

Gluteus Maximus Muscle

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1 Overview

The gluteus maximus is a primary extensor and external rotator of the hip¹. The gluteus maximus is a secondary hip abductor¹ The gluteus maximus also plays an important role in stabilization of the SIJ and lumbar spine via its ligamentous and fascial originations¹

Muscle	Origin	Insertion	Innervation	Action
Gluteus Maximus	Sacrum (dorsal surface, lateral part) Ilium (gluteal surface, posterior part) Thoracolumbar fascia sacrospinous lig.	IT Band Gluteal tuberosity	Inferior gluteal n. L5 - S2	Entire mm.: Extension, ER Upper fibers: Abduction Lower fibers: Adduction

2 Origin

- Sacrum (dorsal surface, lateral part)²
- Ilium (gluteal surface, posterior part)²
- Thoracolumbar fascia²
- Sacrospinous lig.²

3 Insertion

- **Upper fibers:** iliotibial tract²
- **Lower fibers:** gluteal tuberosity²

4 Innervation

The gluteus maximus muscle is innervated by nerve roots L5, S1, S2 via the Inferior gluteal nerve²

5 Action

- Entire muscle: extends and externally rotates the hip in sagittal and coronal planes²
- Upper fibers: Hip abduction²
- Lower fibers: Hip adduction²

6 Biomechanics

The moment arm of the gluteus maximus decreases as the hip moves into flexion¹. The more hip flexion decreases the moment arm of the gluteus maximus and therefore results in less torque¹.

7 Length test

8 Manual Muscle Test

9 Exercises

- Single leg bridge (with 90° knee flexion and pushing through the hindfoot)
- Wall triple extension
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1. Neumann DA, Kelly ER, Kiefer CL, Martens K, Grosz CM. *Kinesiology of the Musculoskeletal System: Foundations for Rehabilitation*. 3rd ed. Elsevier; 2017.
2. Gilroy AM, MacPherson BR, Wikenheiser JC, Voll MM, Wesker K, Schünke M, eds. *Atlas of Anatomy*. 4th ed. Thieme; 2020.