Systematic Anatomy
(For international students)

Teaching contents
Muscles of abdomen & upper limbs

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Muscles of abdomen
Muscles of the upper limb
The muscles of the upper limb
Muscles of Upper Limb

Ms of shoulder
- Superficial layer 1
- Deep layer 5

Ms of arm
- Anterior group 3
- Posterior group 1

Ms of forearm
- Anterior group 9
- Posterior group 10

Ms of hand
- Lateral group 4
- Intermediate group 11
- Medial group 3
Muscle of the shoulder-pectoral girdle

Superficial layer 1
Deltoid m

Deep layer 5
1-Supraspinatus
2-Infraspinatus
3-Teres minor
4-Teres major
5-Subscapularis
Deltoid

Muscle of the shoulder

A thick powerful triangular muscle
To form the rounded contour of the shoulder
**Origin:** Lateral 1/3 of clavicle, acromion, spine of scapula
**Insertion:** deltoid tuberosity of humerus
**Action:** the most powerful abductor of the arm

Supraspinatus

In the supraspinous fossa of scapula
**Origin:** supraspinous fossa of scapula
**Insertion:** its tendon crosses above the shoulder joint, top of the greater tubercle of humerus
**Action:** stabilizes and abducts the shoulder joints
In the infraspinous fossa of scapula, triangular
**Origin**: infraspinous fossa of scapula, across
*The back of the shoulder joint.*
**Insertion**: the middle of the greater tubercle,
**Action**: stabilizes the shoulder joints
and laterally rotates the arm

**Infraspinatus**

**Teres minor**

**Origin**: the upper 2/3 of lateral border of scapula,
across, *The back of the shoulder joint.*
**Insertion**: the lower part of the greater tubercle
**Action**: laterally rotates and adducts humerus
hold the humeral head in glenoid cavity
Teres major

A thick round muscle below the teres major
Origin: dorsal surface near the inferior angle of scapula
Insertion: the crest of the lesser tubercle of humerus,
Action: acts on the latissimus dorsi in adduction, extending and medial rotating the arm

Subscapularis

A large thick triangular muscle, infrascapular fossa
Origin: infrascapular fossa
Insertion: the lesser tubercle of humerus, crossing the front of the shoulder joint
Action: medially rotates the arm and stabilizes the shoulder joint
Anterior muscular group of arm

Superficial and deep layer, three muscles

Superficial layer:
- Coracobrachial m.
- Biceps brachii

Deep layer:
- Brachial m.
**Biceps brachii**

**Location:** the anterior surface of the humerus

**Origin:** medial head-coracoid process, lateral head-superior tuberosity of the glenoid

**Insertion:** both heads insert on the radial tuberosity

**Action:** flex elbow joint and shoulder joint and supinates the forearm

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**Coracobrachialis**

**Origin:** coracoid process

**Insertion:** humerus

**Action:** flexes the shoulder joint

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**Brachialis**

**Origin:** humerus

**Insertion:** tuberosity of ulna

**Action:** flex the elbow joint

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Posterior muscular group of arm

Triceps brachii

B-Lateral head
C-long head
D-Medial head

Origin: one from infraglenoid tuberosity
two head from poster surface of humerus

Insertion: olecranon of ulna

Action: it is the chief extensor of the forearm.
Can also extend and adduct the shoulder joint.
Feature of ant. muscular group of forearm

◆ Most muscles originate from medial epicondyle, attach to wrist and finger.
◆ Brachioradial muscle is the muscle of landmark.
◆ Their action: flexs the wrist, finger & pronation.

Attention please:
Mastering the function and grouping of each group.
Especially:
Anterior group of forearm
Posterior group of forearm
The anterior muscle group of the forearm

Superficial layer
From lateral to medial
1–brachioradialis
2–pronator teres
3–flexor carpi radialis
4–palmaris longus
5–flexor carpi ulnaris
6–flexor digitorum superficialis
The anterior muscle group of the forearm

Deep layer
7–Flexor digitorum profundus
8–Flexor pollicis longus
9–Pronator quadratus
Feature of posterior muscular group of forearm

- Most muscles originate from lateral epicondyle, attach to wrist and finger.
- We often recognize them according to their insertions.
- Their action: extends the wrist and finger and supination.
Posterior muscular group of forearm

Superficial layer
1 Extensor carpi radialis longus
2 Extensor carpi radialis brevis
3 Extensor digitorum
4 Extensor digiti minimi
5 Extensor carpi ulnaris

Deep layer
6 Supinator
7 Abductor pollicis longus
8 Extensor pollicis brevis
9 Extensor pollicis longus
10 Extensor indicis
A. Deltoid
B. Triceps brachii, lateral head
C. Triceps brachii, long head
D. Triceps brachii, medial head
E. Abductor pollicis longus
F. Extensor pollicis longus
G. Extensor indicis
H. Extensor carpi radialis brevis
I. Extensor carpi radialis longus
J. Brachioradialis
K. Extensor pollicis brevis
Muscle of the hand

Thenar (lateral group) 4—movement of the thumb
Intermediate group 11—movement of 2-5 finger
Hypothenar (medial group) 3—movement of 5th finger
Muscle of the hand

Thenar (lateral group) 4 — movement of the thumb

- Flexor pollicis brevis
- Abductor pollicis brevis
- Opponens pollicis
- Adductor pollicis

Superficial layer

Deep layer
Hypothenar 3—movement of 5th finger

Flexor digiti minimi brevis
Adductor digiti minimi
Opponens digiti minimi

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Intermediate group 11—movement of 2-4 finger

Lumbricales 4

Palmar interossei 3

Dorsal interossei 4

Flexor the finger

adductor

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The important contents today

- Master the name, position and action of anterolateral group muscle in abdomen.
- Master the name, position and action of shoulder muscle.
- Master the name, location and function of the arm muscle.
- Master the name and action of anterior and posterior group in forearm.
- Understand grouping of hand muscle.
See you next time!