A/P Lab Unit 1

Pectoral Girdle & Upper Extremities
Figure 10.22c

Biceps brachii:
Long head
Short head

(c) Anterior view
Thoracic Cage

- Consists of thoracic vertebrae, sternum and ribs
- Attachment site for pectoral girdle and many limb muscles
- Protects many organs
- Rhythmically expanded by respiratory muscles to draw air into the lungs
- Hemispherical head
- Anatomical neck
- Greater and lesser tubercles
- Deltoid tuberosity
- Intertubercular groove holds biceps tendon
• Rounded capitulum articulates with radius

• Trochlea articulates with ulna

• Olecranon fossa holds olecranon process of ulna
• Forearm muscles attach to medial and lateral epicondyles
Figure 10.22b

Supraspinatus
Spine of scapula
Greater tubercle of humerus
Infraspinatus
Humerus
Teres minor
Teres major
Triceps brachii:
  Lateral head
  Long head
Latissimus dorsi

(b) Posterior view
Ulna and Radius

- **Radius**
  - head = disc rotates during pronation and supination
    - articulates with capitulum
  - radial tuberosity for biceps muscle

- **Ulna**
  - olecranon and trochlear notch
  - radial notch holds ulna

- **Interosseous membrane**
  - ligament attaches radius to ulna along interosseous margin of each bone
Figure 8.33a

- Olecranon
- Trochlear notch
- Radial notch of ulna
- Head of radius
- Neck of radius
- Tuberosity of ulna
- Tuberosity of radius
- Ulna
- Radius
- Interosseous margins
- Interosseous membrane
- Ulnar notch of radius
- Head of ulna
- Styloid process
- Articular facets

(a) Anterior view
Carpal Bones

- Form wrist
  - flexion, extension, abduction and adduction
- 2 rows (4 bones each)
  - proximal row = scaphoid, lunate, triquetrum and pisiform
  - distal row = trapezium, trapezoid, capitate and hamate
Metacarpals and Phalanges

- Phalanges are bones of the fingers
  - thumb or pollex has proximal and distal phalanx
  - fingers have proximal, middle and distal phalanx
- Metacarpals are bones of the palm
  - base, shaft and head
Sesamoid Bone
Scapula

- Triangular plate overlies ribs 2 to 7
- Spine ends as acromion process
- Coracoid process = muscle attachment
- Subscapular, infraspinous and supraspinous fossa
- Glenoid fossa = socket for head of humerus
Scapular Features

- Suprascapular notch
- Acromion
- Coracoid process
- Glenoid cavity
- Subscapular fossa
- Lateral border
- Superior border
- Superior angle
- Acromion
- Supraspinous fossa
- Spine
- Medial border
- Infraspinous fossa
- Lateral angle
- Inferior angle

(a) Anterior view
(b) Posterior view
Figure 8.31a

- Suprascapular notch
- Superior border
- Acromion
- Coracoid process
- Glenoid cavity
- Subscapular fossa
- Lateral border
- Medial border

(a) Anterior view
(b) Scapula (posterior view)
(b) Inferior view

- Conoid tubercle
- Sternal end
- Acromial end
Clavicle

- S-shaped bone, flattened dorsoventrally
- Inferior - marked by muscle and ligament
- Sternal end rounded -- acromial end flattened
Anterior Scapular Muscles

- **Pectoralis Minor**
  - ribs 3-5 to coracoid process of scapula
  - protracts and depresses scapula
  - lifts ribs during forced expiration

- **Serratus Anterior**
  - ribs 1-9 to medial border of scapula
  - abducts and rotates or depresses scapula
  - throwing muscle
Posterior Scapular Muscles

- **Rhomboideus mm.**
  - medial border of scapula to C7-T1

- **Levator scapulae**
  - from superior angle of scapula to C1-C4
Figure 10.21

Lateral rotation
- Trapezius (superior part)
- Serratus anterior

Elevation
- Levator scapulae
- Trapezius (superior part)
- Rhomboideus major
- Rhomboideus minor

Medial rotation
- Levator scapulae
- Rhomboideus major
- Rhomboideus minor

Depression
- Trapezius (inferior part)
- Serratus anterior

Retraction
- Rhomboideus major
- Rhomboideus minor
- Trapezius

Protraction
- Pectoralis minor
- Serratus anterior
Rotator Cuff Muscles

- Extending from posterior scapula to humerus
  - supraspinatus
  - infraspinatus
  - teres minor

- Extending from anterior scapula to humerus
  - subscapularis

All 4 help reinforce joint capsule.
Biceps brachii:
- Long head
- Short head

(c) Anterior view
Figure 10.22b

(b) Posterior view

- Supraspinatus
- Spine of scapula
- Greater tubercle of humerus
- Infraspinatus
- Humerus
- Teres minor
- Teres major
- Triceps brachii:
  - Lateral head
  - Long head
- Latissimus dorsi