

# Newsletter

November 2003

## Piriformis Syndrome

Piriformis Syndrome is a muscular problem that can cause sciatica or leg pain. It is often mis-diagnosed because it can mimic other problems, such as disc herniations, which also present with leg pain. The good news is once properly diagnosed it's usually quite easy to remedy.

### The Anatomy

The piriformis muscle is a tiny muscle located deep in the buttock, underneath all the Gluteal muscles. It originates on the lateral aspect of the sacrum and inserts into the head of the femur. It aids in external rotation of the hip. Somewhat insignificant on it's own, but problems arise because of the piriformis muscle's relationship to the sciatic nerve. The sciatic nerve is the largest nerve in the body. At it's largest point it's about the width of one's little finger. It originates in the low back from numerous roots and then runs down the leg to supply all nervous system functions to the leg. On it's way down the leg, it passes the piriformis muscle. Some anatomic variations do exist: In some people the nerve passes over the piriformis muscle, in some it splits and passes around the piriformis and in others it passes through the piriformis. Problems arise when the piriformis muscle becomes tight because it will often compress the sciatic nerve giving pain into the distribution of the nerve.

### Signs and Symptoms

- Deep aching in the buttock and thigh on the involved side. Usually not beyond the knee.
- The pain is often aggravated by sitting, squatting or walking.
- Affected legs often externally rotated (toes point out) when relaxed, such as when lying face down on the bed with your feet over the end of the mattress.
- Right leg often affected after driving a long distance if the foot has been in external rotation while depressing the gas pedal.
- Often causes low back pain.
- Some reports suggest a 6:1 female to male predominance.

### What's Going On

If the leg has been externally rotated for an extended period of time (such as when driving) the piriformis muscle can shorten. When you try to straighten out the involved leg the muscle compresses the sciatic nerve. If compressed long enough the nerve will cause aching in the leg and even pain in the low back. The leg doesn't necessarily have to have been externally rotated for a long time – piriformis syndrome may be a result of faulty foot or spinal mechanics, gait disturbances, poor posture or sitting habits of any other factor that could cause that muscle to function abnormally.

### What To Do About It

Your first approach should be through stretching. Because this muscle usually isn't stretched it may just be tight from running, etc. To stretch your RIGHT piriformis, start off by lying on your back. Bend your knees and cross your right leg over your left so your right ankle rests on your left knee in a figure four position. Now, bring your left leg towards your chest by bending at the hip. Reach through and grab your left thigh to help pull things towards your chest. If you haven't stretched your piriformis in the past, stretching may be all you need to do. If stretching alone doesn't help them you'll need to have someone

check your pelvic and foot mechanics. Pelvic mechanics can play a role in piriformis syndrome, because the piriformis muscle originates on the sacrum it can be directly influenced by poor pelvic mechanics. The good news is that it's usually easily fixed. If your feet are contributing to the situation, you may need to get different running shoes or maybe orthotics. Also, you'll want your doctor to review your work and non-work postures and positions to see if anything that you're doing regularly may be contributing to the tightness of the muscle.

- Stretch the Piriformis muscle.
- Address faulty pelvic or foot mechanics.
- Address postural or work related contributing factors.
- Return to activity gradually.
- Build up slowly to pre-injury level.