

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

G. Blevins/G.brady  
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## APPENDICULAR SKELETON

### 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
- 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
- Greater multiangular
- Lesser multiangular
- 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
- 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.