Bones of the lower extremity

The Pelvic Girdle attaches the limbs to the Axial Skeleton at the Sacrum. Sacrum NOT part of Pelvic Girdle!!!

The Pelvic Girdle composed of 2 hip bones (aka Os Coxae). Each hip bone composed of 3 bones that have fused together.

1. **Ilium** - the flared superior part
2. **Ischium** - lower posterior (dorsal) part
3. **pubis** – the anterior (ventral) part

Right and left hips bones joined anteriorly at pubic symphysis (fibrocartilage)
1. **Ilium**
   1a. iliac crest
   1b. anterior superior iliac spine
   1c. anterior inferior iliac spine
   1d. posterior superior iliac spine
   1e. posterior inferior iliac spine
   1f. greater sciatic notch (draw)

2. **Ischium**
   2a. ischial spine
   2b. ischial tuberosity
   2c. ramus of ischium

3. **Pubis**
   3a. inferior pubic ramus

4. **acetabulum**
5. **obturator foramen**

**Acetabulum** - where all 3 bones Join.
Forms the cavity that articulates with head of Femur.

The 3 bones that fuse to form a Hip bone

![Lateral view Right hip bone](image)
1. **Ilium**
   1a. iliac crest
   1b. anterior superior iliac spine
   1c. anterior inferior iliac spine
   1d. iliac fossa
   1e. auricular surface
   Auricle surface of ilium articulates with auricular surface of sacrum. Where pelvic girdle attaches to axial skeleton. Forms the Sacroiliac joint (SI joint)

2. **Ischium**
   2a. ischial spine
   2b. ramus of ischium

3. **Pubis**
   3a. superior pubic ramus
   3b. inferior pubic ramus
The Pelvis = the 2 hip bones (pelvic girdle) articulated with the sacrum
Red dots form the outline of the pelvic brim which separates the
True Pelvis from False Pelvis. In OB when the baby “drops”
It is said to of dropped into the true pelvis.

Terms to know in an articulated pelvis:
-Pelvis vs pelvic girdle-

-pelvic brim=

-false pelvis=
-true pelvis=

-pubic arch (angle=)

1. sacrum (axial skeleton)
2. ilium
3. Ischium :
   3e= ramus of the ischium
   3f= ischial spine
4. Pubis :
   4b= superior pubic ramus
   4c= inferior pubic ramus
5. pubic symphysis (fibrocartilage)
6. Acetabulum
7. Obturator foramen

Pelvic girdle attaches lower limbs to the axial skeleton (sacrum)
Know the main differences between female and male pelvis. See your lecture notes! Form determines function indeed!

<table>
<thead>
<tr>
<th>Feature</th>
<th>Female Pelvis</th>
<th>Male Pelvis</th>
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<tbody>
<tr>
<td>Pelvic inlet shape</td>
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<td>Pubic angle/Arch</td>
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<td>Acetabulum</td>
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<td>Ischial tuberosities</td>
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<td>Coccyx</td>
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</table>
Right Femur- head of femur articulates with the acetabulum of the hip bone. Femur the largest bone of the body!

1. Head  
2. neck  
3. greater trochanter  
4. lesser trochanter  
5. linea aspera  
6. lateral epicondyle  
7. medial epicondyle  
8. patellar surface  
9. medial condyle  
10. intercondylar fossa  
11. lateral condyle

The weakest part of the femur is? (the part that “breaks” when grandma falls and breaks her hip.)
Lower leg bones: Tibia and Fibula

The weight from the femur is transferred to the tibia. The fibula bears no weight! Fibula a site for muscle attachment.

Tibia (thick inner bone)
1. lateral condyle
2. intercondylar eminence
3. medial condyle
4. tibial tuberosity
5. medial malleolus

Tibial tuberosity-
Where the might quadriceps muscles insert via patellar ligament.
Lots of surface area!!

Fibula- the lateral bone
6. Head of fibula
7. Lateral malleolus

Articulated Tibia and Fibula
Right Foot

Tarsals
1. talus
2. calcaneous
3. navicular
4. medial cuneiform
5. intermediate cuneiform
6. lateral cuneiform
7. cuboid

In the x-ray notice how the lateral and medial malleolus cup the talus. The “bumps” you feel on the medial and lateral sides of your ankle are these two structures!

Phalanges
9. Proximal phalanges
   1-5 proximal phalanges

Metatarsals
8. Metatarsals
   1-5 metatarsals

Tarsals
“Tiger Cubs Need MILC” your tarsal bones.

Phalanges ("toes") numbered just like fingers. Here the great toe is #1. Again digit # 1 has no middle phalange