Human Anatomy

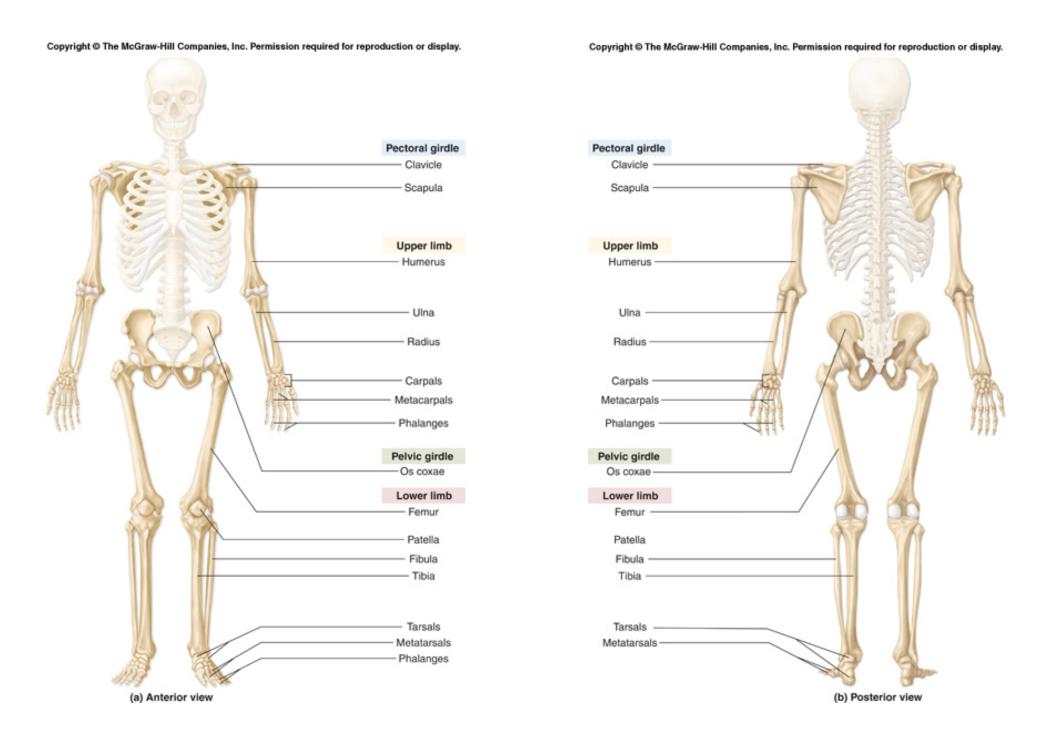
Appendicular Skeleton

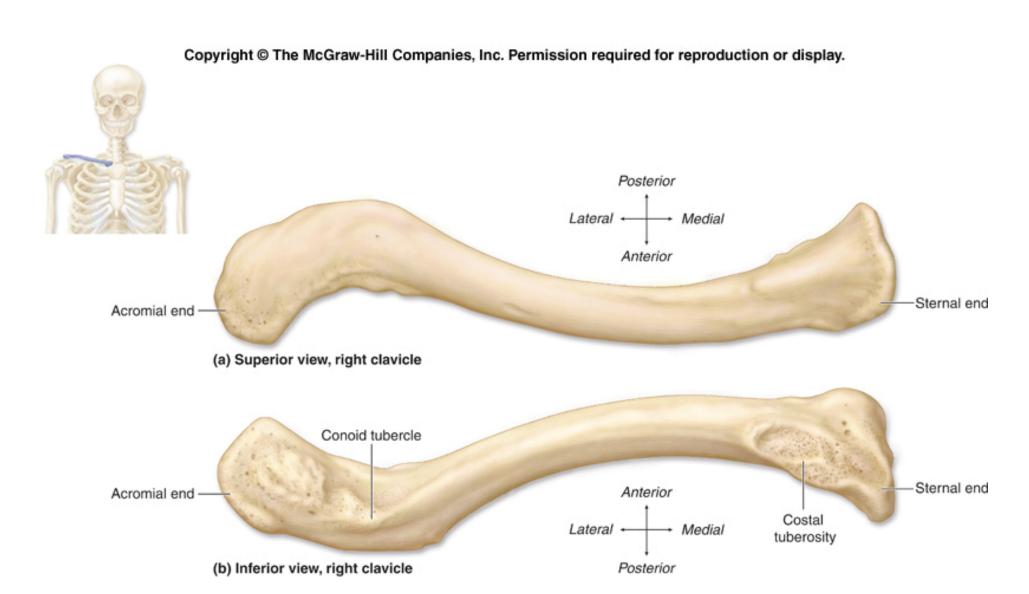
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Appendicular Skeleton

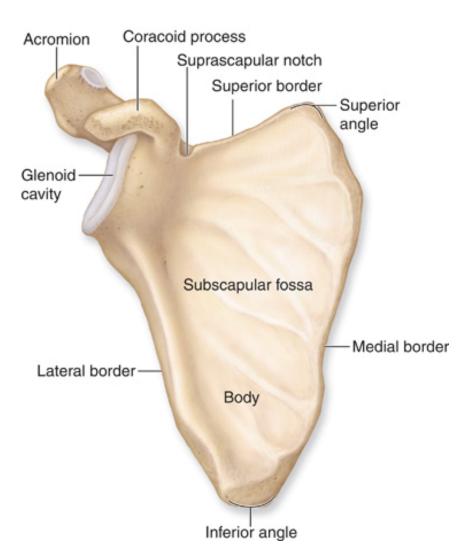
- Includes the bones of the upper and lower limbs.
- The girdles of bones that attach the upper and lower limbs to the axial skeleton.
 - pectoral girdle consists of bones that hold the upper limbs in place
 - pelvic girdle consists of bones that hold the lower limbs in place





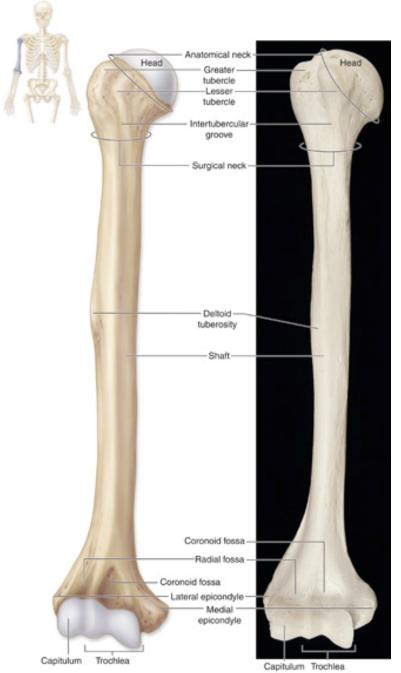
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Inferior angle



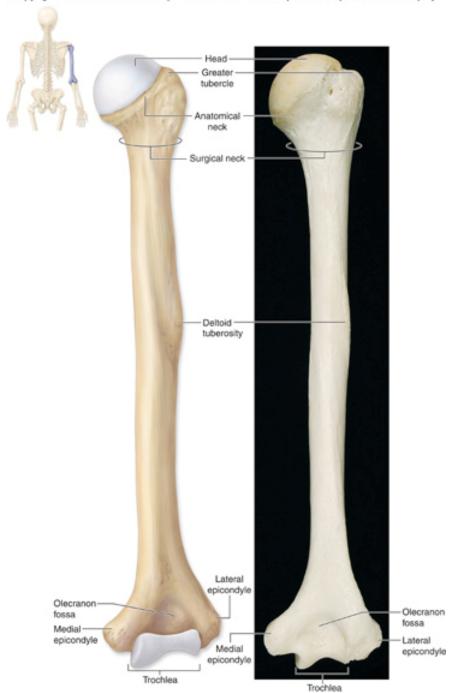
(a) Right humerus, anterior view

Copyright © The McGraw-Hill Companies, Inc. Permission required for reproduction or display. Humerus Lateral epicondyle Medial epicondyle Capitulum -Trochlea Head of radius Ulna Radius

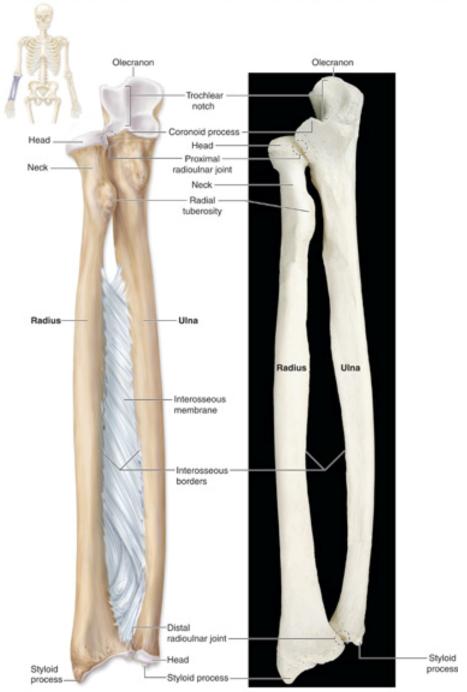
(b) Right elbow joint, anterior view

Copyright © The McGraw-Hill Companies, Inc. Permission required for reproduction or display. Humerus Medial epicondyle Olecranon of ulna Lateral epicondyle Head of radius Ulna

(c) Right elbow joint, posterior view



(d) Right humerus, posterior view

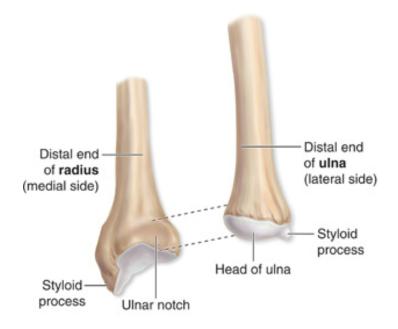


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(b) Right proximal radioulnar joint

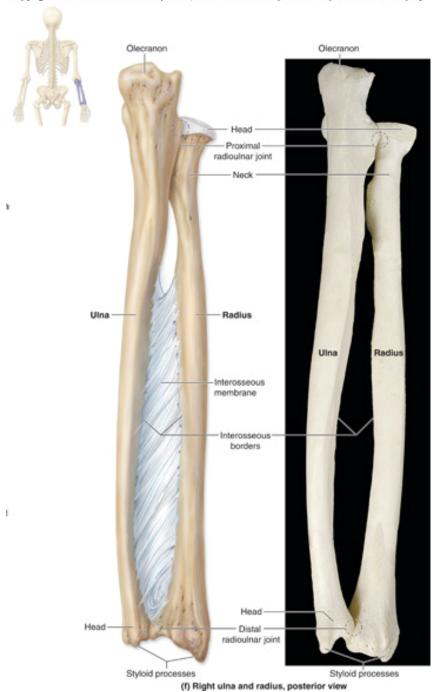


(c) Right distal radioulnar joint

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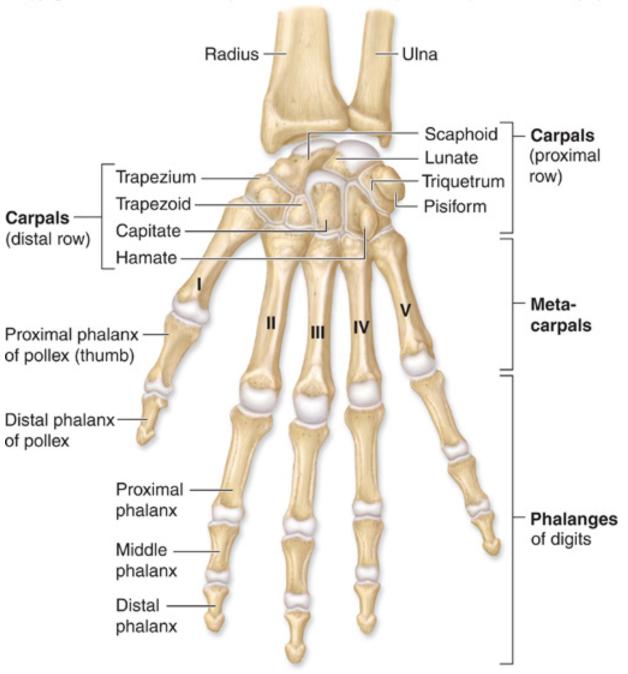
(d) Supination of right forearm

(e) Pronation of right forearm

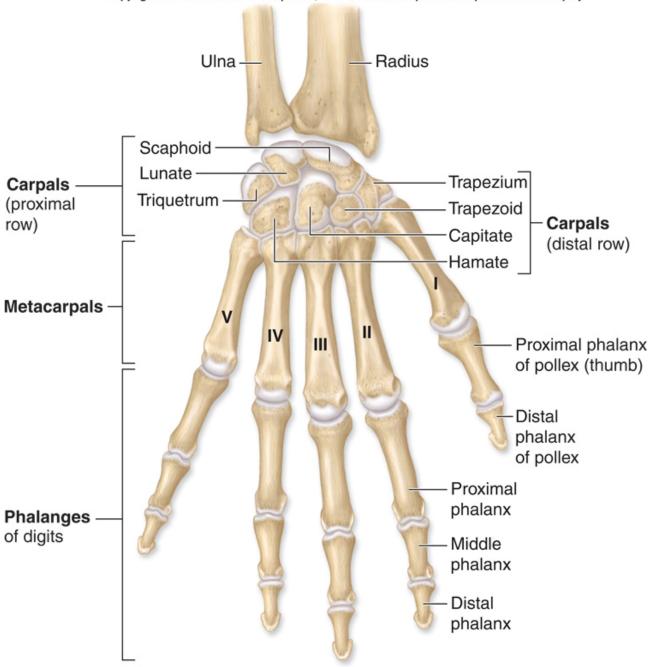


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(a) Right wrist and hand, anterior view

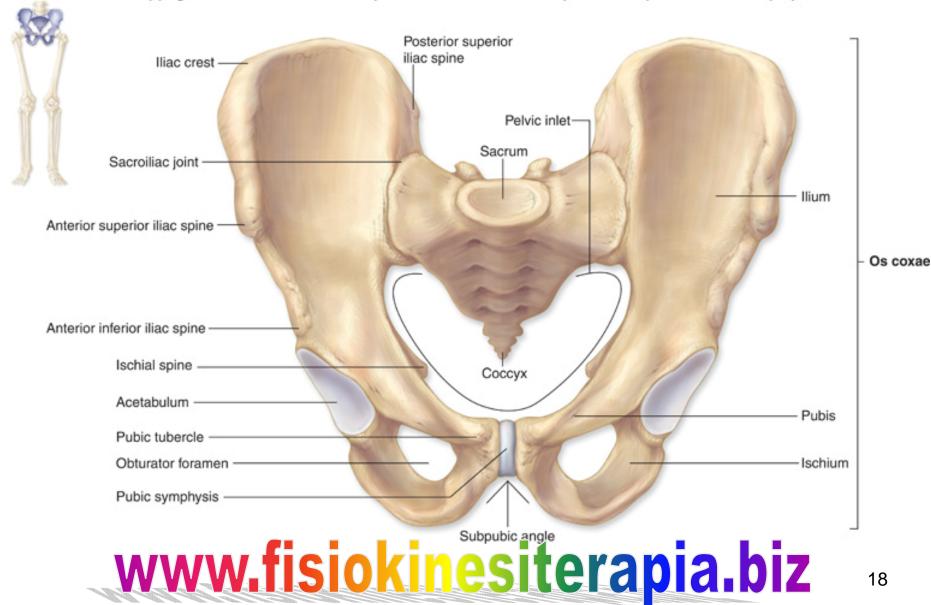


(b) Right wrist and hand, posterior view

Pelvis

- The adult pelvis is composed of four bones:
 - the sacrum, the coccyx, and the right and left ossa coxae.
- Protects and supports the viscera in the inferior part of the ventral body cavity.
- Pelvic girdle refers to the left and right ossa coxae only.

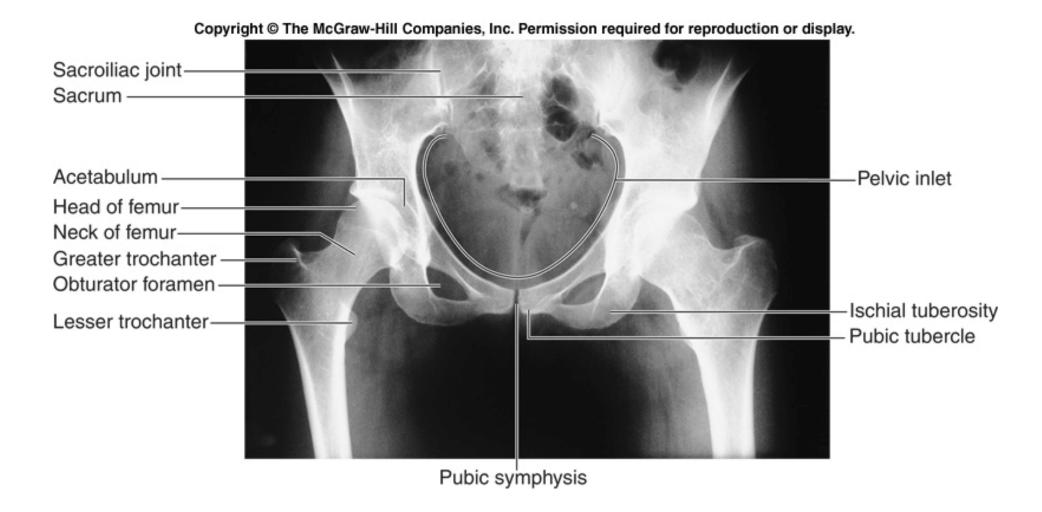
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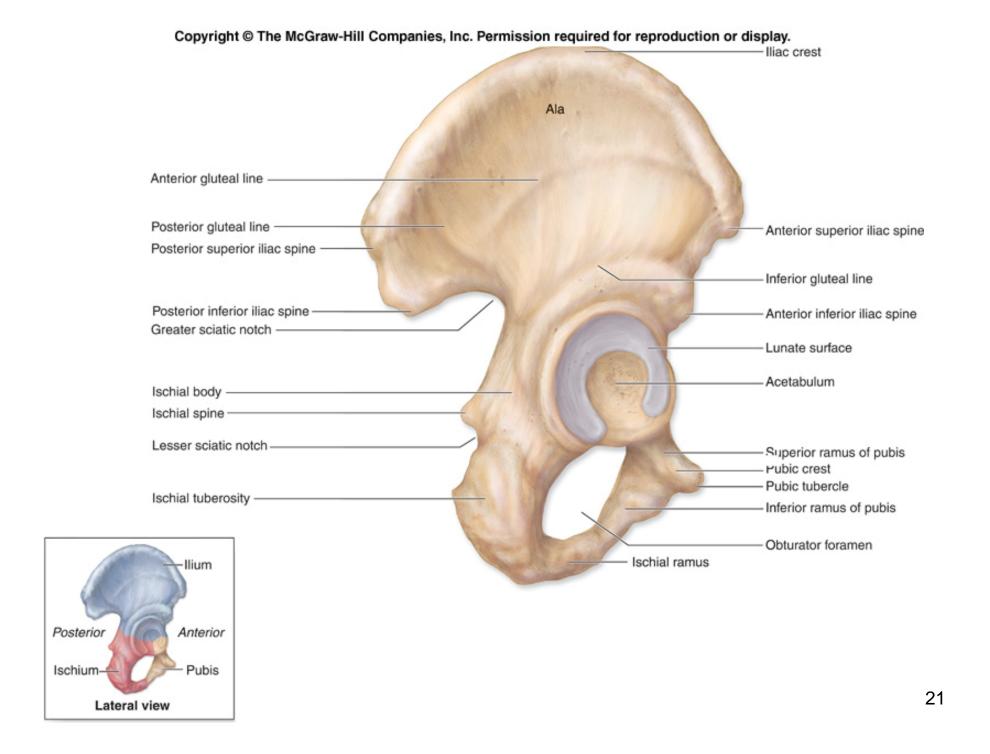


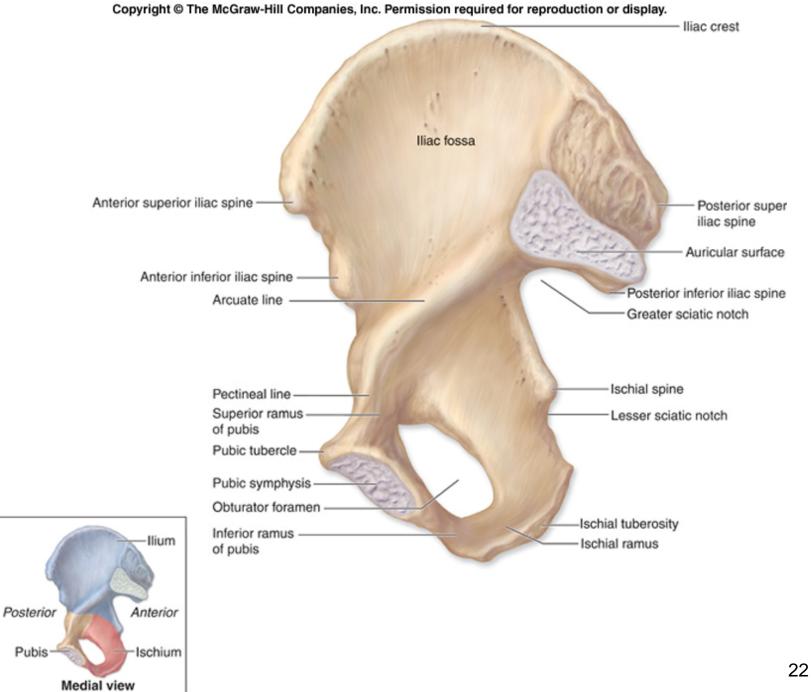


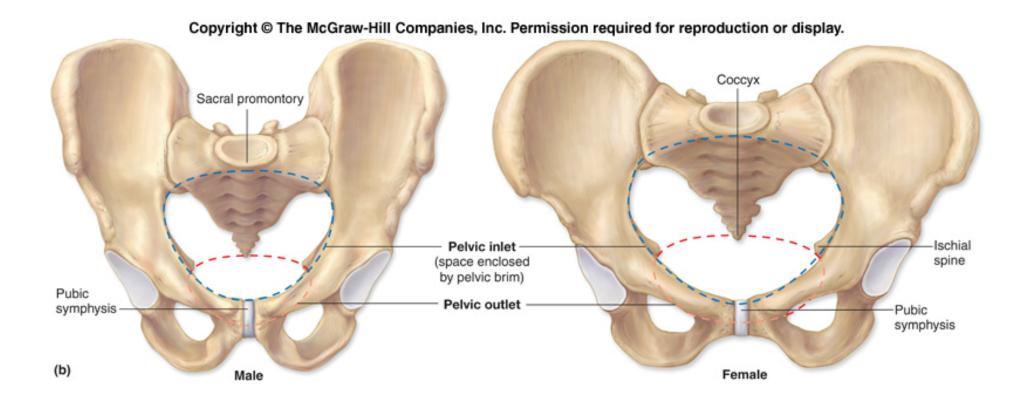
Os Coxae

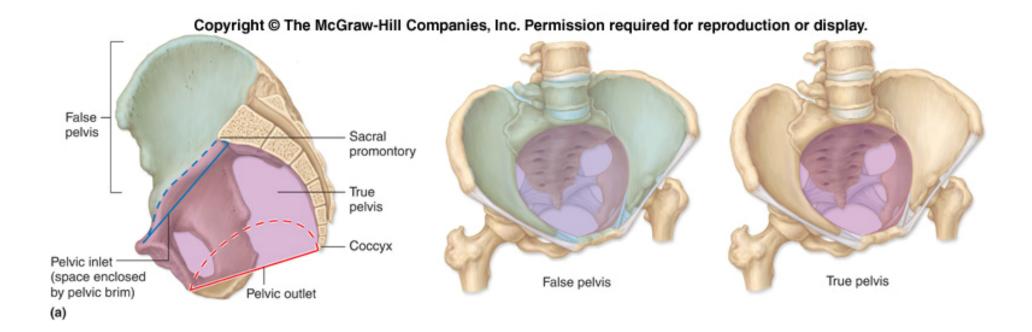
- Commonly referred to as the "hip bone" or innominate bone.
- Each is formed from three separate bones:
 - the ilium, the ischium, and the pubis
- Each articulates posteriorly with the sacrum at the sacroiliac joint.









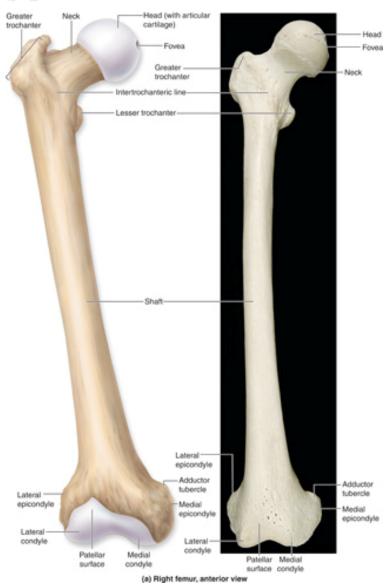




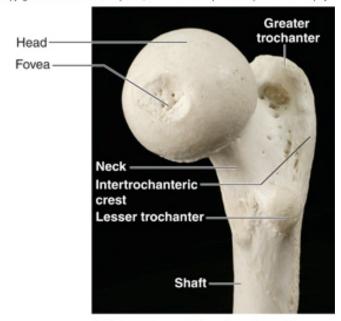
Pelvic Brim

- A continuous oval ridge that helps subdivide the entire pelvis into a true pelvis and a false pelvis.
 - true pelvis lies inferior to the pelvic brim
 - encloses the pelvic cavity and forms a deep bowl that contains the pelvic organs
 - false pelvis lies superior to the pelvic brim
 - enclosed by the ala of the iliac bones
 - forms the inferior region of the abdominal cavity and houses the inferior abdominal organs

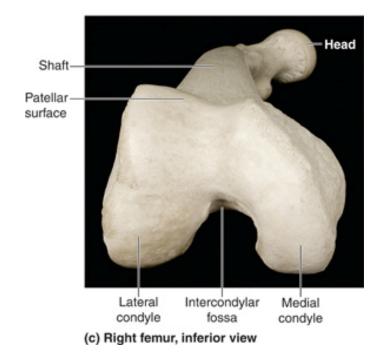




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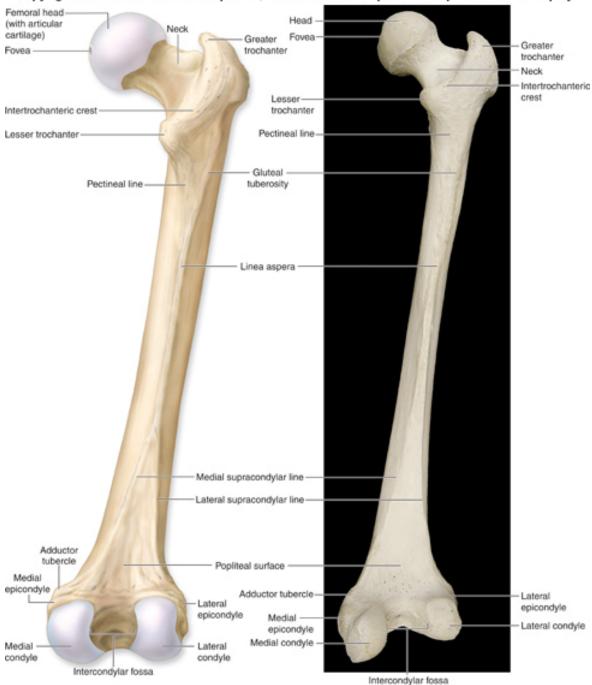


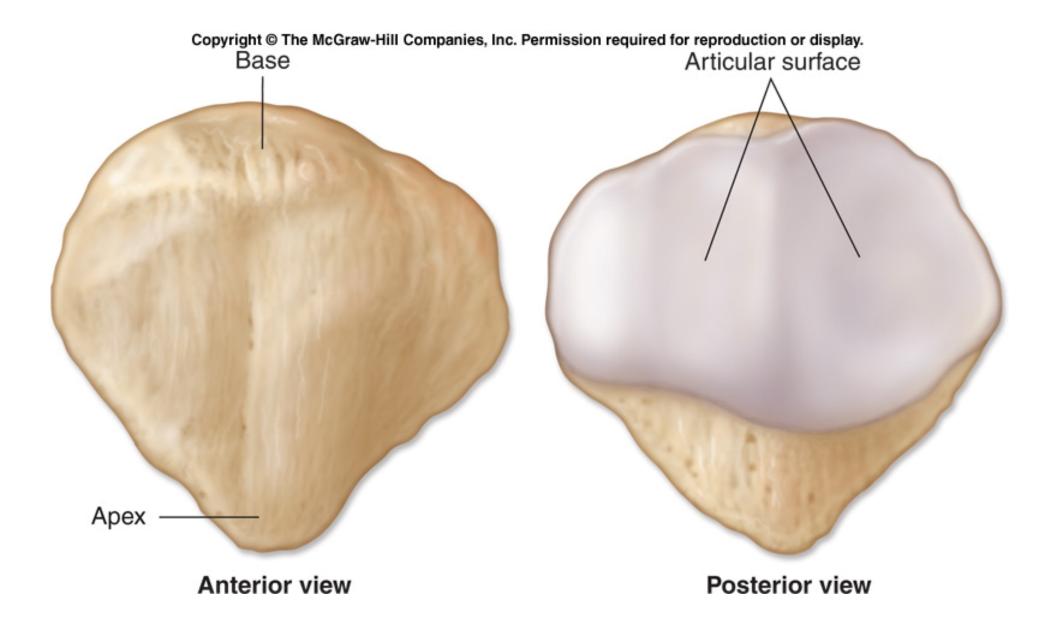
(b) Right femoral head, medial view

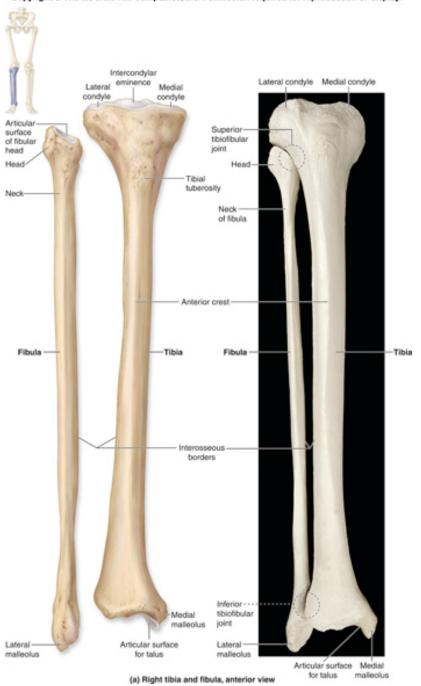


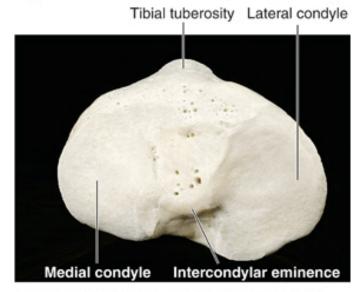
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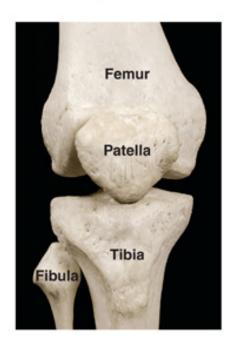






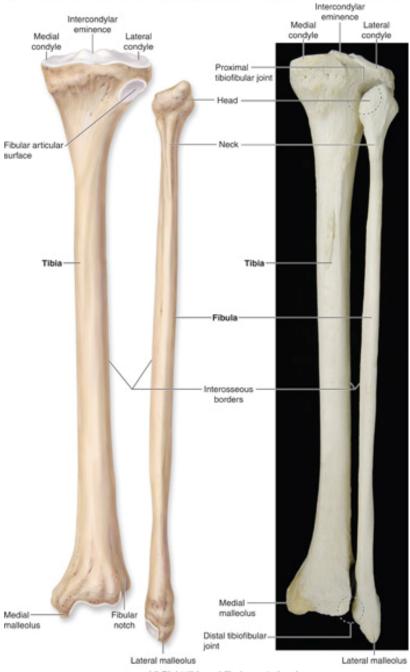


(b) Proximal end of right tibia, superior view



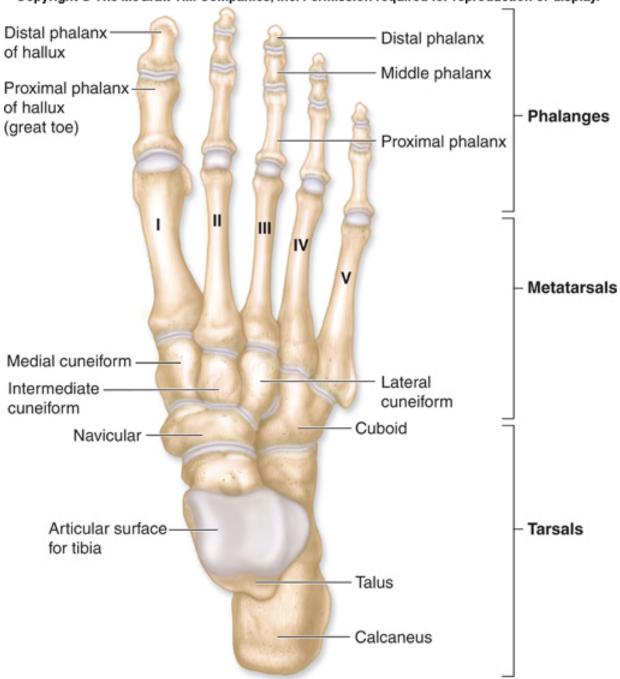
(c) Right knee joint, anterior view

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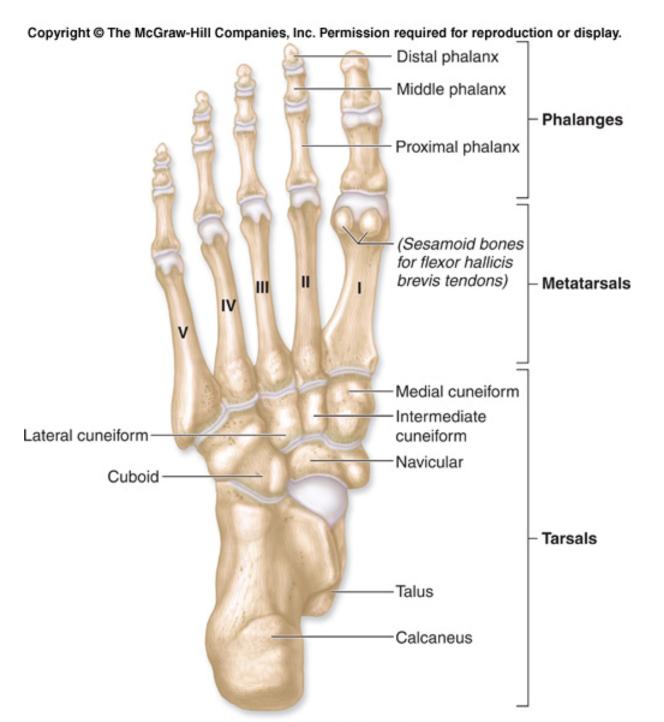


(d) Right tibia and fibula, posterior view

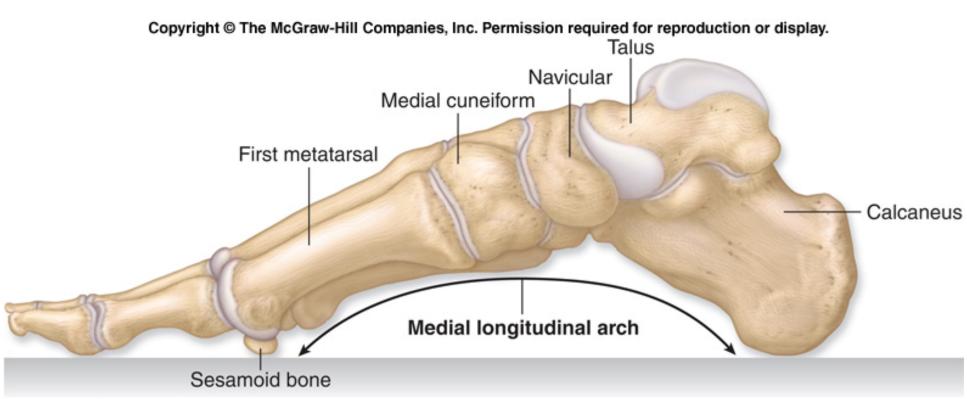
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(a) Right foot, superior view



(b) Right foot, inferior view



(a) Right foot, medial view



Arches of the Foot

- The sole of the foot does not rest flat on the ground.
- Helps it support the weight of the body.
- Ensures that the blood vessels and nerves on the sole of the foot are not pinched when standing.



Arches of the Foot

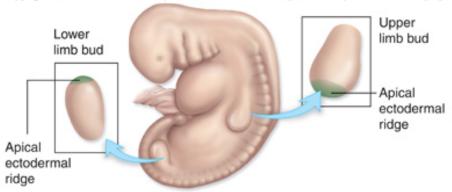
- Medial longitudinal arch extends from the heel to the big toe.
- Lateral longitudinal arch is not as high as the medial longitudinal arch.
- Transverse arch runs perpendicular to the longitudinal arches.



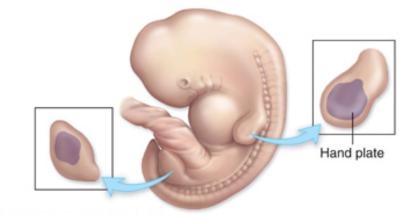
Aging of the Appendicular Skeleton

- Skeletal mass and density decline.
- Erosion and porosity increase.
- Bones become more brittle and susceptible to fracture.
- Articulating surfaces deteriorate, contributing to osteoarthritis.
- Changes begin in childhood and continue throughout life.

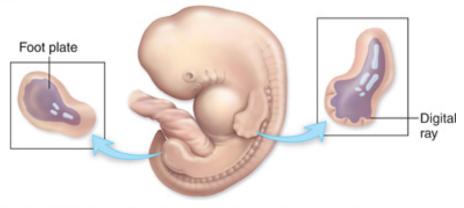
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(a) Week 4: Upper and lower limb buds form.



(b) Week 5: Hand plate forms.



(c) Week 6: Digital rays appear in hand plate. Foot plate forms.



Limb Malformations

- Polydactyly
- Ectrodactyly
- Syndactyly
- Amelia
- Phocomelia