

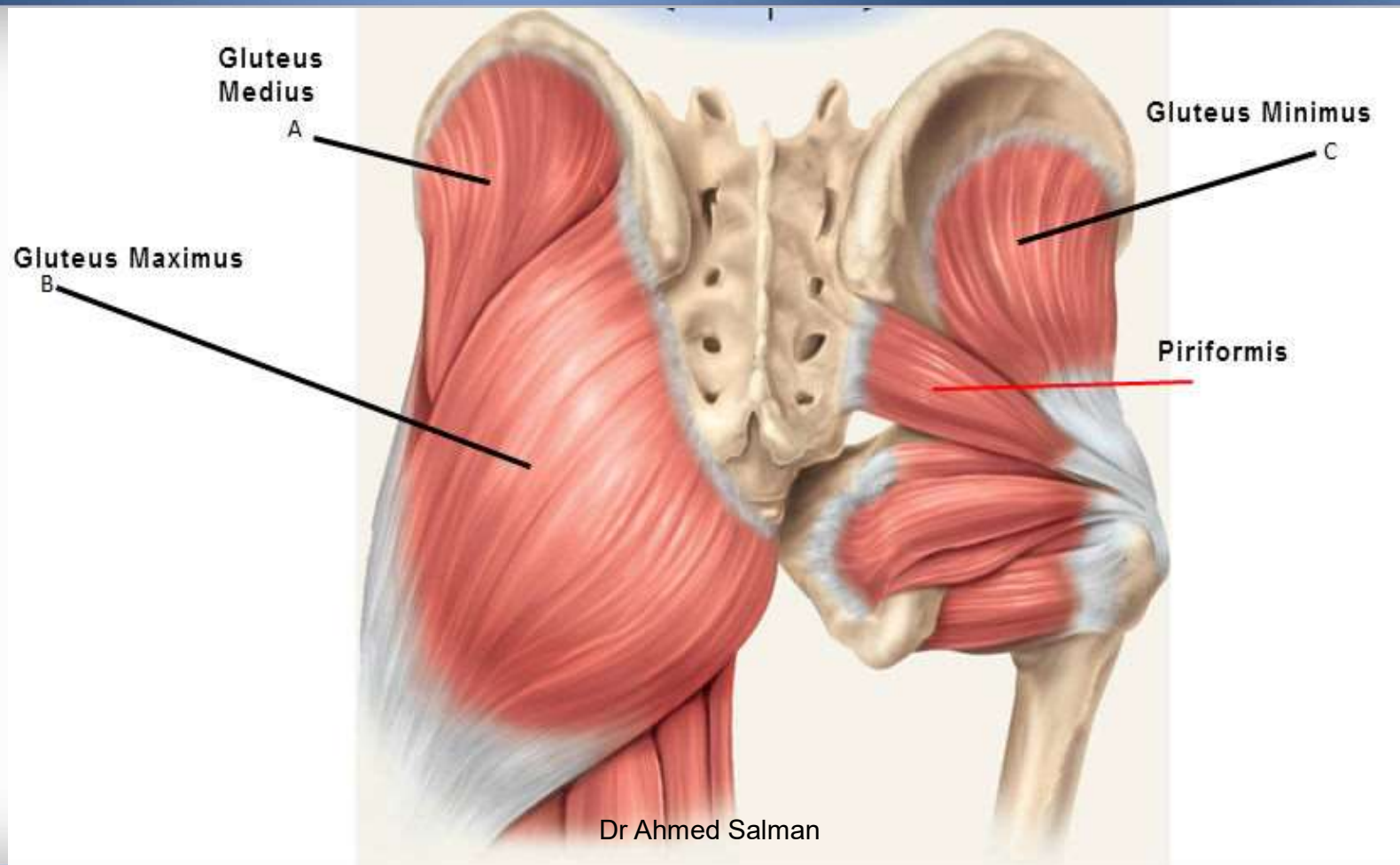


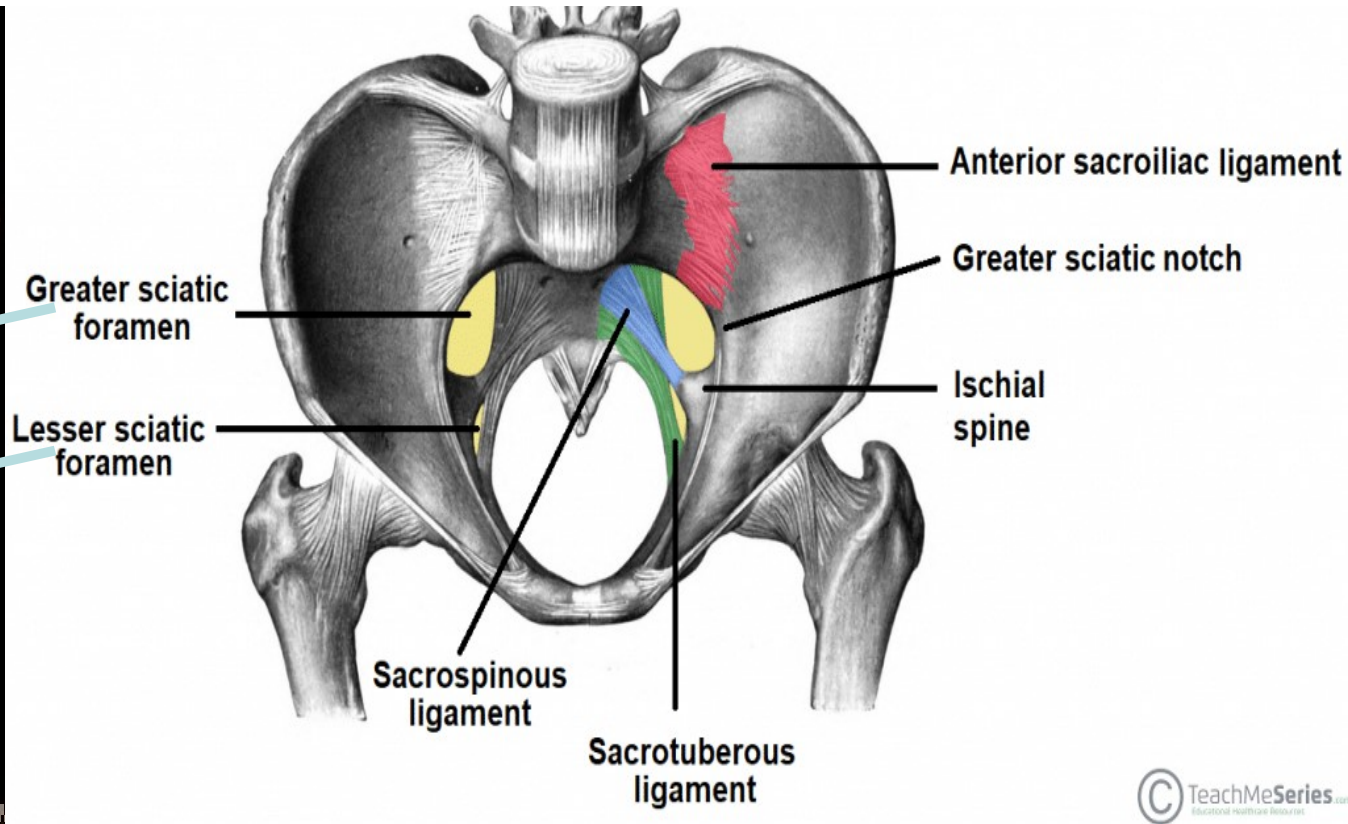
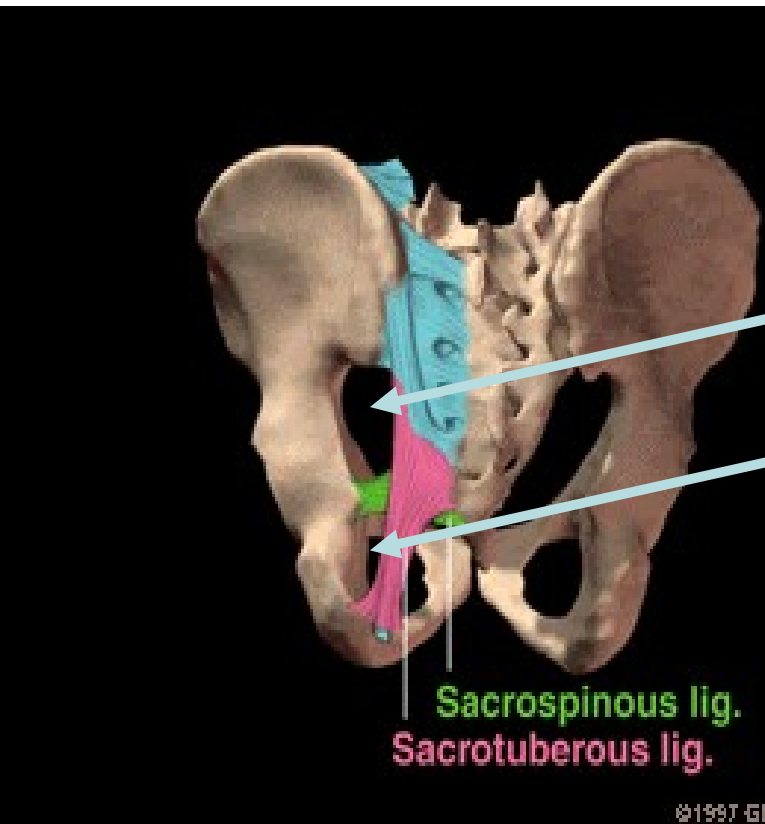
# GLUTEAL REGION

**Dr. Ahmed Salman**

**Associate Prof. of Anatomy. The University Of Jordan**

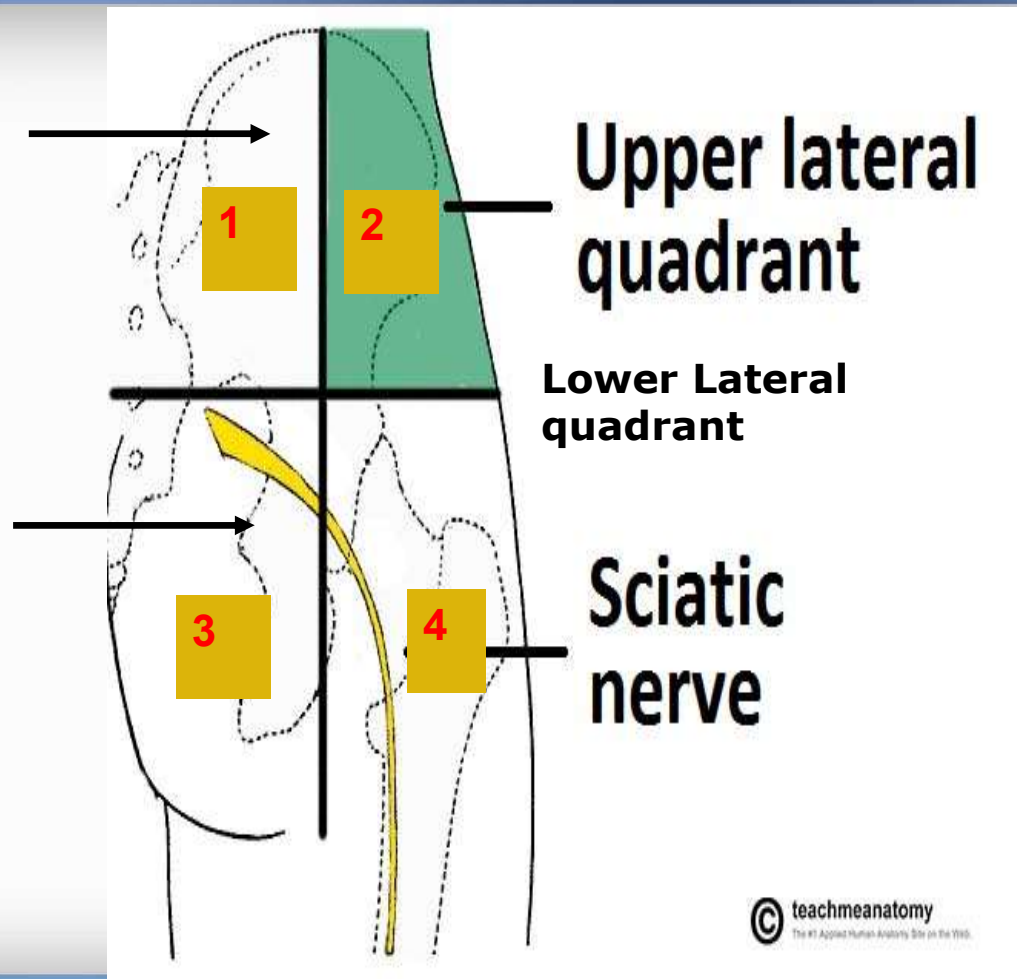
# Gluteal Region





**Upper Medial quadrant**

**Lower Medial quadrant**



## Cutaneous nerve supply of (Gluteal region)

### 1-Upper Medial quadrant is supplied by the:

Cutaneous branches from dorsal rami of upper 3 lumbar nerves (L1, L2, L3) and upper 3 sacral nerves (S1, S2, S3).

### 2-Upper Lateral quadrant is supplied by the:

Lateral cutaneous branch of subcostal nerve (T12)

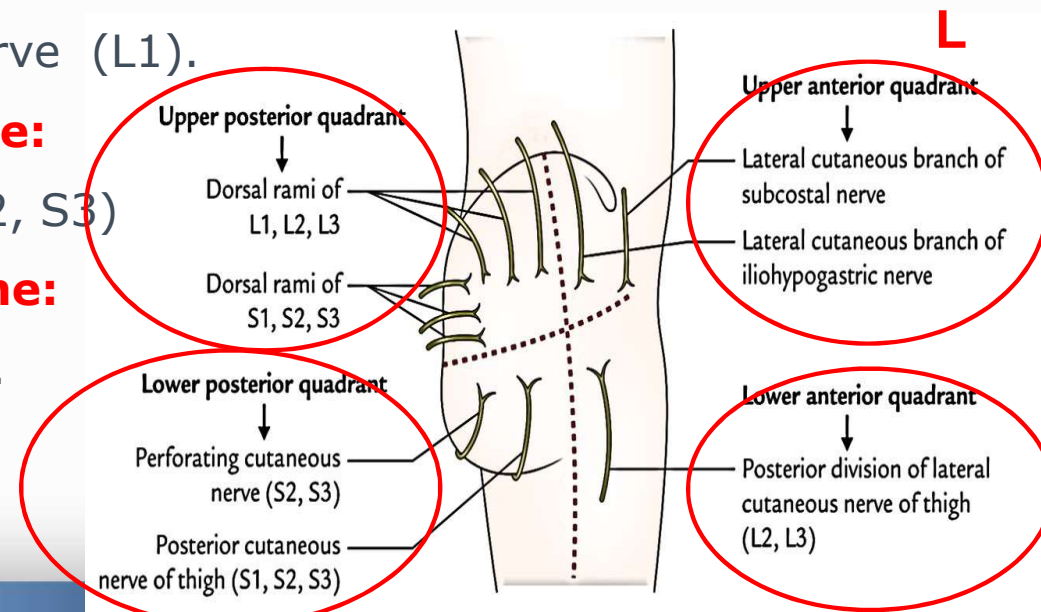
Lateral cutaneous branch of iliohypogastric nerve (L1).

### 3-Lower Medial quadrant is supplied by the:

Posterior cutaneous nerves of the thigh (S1, S2, S3)

### 4-Lower Lateral quadrant is supplied by the:

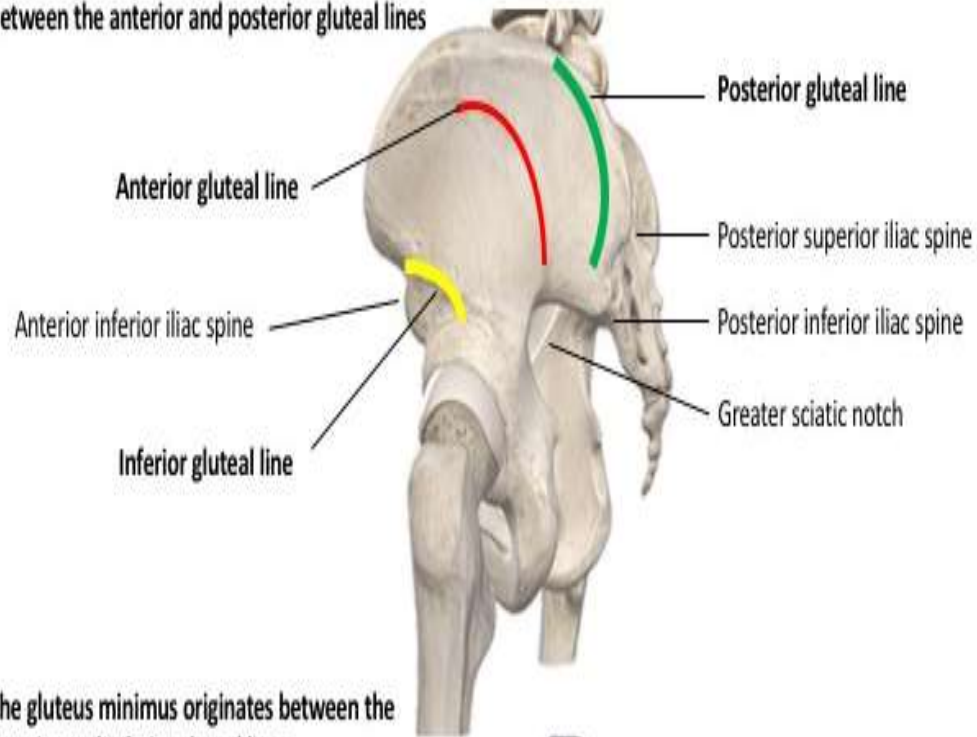
Lateral cutaneous nerves of the thigh (L2, L3).



## **I- Muscles**

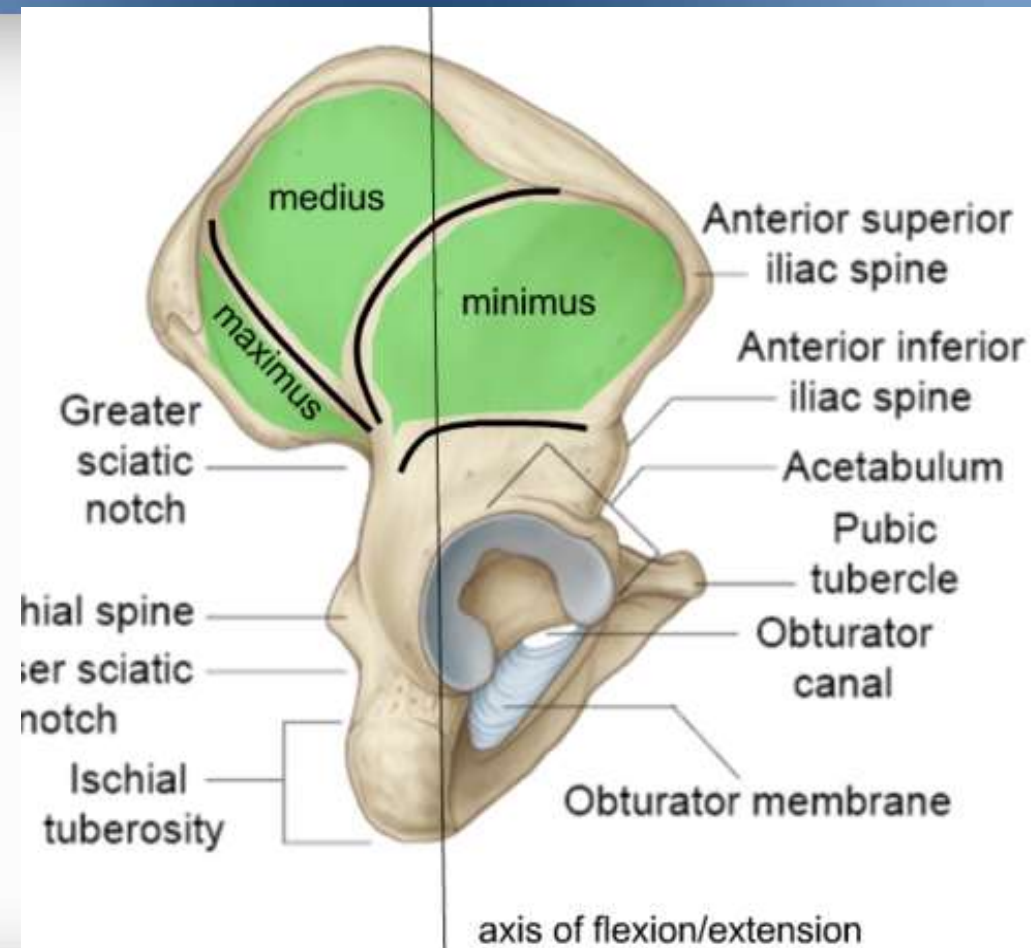
1. Gluteus maximus
2. Gluteus medius
3. Gluteus minimus
4. Tensor fascia latae

The gluteus medius originates on the iliac crest between the anterior and posterior gluteal lines

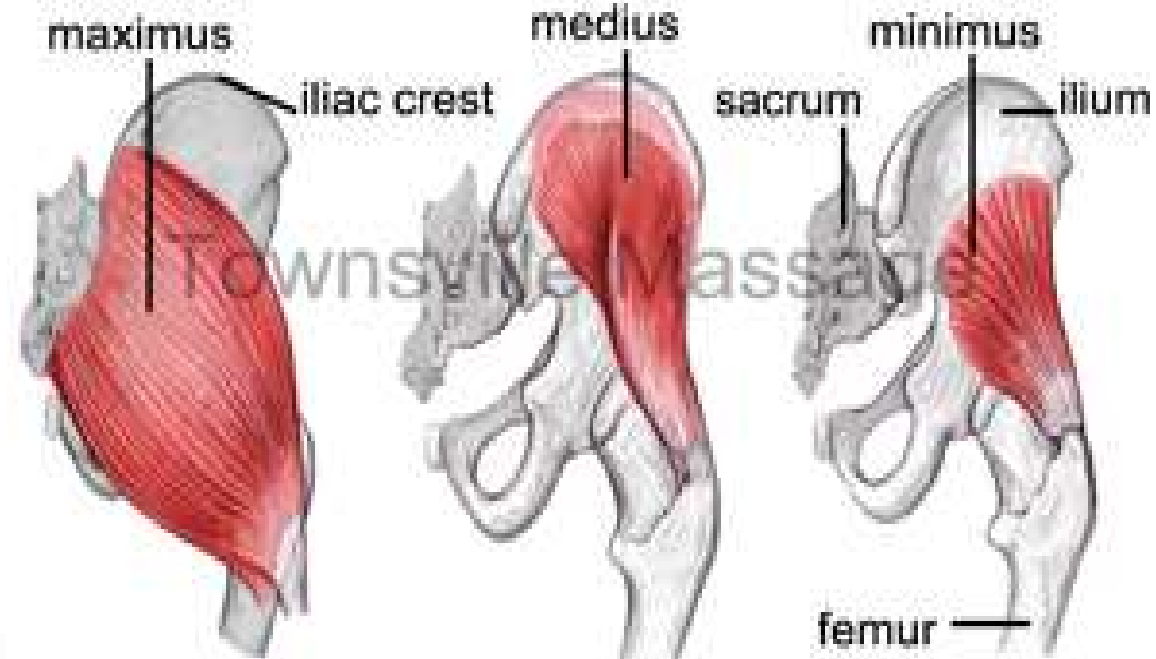
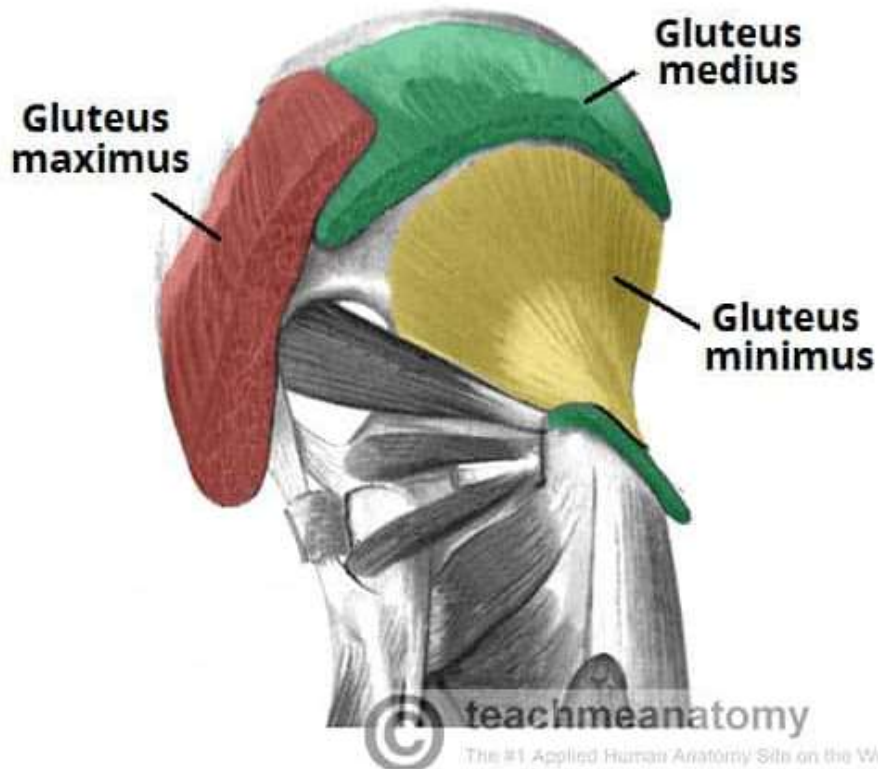


The gluteus minimus originates between the anterior and inferior gluteal lines

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# Gluteal Muscles



All are innervated by the **Superior** gluteal nerve  
**EXCEPT**  
Gluteal maximus by inferior gluteal nerve



# Gluteus maximus

**Origin :** Outer surface of Ilium, sacrum , coccyx and sacrotuberous ligament

**Insertion :**

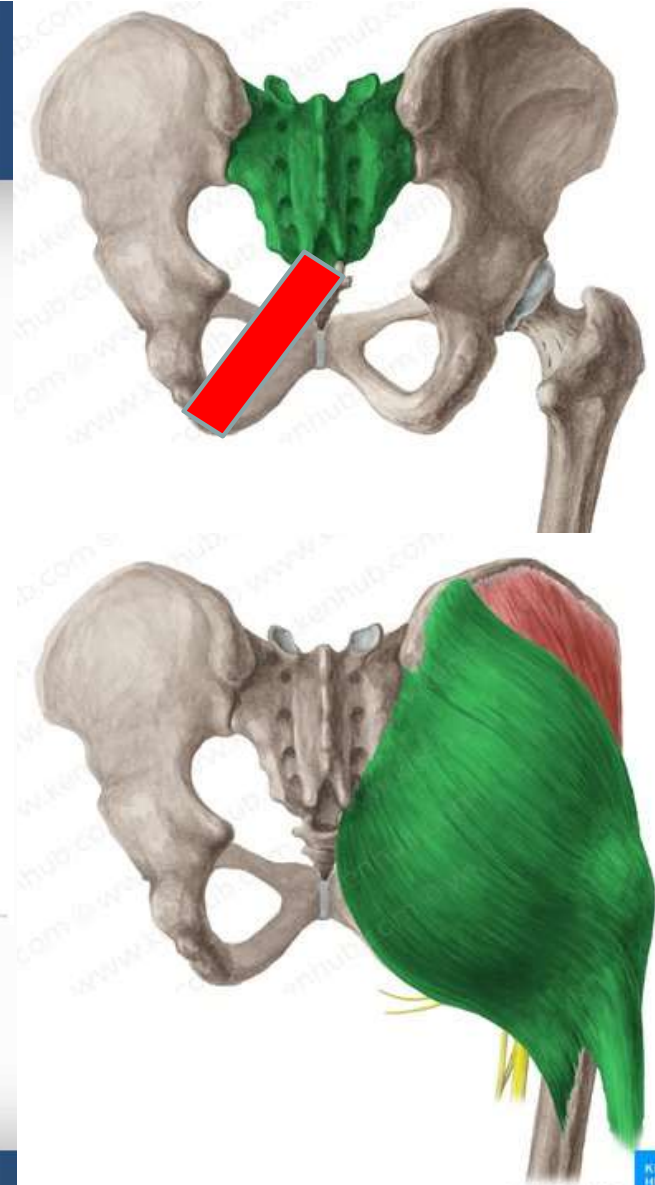
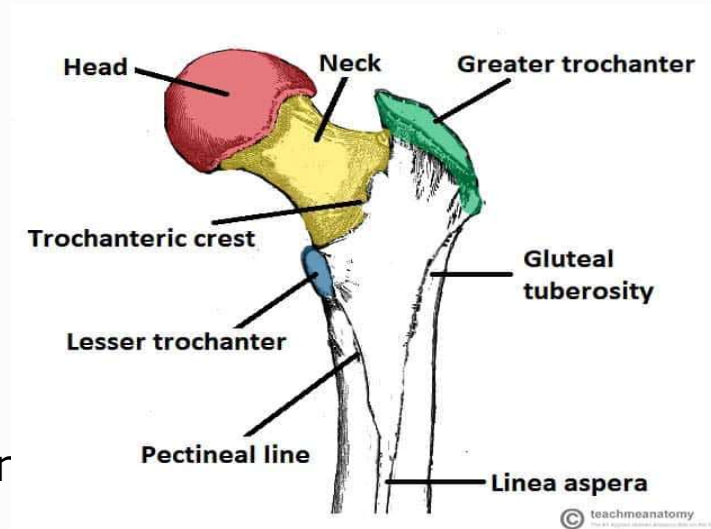
Gluteal tuberosity of femur  
Iliotibial tract

**Nerve Supply:**

Inferior gluteal nerve

**Action :**

- ❑ Extends and lateral rotation of thigh.
- ❑ Extends the knee (through iliotibial tract)



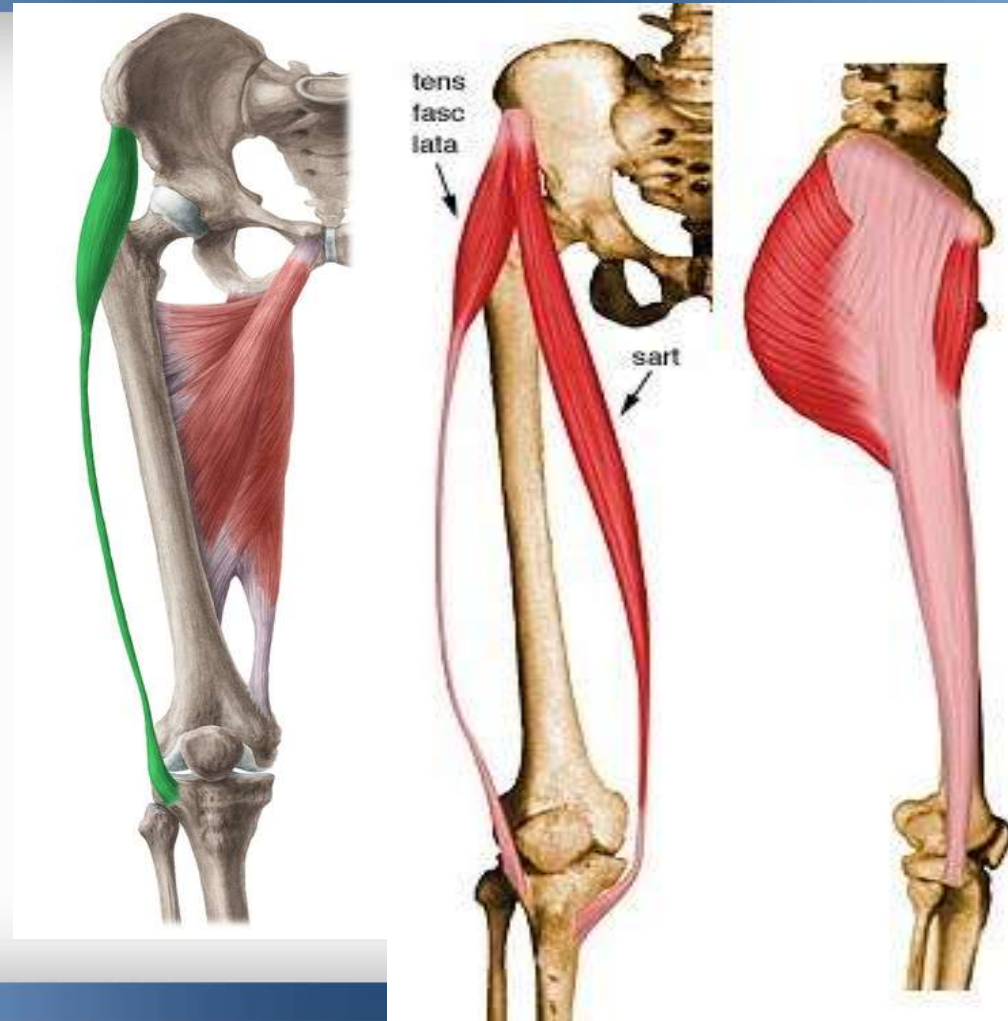
# Tensor fascia latae

**Origin:** Iliac crest

**Insertion :** iliotibial tract

**Nerve supply :** Superior gluteal nerve

**Action :** Helps gluteus maximus in extending the knee joint



## Gluteus medius and minimus

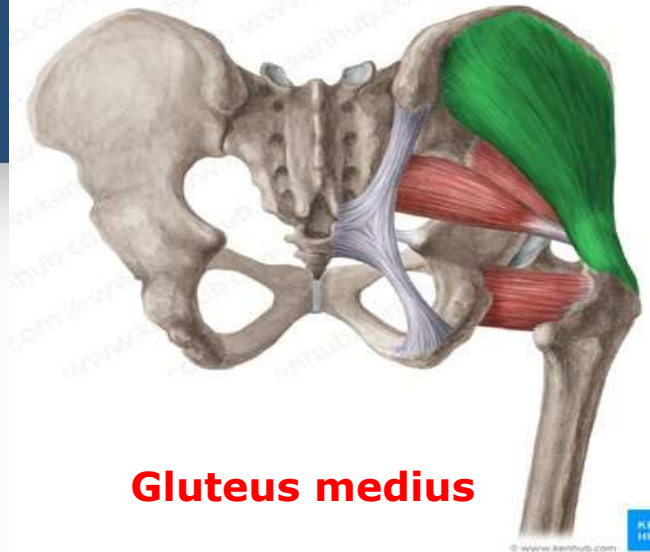
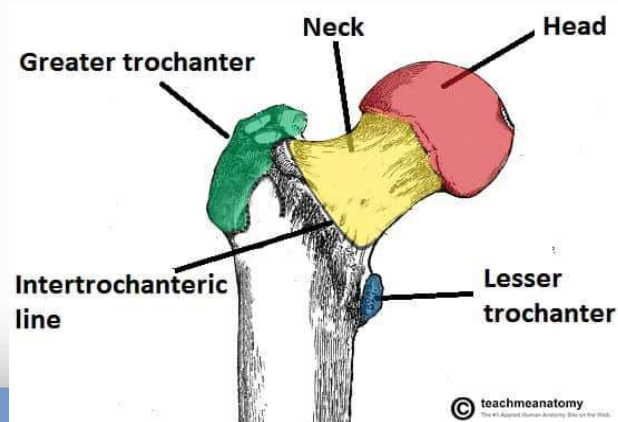
**Origin:** Outer surface of Ilium

**Insertion :** Greater trochanter of femur

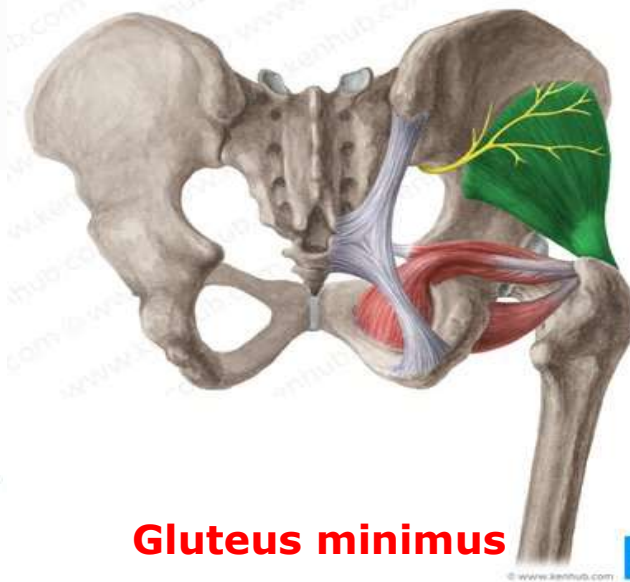
**Nerve supply :** Superior gluteal nerve

**Action :**

- ❖ Abduction
- ❖ Prevent tilting of the pelvis when the opposite limb is raised



**Gluteus medius**



**Gluteus minimus**



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# Clinical Anatomy

1. In unilateral paralysis of Gluteal medius and minimus, the patient exhibits a lurching gait with a positive Trendelenburg's sign.

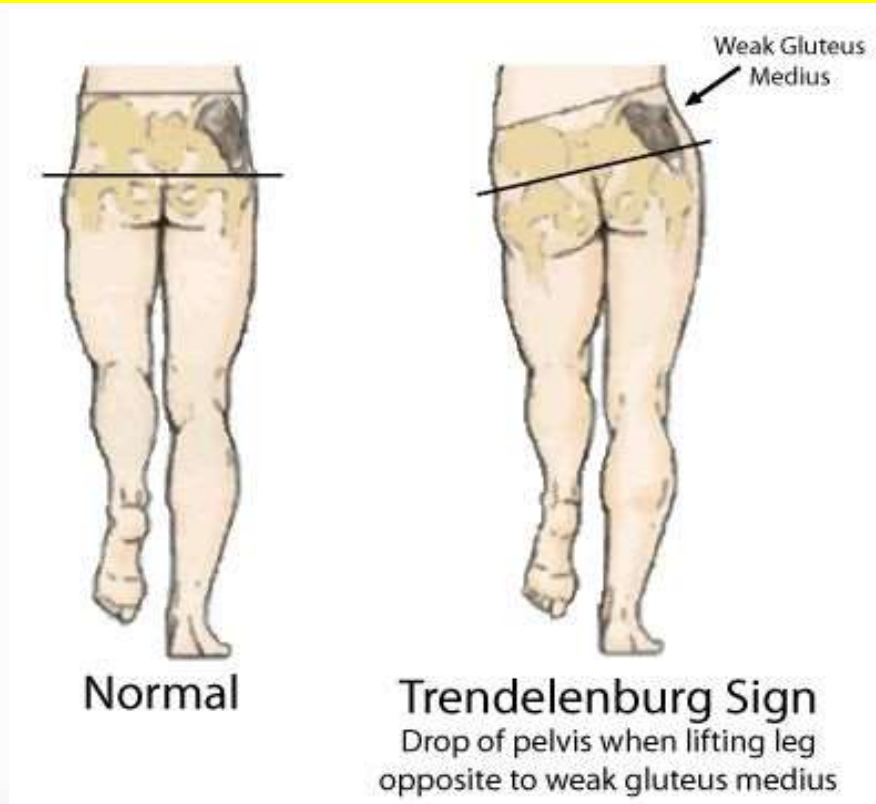
In standing on the affected side, the pelvis will tilt towards the unsupported side.

2. In bilateral paralysis of Gluteal medius and minimus, the patient exhibits a waddling gait in which the trunk is flexed from side to side with each step during walking.

**On standing on the diseased side the sound side sags**

# Paralysis of gluteus medius and minimus

On standing on the diseased side the sound side sags



Trendelenburg test

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## Injury of superior gluteal nerve

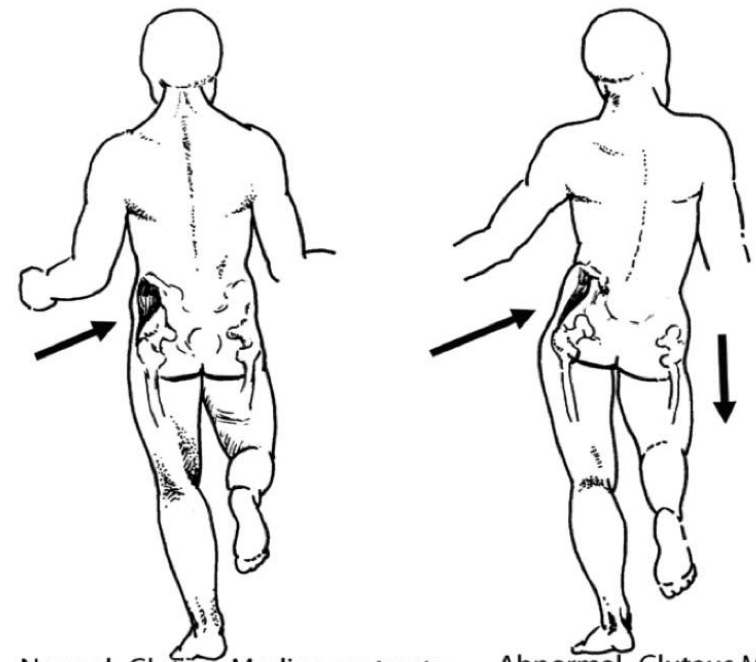
Unilateral injury of superior gluteal nerve leads to lurching gait.

Bilateral injury of superior gluteal nerve leads to waddling gait.



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Trendelenberg Test



Normal- Gluteus Medius contracts  
Opposite hip is elevated

Abnormal- Gluteus Medius weak- opposite hip drops

# Lateral rotators of the thigh

1-Piriformis

2-Obturator internus

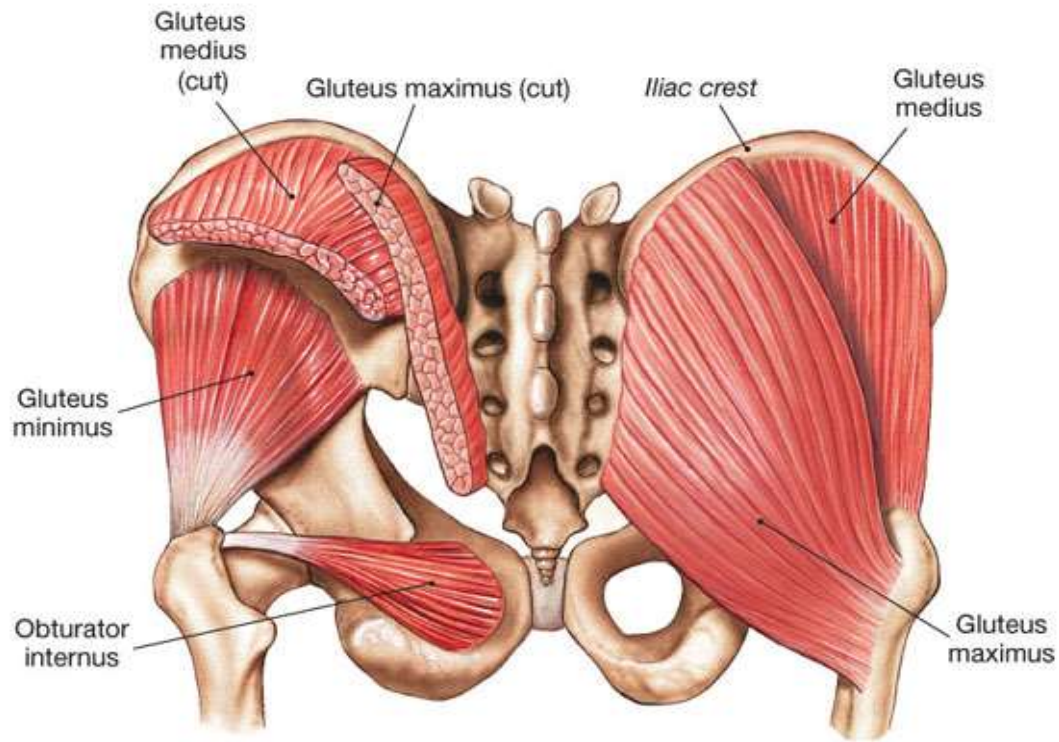
3-Superior gemillus

4-Quadratus femoris

5-Inferior gemillus

6-Obturator externus





(c) Gluteal and lateral rotators, posterior view

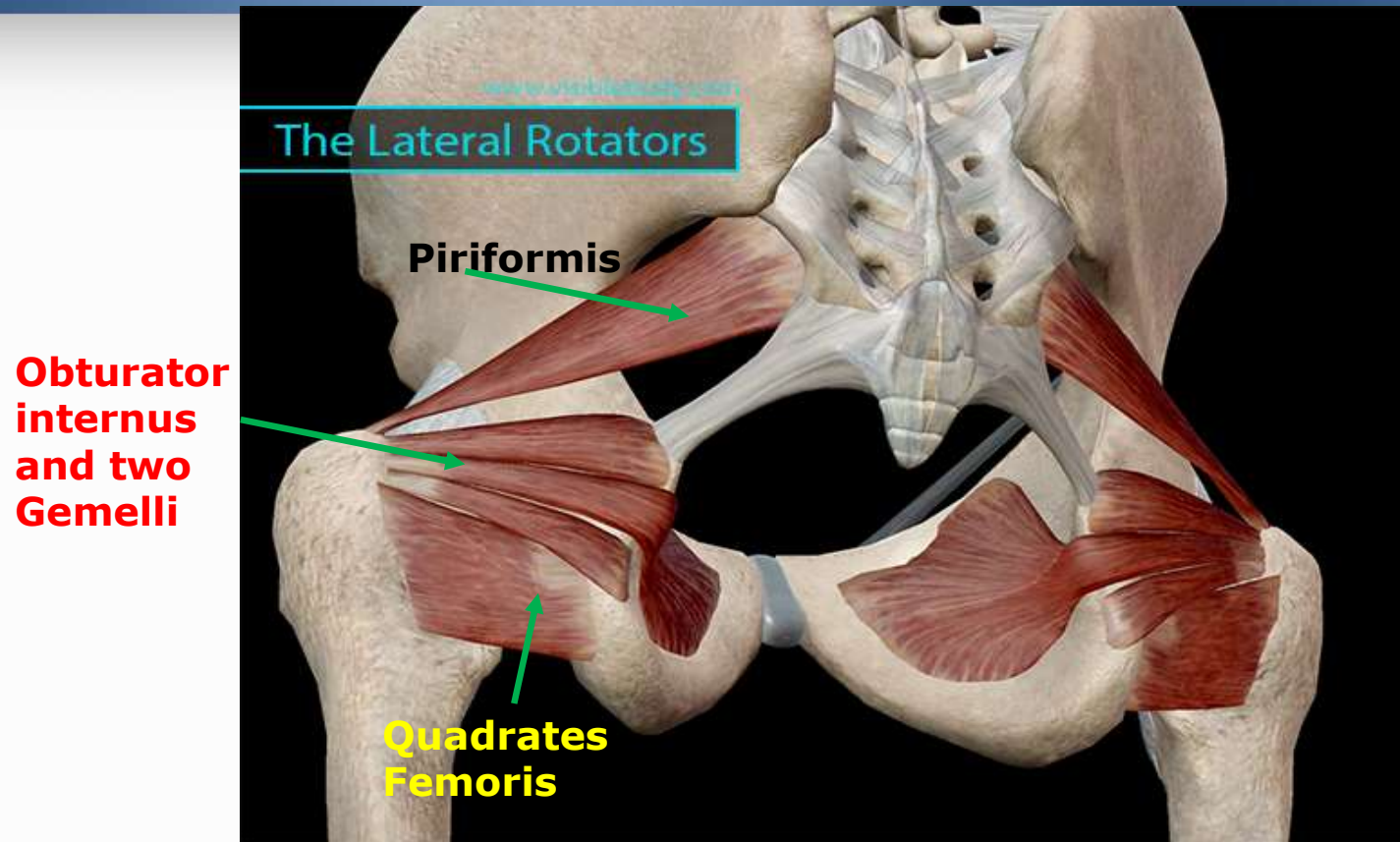
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## Lateral Rotators



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# Lateral rotators of the thigh

1-Piriformis

N.S: S1,S2

2-Obturator internus

N.S: Nerve to obturator internus

3-Superior gemillus

N.S: Nerve to obturator internus

4-Quadratus femoris

Nerve to quadratus femoris.

5-Inferior gemillus

N.S: Nerve to quadratus femoris.

6-Obturator externus:

N.S: Obturator nerve

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## Identify the marked muscles and their nerve supply

A-

B-

C-

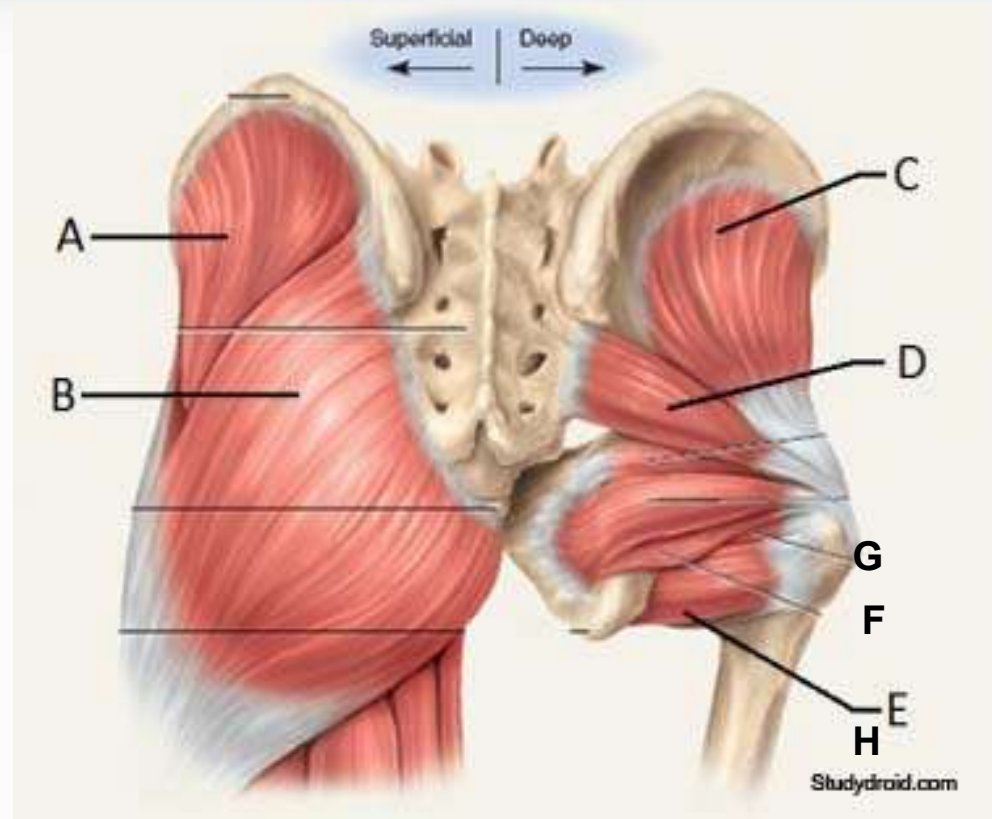
D-

E-

F-

G-

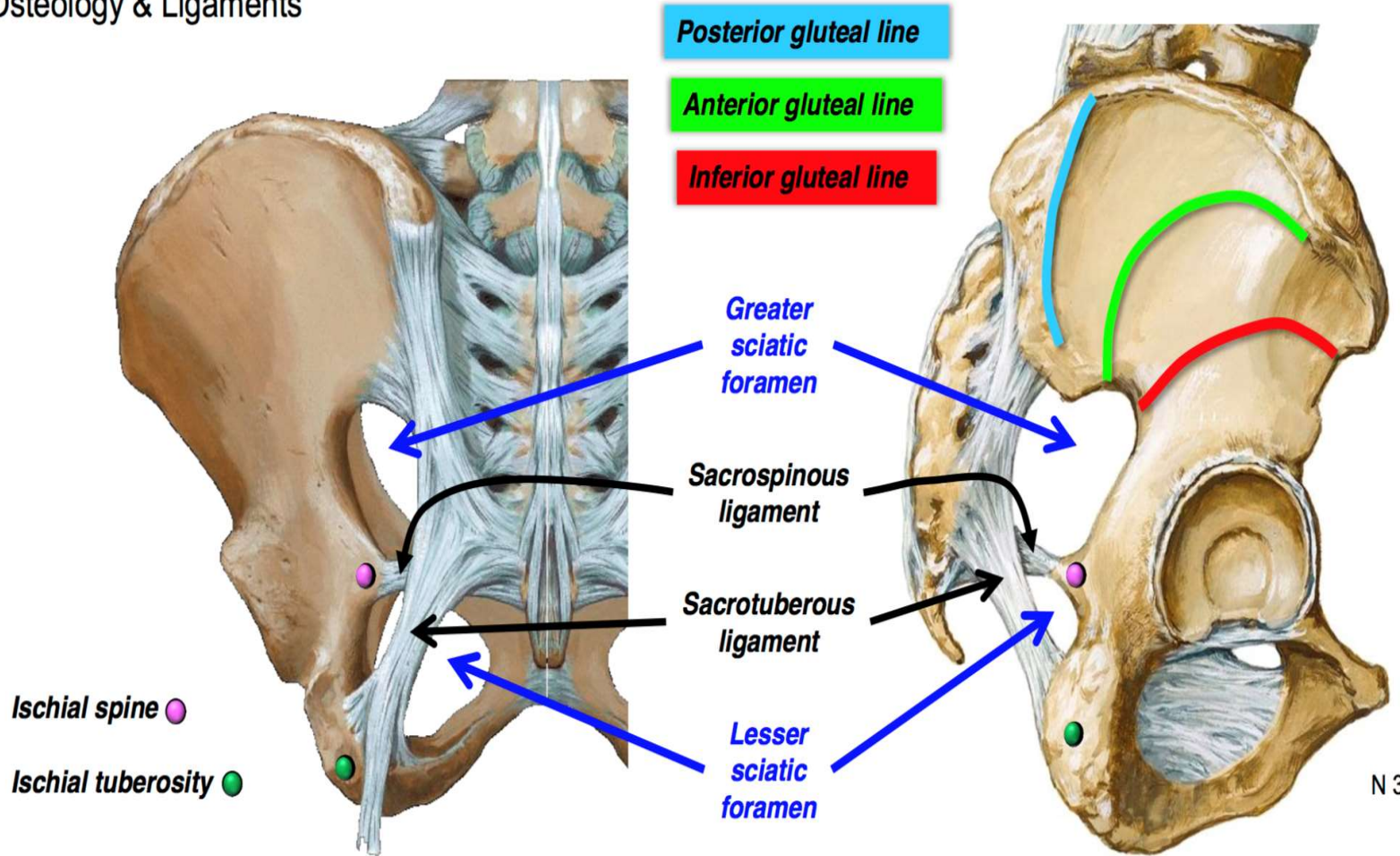
H-



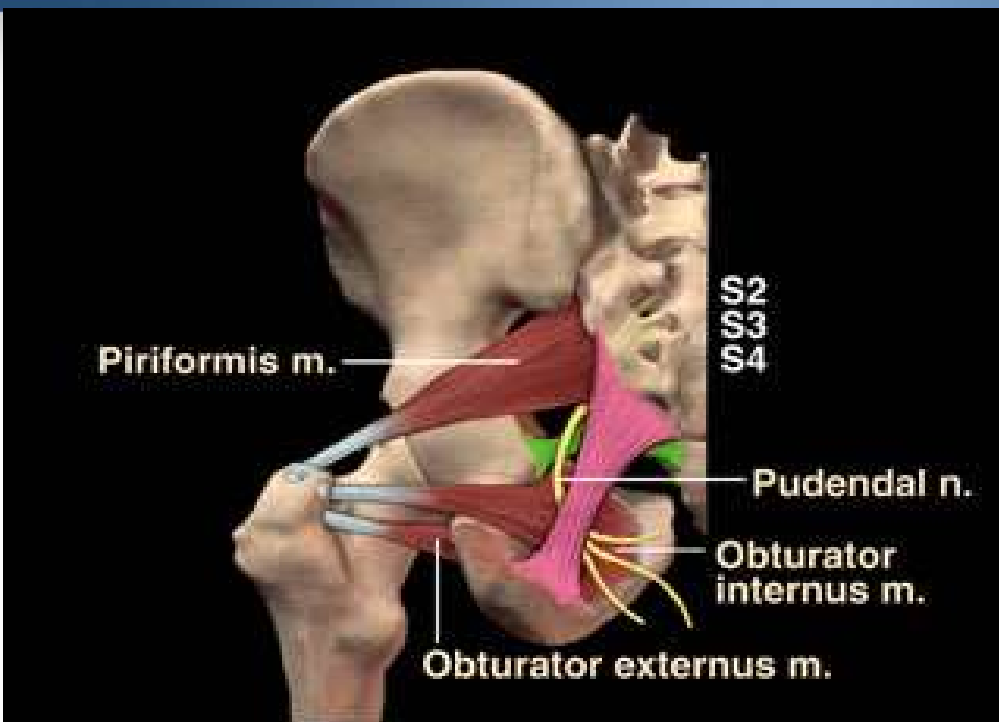
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# Greater and lesser sciatic foramens

Osteology & Ligaments



# Greater and lesser sciatic foramens



## **Sacrospinous ligament**

Between ischial spine and back of sacrum & coccyx

## **Sacrotuberous ligament**

Between ischial tuberosity and back of sacrum & coccyx

## **Greater sciatic foramen**

Between **greater sciatic notch**, sacrospinous and sacrotuberous ligaments.

## **Lesser sciatic foramen**

Between **lesser sciatic notch**, sacrospinous and sacrotuberous ligaments.

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# Structures Passing in Greater and Lesser Sciatic Foramen

**Greater sciatic foramen** (7 nerves+3 vessels+1 muscle)

## **Above Piriformis**

Superior gluteal nerve and vessels

## **Below Piriformis**

- Sciatic nerve
- Posterior cutaneous nerve of the thigh
- Inferior Gluteal nerve and vessels
- Nerve to Quadratus femoris
- **Pudendal nerve**
- **Internal pudendal vessels**
- **Nerve to Obturator Internus**

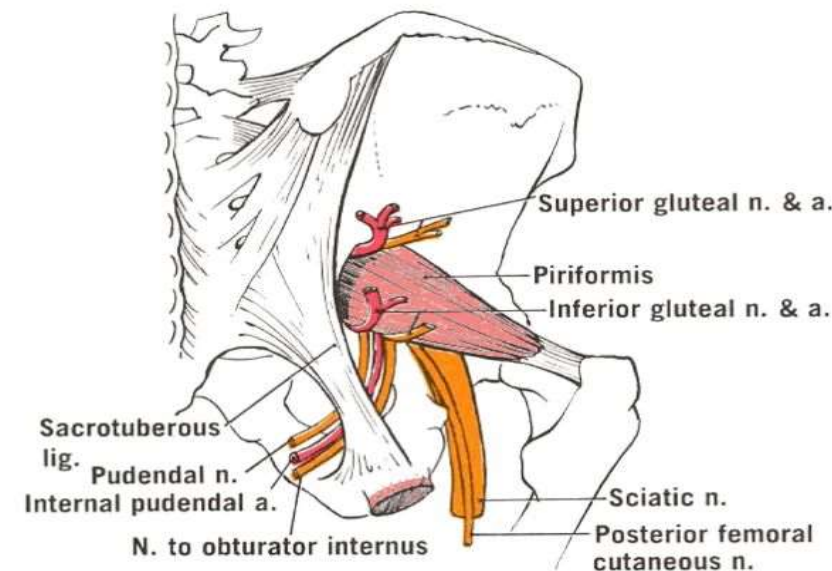
## **Lesser Sciatic foramen**

- Tendon of Obturator Internus Muscle
- **Pudendal nerve**
- **Internal pudendal vessels**
- **Nerve to obturator internus**

**Note each foramen contain a muscle**

**Greater sciatic foramen : Piriformis**

**Lesser Sciatic foramen : Obturator Internus**



THANK  
YOU!



Desi  
10.1.1986