
Sacroiliac (S-I) joint dysfunction is understood by clinicians as one of many causes of the general category of low back pain. S-I joint dysfunction may wholly be responsible for the low back pain syndrome and/or may be contributory to low back pain in concert with other pathology of the lumbar spine. It is often an overlooked and underappreciated diagnosis.

Brief Anatomy:

The S-I joint can be thought of as the bottom joints of the spine relating to the hip bones, The sacrum (bottom of the spine) relates on each side to the ilia (hip bones) to form the sacroiliac joints. The ilia accept the femoral shafts of the lower extremities to form the hip joints. Therefore, as a person walks with reciprocal motion of the legs, the S-I joints also reciprocally move. There are muscles and ligaments that transverse the S-I joint in the front and the back, all of which can be causes of pain and inflammation if these joints are in dysfunction.

Ligamentous Anatomy of Sacroiliac Joint





Patient Symptoms:

Pain is usually reported as being on one side of the low back; however, occasionally there is pain on both sides. The patient reports posterior low back pain, hip pain, buttock pain, groin pain, lateral thigh pain, knee pain and occasionally leg and calf pain. He also reports the need to limp, leg length difference and increased pain with walking, standing or sitting. He may report improvement with resting recumbently or changing positions often.

Clinical Findings:

Anatomically leg length differences are demonstrated. There is asymmetry or nonequalized right and left hip bones when compared to each other. There is tenderness to palpation of the posterior S-I joint ligaments. There is associated muscle guarding of the muscles of the low back. There is pain with end range of motion of the hip joints as they stress the S-I joint.

Kinetic tests by the therapist will reveal differences in mobility of the S-I joints when comparing one joint to the other. The therapist may assess the affected joint is moving too little (hypomobile) or moving too much (hypermobile). The therapist will evaluate generalized motion of the lumbar spine and mobility of its associated joints. The therapist will also assess gait pattern deficiencies. Diagnostic testing such as x-ray, CT or MRI do not usually demonstrate abnormalities, and therefore cannot be used for diagnosis of S-I joint dysfunction.

Clinical Treatment:

Initial treatment by the therapist will involve joint mobilization of the affected S-I joint to attain symmetry of the pelvis and improved mobility of the affected joint. The lumbar spine will also be treated according to the deficiencies found during assessment.

Following mobilization, the therapist will instruct the patient on proper biomechanics to avoid unnecessary and improper strain of the injured joints. Therapeutic exercise will be taught to improve neuromuscular stability of the low back and pelvis. Applications of neuromodulation modalities to decrease muscle spasm during the early stages of treatment will likely be utilized.

Too much movement of the S-I joint may indicate a laxity of ligaments which would normally hold these joints within normal range of motion. Therefore, additional stabilization procedures (i.e., pelvic belt fixation, non weight-bearing gait with crutches, taping techniques) may be required.

With those patients who continue to demonstrate hypermobility after failing to attain stabilization by conservative means of rehabilitation, an orthopedic consultation for surgical fixation may be necessary.

Our clinic specializes in evaluation and treatment of sacroiliac joint dysfunction. Therefore, we see patients from all over the U.S. Some patients receive all their treatment here, and some are evaluated and referred back to local experienced physical therapists.

The two physical therapists in our clinic who specialize in S-I joint dysfunction are:

Jeff Skorput, PT has 22 years of clinical experience in orthopedic and manual therapy techniques. A graduate of the University of Vermont Physical Therapy Program, Jeff also completed a Clinical Post Graduate Program in orthopedic manual therapy in 1984. As co-director of Gainesville Physical Therapy in Gainesville, Georgia, Jeff's clinical emphasis continues with orthopedic manual therapy.

Vicki Sims, PT is co-director of Gainesville Physical Therapy in Gainesville, Georgia. A graduate of Georgia State University, Vicki has 22 years of clinical experience in hospital and outpatient orthopedic physical therapy. Vicki is active in research and has co-authored two clinical papers on the S-I joint. She was invited to speak at the 1995 International Conference on Sacroiliac Joint and Low Back in San Diego, California.

They also teach seminars three to four times per year around the Southeast. For more information, please call our clinic in Gainesville, Georgia at (770) 297-1700 or email us at biorem@mindspring.com.

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Recommendations for First Three Weeks

Post-Op SI Fusion Surgery

1. No driving or car riding for more than one hour.
2. No sitting for longer than one hour.
3. No standing or walking for longer than 30 minutes.
4. Avoid bending and twisting at waist.
5. Sleep with a pillow between knees.
6. Sit straight with a pillow to small of back.

7. No tilting anything over 10 lbs.
8. You may drive in approximately one week.
9. Avoid stair climbing. If you do stair climb, lead with the strong leg and take one step at a time.
10. No single leg standing.
11. No exercise for three weeks.

Note: After you begin your walking and exercise program, if you experience buttocks pain it could represent an irritation of the piriformis muscle.

Decrease walking to a minimum.

PHASE I:

Light Strengthening (3 to 6 weeks post-op)

1. Abdominals: Lie on back, bring both knees toward the chest, raising the feet approximately 2" off the floor. Lower feet back to the mat. Relax and repeat.
2. Pelvic Floor Muscles - Kegels: Tighten the buttock and pelvic floor muscles and relax them. Remember to breathe, don't hold your breath.
3. Bridges: Lie on back with both knees bent and feet flat on mat. Find the neutral position of your back, hold this position and lift your buttocks off the mat. Relax and repeat.
4. Gluteus Maximus: Lie on stomach, keeping entire leg straight, lift the right leg approximately 3-4" off the mat. Relax and repeat with the left leg.
5. Lumbar Area - Press Ups: Lie on stomach with hands placed at ear level. Push up so your arms straighten and your back arches. Lower yourself. Relax and repeat.
6. Arch and Sag: Get onto the floor on your hands and knees (the all-fours position). Arch your back up like a mad cat while lowering your head, then sag like a lazy horse while raising your head.

*** You may begin a walking program.

PHASE II:

Flexibility and Strengthening (6-10 weeks post-op). Continue with all of Phase I exercises as well as the following:

1. Abdominal Bracing With Arms and Unsupported Legs: Lie on your back with knees bent and arms lying at your sides. Find your neutral position and brace your abdominal muscles. Relax your neck and

shoulders as you lift your arms and legs off the floor (i.e., right arm and right leg together, then left arm and left leg together). Gradually straighten your leg while raising your arm on the same side.

2. **Marching while Bridged Repetitions:** Lie on your back with knees bent. Raise your hips off the floor using your lower abdominal muscles and buttocks muscles. Lift each foot a small amount in tiny, marching steps. Use your buttocks muscles to hold your pelvis while your legs move independently from your trunk.

3. **Hip and Lower Trunk Rotation:** Lie on your back with your knees bent and feet flat on the mat. Slowly drop your knees to the side, first rotating hips, then pelvis, then the low back and finally the upper back. Then slowly return to the starting position beginning with the upper back. Be careful to rotate one segment at a time.

4. **Double Knee Pull:** Lie on your back with knees bent and feet flat on mat. Place one hand on each knee and gently pull the knees up towards your armpits.

5. **Back Extension:** Lie on your stomach over 2 pillows, then place your hands behind your head. Slowly lift your head and shoulders off the mat, then lower yourself to the mat.

6. **Prone Arm and Leg Lifts:** Lie on your stomach with legs straight and arms straight above head. Use your abdominal muscles to stabilize your position. Lift one arm and the opposite leg. Repeat other arm and opposite leg. Your trunk should not move.

7. **Quadruped Arm and Leg Raises:** Get into all fours position. Relax your neck and tighten your abdominal muscles to stabilize your spine in its neutral position. Alternate lifting one arm and the opposite leg.

*** Always finish exercise session with the press-up exercise.