

Unit 5:

Bones and joints of the lower limb: pelvic girdle and femur

GENERAL OBJECTIVES:

- recognize, name and correctly orient hip bones and femur
- explain how is anatomy of hip bones/pelvis adjusted to its function
- name and describe all joints of pelvis focusing of anatomical and functional properties
- remember concepts and common structural properties of flat and long bones

SPECIFIC OBJECTIVES:

Bones of the pelvic girdle and femur

HIP BONE

Describe anatomical position of the hip bone, which bony elements lay in frontal plane?

Which primary bones fuse to form hip bone?

What are differences between male and female pelvis?

Identify the bony structures on each of the following parts of the HIP BONE.

Ileum: the body and alae,

- Iliac crest
- Gluteal surface and lines
- Iliac fossa
- Sacral side with auricular surface and iliac tuberosity

Pubis: the body and rami (superior and inferior)

- Superior ramus
- Inferior ramus

Ischium: the body and ramus

- Ischial spine and tuberosity
- Greater and lesser sciatic notches

Acetabulum

Obturator foramen

FEMUR

- Upper (proximal) end: head, neck, angles, trochanters, intertrochanteric crest, trochanteric fossa

- Shaft: linea aspera with lips
- Lower (distal) end: condyles, intercondilar fossa, patellar surface,

Joints of the pelvis and hip

Bony Pelvis (Hip Bones, Sacrum & Coccyx)

Bony Features & Articular Surfaces

Attachments of: *Ligaments & Muscles*

Lesser Pelvis

Pelvic Brim -> Pelvic Inlet (Superior Aperture)

Lateral & Posterior Walls: Obturator & Sciatic Foramina

Pubic Arch, Ischial Tuberosity & Tip of Coccyx -> Pelvic Outlet

Sex Differences between Male & Female Pelves

Joints

Lumbosacral: *Intervertebral Disc & Facet Joints*
Iliolumbar Ligament
Sacroiliac: *Articular Surfaces & Interosseus Ligaments*
Accessory Ligaments: Sacrotuberous & Sacrospinous
Sacrococcygeal
Pubic Symphysis

Hip Joint

Articular Surfaces

Fibrous Capsule & Retinacula (with blood supply to head of femur)

Synovial Membrane

Ligaments: Iliofemoral

Pubofemoral, Ischiofemoral

Transverse Acetabular, Ligament of Head

Special Structures:

Acetabular Labrum, Bursae, Pad of Fat

Movements at the Hip Joint:

Flexion/Extension

Adduction/Abduction

Medial Rotation/Lateral Rotation

Stability