

Bio& 241(A&P) Unit 2 Lab 3: The Appendicular Skeleton



APPENDICULAR SKELETON

*You need to be able to distinguish
Left and right bones and processes.*

PECTORAL (OR SHOULDER) GIRDLE

Clavicles [2]

- Sternal extremity
- Acromial extremity
- Conoid tubercle

Scapula [2]

- Borders:
 - Superior
 - Vertebral (medial)
 - Axillary (lateral)
- Angles:
 - Superior (medial)
 - Inferior
- Fossae:
 - Sub scapular
 - Supraspinatous
 - Infraspinatous
- Glenoid cavity (or fossa)
- Spine
- Acromion process
- Coracoid process

UPPER EXTREMITY BONES [60]

Humerus [2]

- Head
- Anatomical neck
- Surgical neck
- Greater tubercle
- Lesser tubercle
- Intertubercular (bicipital) groove
- Deltoid tuberosity
- Capitulum
- Trochlea

Humerus [2]

- Medial epicondyle
- Lateral epicondyle
- Olecranon fossa
- Coronoid fossa

Ulna [2]

- Olecranon process
- Coronoid process
- Semilunar (or trochlear) notch
- Radial notch
- Head
- Styloid process

Radius [2]

- Head
- Radial tuberosity
- Styloid process
- Ulnar notch

Carpal bones [16 or 8 per wrist]

- scaphoid
- Lunate
- Triquetrum
- Pisiform
- Trapezium
- Trapezoid
- Capitate
- Hamate

Metacarpal bones [10 or 5 per hand] Numbered 1-5 (thumb side is #1)

Phalangeal bones [28 or 14 per hand]

- Fingers numbered 1-5
- 1. Pollex
 - Proximal
 - Distal

Phalangeal bones

- 2-5. Index-little
 - Proximal
 - Middle (Intermediate)
 - Distal

PELVIC (OR HIP) GIRDLE

Os Coxae (or os innominatum) [2]

- Ileum portion
 - Iliac crest
 - Iliac spines:
 - Anterior superior
 - Anterior inferior
 - Posterior superior
 - Posterior inferior
 - Greater sciatic notch
 - Acetabulum
 - Iliac fossa
- Ischium portion
 - Ischial tuberosity
 - Ischial spine
 - Lesser sciatic Notch
- Pubic portion
 - Symphysis pubis
 - Superior pubic ramus
 - Inferior pubic ramus
 - Pubic (suprapubic) arch
 - Pubic crest
 - Obturator foramen

PELVIC GIRDLE - Special Features

- Pelvic brim (or inlet)
- True (or lesser) pelvis
- False (or greater) pelvis
- Pelvic outlet

LOWER EXTREMITY BONES [60]

Femur [2]

- Head
- Neck
- Greater trochanter
- Lesser trochanter
- Linea aspera
- Supracondylar ridges
- Medial condyle
- Lateral condyle
- Intercondylar fossa
- Lateral epicondyle
- Medial epicondyle

Patella [2] (Sesamoid bones)

Tibia [2]

- Condyles (medial and lateral)
- Intercondylar eminence
- Crest
- Tibial tuberosity
- Medial malleolus
- Fibular notch

Fibula [2]

- Lateral malleolus

Tarsal (or tarsus) bones [7/foot]

- Calcaneus (or os calcis)
- Talus (or astragalus)
- Navicular (or scaphoid)
- Cuboid
- Cuneiforms:
 - First (or medial)
 - Second (or intermediate)
 - Third (or lateral)

Metatarsal bones [10 or 5 per foot]

- Numbered 1-5 (big toe is #1)

Phalangeal bones [28 or 14 per foot]

- Toes numbered 1-5
 - 1. Hallux
 - Proximal
 - Distal
 - 2-5 Phalanges
 - Proximal
 - Middle (Intermediate)
 - Distal

COMPARISON OF MALE AND FEMALE SKELETONS:

Pubic Arch

Male = < 90 degrees

Female = > 90 degrees

Pelvic Inlet

Male = heart shaped

Female = large and oval

Coccyx

Male = points anteriorly

Female = points inferiorly

Ilium

Male = more vertical

Female = less vertical (which gives broad hips)

Obturator Foramen

Male = round

Female = oval

Note: Male bones are generally larger and heavier than female bones. Muscle attachments on male bones are more well defined due to the larger size of muscles in males.

The anatomical differences seen in the female pelvic girdle are due to the females need for a larger pelvic outlet to facilitate childbirth.