**Anatomy:** Anatomically, the piriformis muscle lies deep to the gluteal muscles. It originates from the sacral spine and attaches to the greater trochanter of the femur. The sciatic nerve usually passes underneath the piriformis muscle, but in approximately 15% of the population, it travels through the muscle. The piriformis muscle assists in abducting and laterally rotating the thigh.

**Causes/Mechanism of Injury**
- Patients with the nerve passing through the muscle are particularly predisposed to this condition.
- Trauma to the buttock
- Overuse
- Leg length discrepancy
- Fibrosis after an injection in the buttock
- Abnormal gait
- SI dysfunction
- Sitting with wallet in pocket
- Femoral head anteversion
- Poor lower extremity biomechanics

**Symptoms:** The piriformis syndrome is a condition in which the piriformis muscle irritates the sciatic nerve, causing pain in the buttocks and referring pain along the course of the sciatic nerve. This referred pain, called "sciatica", often goes down the back of the thigh and/or into the lower back. Patients generally complain of pain deep in the buttocks, which is made worse by sitting, climbing stairs, or performing squats. Other common symptoms include gluteal atrophy and spontaneous fasciculations of the muscles of the calf, buttock, and hamstrings.

**Treatment/Management:** Conservative treatment includes piriformis stretching, which aims to correct the underlying pathology by relaxing a tight piriformis, and related muscle stretching to relieve nerve compression. Because the piriformis lies deep in the gluteus maximus, using moist heat or ultrasound prior to stretching is most often suggested. Stretches can be performed in both the standing and supine positions, and they involve hip and knee flexion, hip adduction, and internal rotation of the thigh. This may take some time to increase tolerance, as this is the same position used to provoke piriformis pain. Various therapeutic injections may be considered, including local anesthetic, corticosteroid, or Botox.

**Common Physical Therapy Treatments**
- Stretching hip musculature
- Strengthening hip musculature
- Ice/heat to decrease symptoms
- Ultrasound to increase extensibility
- Mobilization of Sacroiliac region and hip
- Neural mobilization
- PNF using contract/relax technique
- Myofascial release technique
- Orthotics

**Exercises**
Exercises for Piriformis Syndrome focus on stretching and strengthening the hip musculature.

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www.TherapyInMotion.net
### Stretch IT band sidelying

- Lie on uninvolved side.
- Extend involved leg backwards and slowly lower until a gentle stretch is felt in outer side of thigh.
- Keep leg straight and rotated outward.

**Perform 1 set of 4 Repetitions, twice a day.**

Hold exercise for 20 Seconds.

### Stretch IT/TFL stand at wall

- Stand next to wall, about a foot away, involved leg toward wall.
- Cross over the uninvolved leg in front, and lean hip into wall, as shown.

**Perform 1 set of 5 Repetitions, twice a day.**

Hold exercise for 30 Seconds.

### Stretch Piriformis supine w/hip ER

- Lie on back with knees bent.
- Cross one leg over the other.
- Grasp knee and ankle as shown.
- Pull knee across chest to opposite shoulder as shown.
- Repeat with other leg.

**Perform 1 set of 4 Repetitions, twice a day.**

Hold exercise for 20 Seconds.

### Stretch hip/knee figure 4

- Lie on back, knees bent.
- Move left ankle over right knee.
- Gently lift right knee up to chest until stretch is felt.
- Repeat with other leg.

**Perform 1 set of 4 Repetitions, twice a day.**

Hold exercise for 20 Seconds.

### Stretch IT Band supine w/towel

- Lie on back.
- Place towel around bottom of foot as shown.
- Raise leg and straighten knee.
- Gradually lower leg over other leg, keeping knee straight until a gentle stretch is felt in hip.

**Perform 1 set of 4 Repetitions, twice a day.**

Use Towel.

Hold exercise for 20 Seconds.

### Stretch hip flexors supine 1

- Lie on back, with knees bent, hanging off edge of bed.
- Pull one knee up to chest.
- Keep other thigh flat on bed.
- Repeat with other leg.

**Perform 1 set of 4 Repetitions, twice a day.**

Hold exercise for 20 Seconds.

### Resist hip abd bil supine knees bent w/elastic

- Loop elastic around thighs.
- Lie on back propped on elbows with knees bent.
- Move thighs apart.
- Return to start position and repeat.

**Perform 3 sets of 10 Repetitions, once every other day.**

Use red Elastic.

Rest 1 Minute between sets.

Perform 1 repetition every 4 Seconds.

### AROM hip abd uni sidelying

- Lie on uninvolved side, with lower knee bent for stability.
- Keep knee straight on involved leg, lifting leg upward.
- Return to start position and repeat.

**Special Instructions:**

Do not roll trunk forward or backward.

**Perform 3 sets of 10 Repetitions, once a day.**

Rest 1 Minute between sets.

Perform 1 repetition every 4 Seconds.
<table>
<thead>
<tr>
<th>Exercise Program For:</th>
<th>Piriformis Syndrome</th>
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<tbody>
<tr>
<td><strong>Resist hip ER sidelying w/elastic</strong></td>
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| • Lie on right side with knees bent and elastic looped around thighs just above knees.  
• Keep heels together and lift left knee upward.  
• Lower and repeat.  
• Repeat series lying on left side and raising right leg. | • Attach elastic to secure object at ankle level.  
• Loop elastic around ankle, positioned as shown.  
• Pull ankle inward.  
• Slowly return to starting position and repeat. |
| **Perform 3 sets of 10 Repetitions, once every other day.** | **Perform 3 sets of 10 Repetitions, once every other day.** |
| Use red Elastic.  
Rest 1 Minute between sets.  
Perform 1 repetition every 4 Seconds. | Use red Elastic.  
Rest 1 Minute between sets.  
Perform 1 repetition every 4 Seconds. |

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<td><strong>AROM hip ext quadruped</strong></td>
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| • Begin in four point kneeling.  
• Lift one leg up, keeping knee bent.  
• Lower and repeat. | • Attach elastic to secure object at ankle level.  
• Loop elastic around ankle, positioned as shown.  
• Pull ankle inward.  
• Slowly return to starting position and repeat. |
| **Perform 3 sets of 20 Repetitions, once a day.** | **Perform 3 sets of 10 Repetitions, once every other day.** |
| Rest 1 Minute between sets.  
Perform 1 repetition every 4 Seconds. | Use red Elastic.  
Rest 1 Minute between sets.  
Perform 1 repetition every 4 Seconds. |