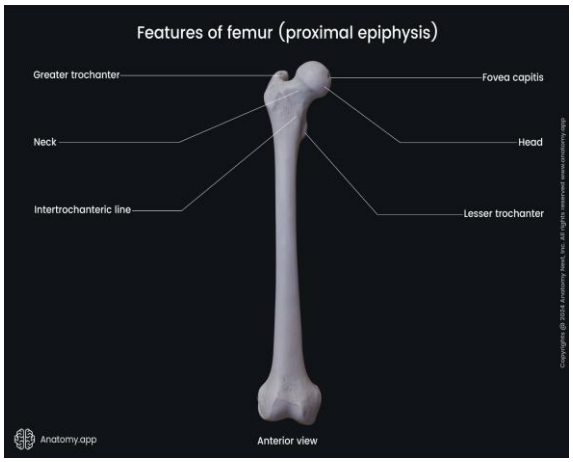
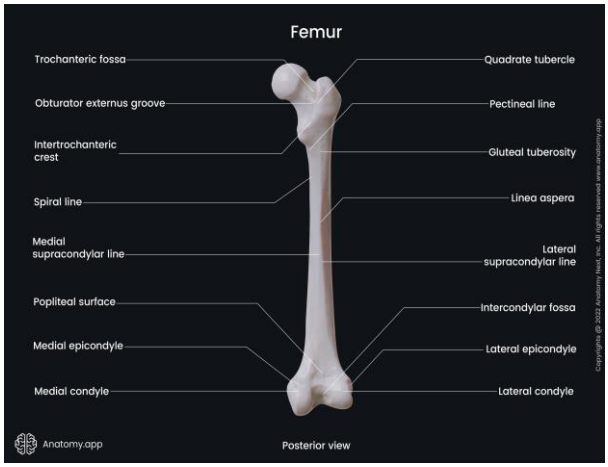
Topic: Femur (Thigh Bone):



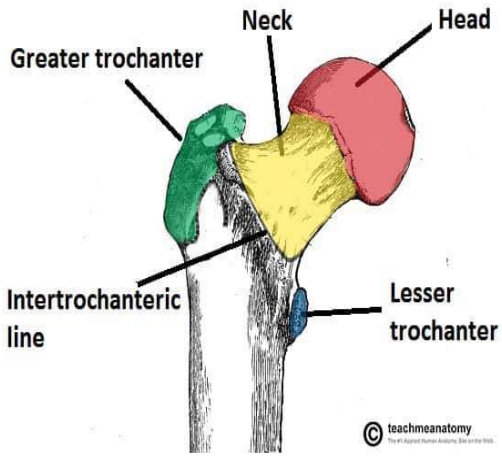
anatomy.app

simplenursing.com

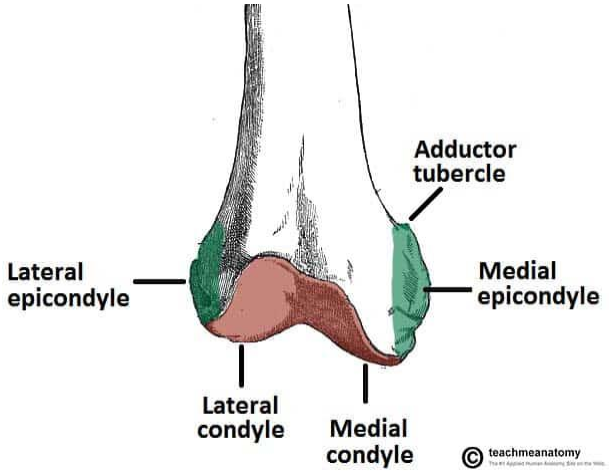


anatomy.app

simplenursing.com



teachmeanatomy.info



teachmeanatomy.info

1. In the osteology lab, you hold the longest bone in the human body. Name it and state why it is called the "typical long bone" example.
2. The femur has proximal and distal ends. Identify the rounded **head** at the proximal end – what fraction of a sphere does it form, and which bone does it articulate with?
3. Just below the head, identify the constricted part – name it and the muscle that commonly avulses it in athletes (iliopsoas).
4. On the proximal posterior surface, identify the prominent **greater trochanter** – name TWO muscles inserting on its anterior aspect (gluteus minimus & ?).
5. Between greater and lesser trochanters posteriorly, there is a deep ridge – name it and the muscle originating from it (quadratus femoris).
6. Identify the **lesser trochanter** on the medial proximal femur – name the single major muscle inserting there.
7. On the shaft, posterior surface, identify the rough vertical line – name it (full term) and its function in attachments.
8. The shaft has three surfaces: anterior, medial, lateral – and three borders. Name the border that is most prominent and spiral in direction.

9. Distal end: Identify the two large condyles – which one is larger/more prominent laterally, and why (weight transmission)?
10. Between the condyles posteriorly, identify the deep notch – name it and the two ligaments attaching within (ACL & PCL).
11. On the lateral surface of the lateral condyle, identify the projection – name it and one muscle originating from it (gastrocnemius lateral head).
12. Proximal attachments scenario: The rough area on the anterior greater trochanter is the insertion for which muscle (gluteus medius)?
13. Shaft attachments: The spiral rough line on the posterior medial shaft is part of linea aspera – name the muscle originating from its medial lip (vastus medialis).
14. Clinical integration: In femoral neck fracture, the distal fragment is pulled upwards by which muscles attaching to trochanters?
15. Overall attachments: List the insertion sites on femur for gluteus maximus (two sites) and its role in physiotherapy for hip extension.

ANSWER KEY:

1. Femur; classic example of long bone with head, neck, shaft, condyles.
2. Head forms 2/3 of a sphere; articulates with acetabulum of hip bone.
3. Neck; lesser trochanter avulsed by iliopsoas tendon.
4. Greater trochanter; gluteus minimus and gluteus medius.
5. Intertrochanteric crest; quadratus femoris.
6. Lesser trochanter; psoas major (and iliacus via iliopsoas).
7. Linea aspera; strengthens bone and provides attachment for adductors/septae.
8. Lateral border (or posterior border in some texts) – spiral linea aspera continuation.
9. Medial condyle larger; bears more weight in stance.
10. Intercondylar fossa/notch; cruciate ligaments.
11. Lateral epicondyle; lateral head of gastrocnemius (and popliteus).
12. Gluteus medius inserts on lateral aspect of greater trochanter.
13. Vastus medialis (medial lip); vastus lateralis on lateral lip.
14. Iliopsoas (lesser trochanter) and gluteus medius/minimus (greater trochanter).
15. Gluteus maximus inserts on gluteal tuberosity (linea aspera) and iliotibial tract; key for hip extension in gait rehabilitation.