

Piriformis Muscle

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1 Overview

Muscle	Origin	Insertion	Innervation	Action
Piriformis	Anterior Sacrum	Apex of the Greater Trochanter	Sacral Plexus Direct Br. S1 - S2	Hip: ER, Abduction, Extension, Stabilization

2 Origin

Anterior surface of sacrum

3 Insertion

Apex of the greater trochanter of the femur

4 Innervation

Direct branches from sacral plexus S1 and S2

5 Action

- Hip: External rotation, abduction, and extension of the hip joint
- Stabilizes the hip joint

6 Anatomy

The Sciatic n. runs superficial to all of the deep external rotators except for the piriformis¹. The sciatic nerve can either runs deep to the piriformis and can exit inferiorly, through the piriformis muscle belly, or superior to the piriformis. As a result, overactivation of the piriformis can lead to neurogenic pain and symptoms and is termed Piriformis syndrome

7 Palpation

1. Place the patient in prone¹.
2. Palpate the: coccyx, PSIS, and greater trochanter¹.
3. The coccyx to the PSIS is the superior and inferior bounds of the piriformis origin and the greater trochanter is the insertion¹.
4. Bisect the coccyx and PSIS and place a finger there¹.
5. Place your fingers along the imaginary line from the bisection to the greater trochanter¹.
6. Work *through* the superficial gluteus maximus to palpate the slender piriformis muscle belly¹.
7. Strum across the piriformis muscle belly to palpate its location¹.

Caution

The sciatic nerve runs through this area, so be mindful of this when palpating.

7.1.a Active palpation

One can bend the patient's knee and ask the patient to perform isometric contractions against gentle resistance to better palpate the piriformis¹. The gluteus maximus may be recruited during this process, but the piriformis should be more evident¹.

8 Pathologies

- Piriformis Syndrome (Piriformis caused sciatica)
- Piriformis Tendinitis

8.1 Piriformis tendinitis

"Tenderness to deep palpation near the hook of the greater trochanter. Pain reproduced by piriformis stretch"²

9 Active Release Technique (ART)

Active release technique for piriformis by Dr. Nick Perkins³

- Patient in contralateral sidelying
- STM to piriformis

- move from hip IR/ABD/Ext into hip ER/Adduction/Flexion
1. Biel A. *Trail Guide to the Body: A Hands-on Guide to Locating Muscles, Bones, and More*. 6th ed. Books of Discovery; 2019.
 2. Dutton M. *Dutton's Orthopaedic Examination, Evaluation, and Intervention*. 5th ed. McGraw Hill Education; 2020.
 3. Perkins N. Stretch Affect Clinical Internship. Published online 10-14-24.