The Muscular System

I. Origins, insertions, and actions
- **A.** Origin
- **B.** Insertion
- **C.** Action

II. Functional classification of muscles
- **A.** Agonists
- **B.** Antagonists
- **C.** Synergists
- **D.** Fixators

III. Arrangement of muscle fascicles
- **A.** Circular
- **B.** Convergent
- **C.** Parallel
- **D.** Fusiform
- **E.** Unipennate
- **F.** Bipennate
- **G.** Multipennate

IV. Naming muscles
- **A.** Location
- **B.** Shape
- **C.** Relative size
- **D.** Direction of fascicles
- **E.** Number of origins
- **F.** Location of origin and insertion
- **G.** Action

V. Major skeletal muscles
- **A.** Muscles of the head
  - **1.** Facial expression
    - **a.** Epicranius
    - **b.** Orbicularis oculi
    - **c.** Orbicularis oris
  - **2.** Mastication
    - **a.** Masseter
    - **b.** Temporalis
    - **c.** Buccinator
- **B.** Muscles of the anterior neck and throat
  - **1.** Suprahyoid muscles
    - **a.** Digastric
    - **b.** Mylohyoid
  - **2.** Infrahyoid muscles
    - **a.** Sternohyoid
    - **b.** Sternothyroid
    - **c.** Thyrohyoid

- **C.** Muscles of the neck and vertebral column
  - **1.** Head movement
    - **a.** Sternocleidomastoid
    - **b.** Scalenes
    - **c.** Splenius
  - **2.** Trunk movement
    - **a.** Erector spinae
      - **i.** Iliocostalis
      - **ii.** Longissiumus
      - **iii.** Spinalis
    - **b.** Multifidus
- **D.** Muscles of the thorax
  - **1.** External intercostals
  - **2.** Internal intercostals
  - **3.** Diaphragm
- **E.** Muscles of the abdominal wall
  - **1.** Rectus abdominis
  - **2.** External oblique
  - **3.** Internal oblique
  - **4.** Transversus abdominis
- **F.** Superficial muscles of the thorax
  - **1.** Anterior thorax
    - **a.** Pectoralis minor
    - **b.** Serratus anterior
  - **2.** Posterior thorax
    - **a.** Trapezius
    - **b.** Levator scapulae
    - **c.** Rhomboid major
    - **d.** Rhomboid minor
- **G.** Muscles that cross the shoulder joint
  - **1.** Pectoralis major
  - **2.** Latissimus dorsi
  - **3.** Deltoid
  - **4.** Subscapularis
  - **5.** Supraspinatus
  - **6.** Infraspinatus
  - **7.** Teres minor
  - **8.** Teres major
- **H.** Muscles that cross the elbow joint
  - **1.** Posterior muscle
    - **a.** Triceps brachii
  - **2.** Anterior muscles
    - **a.** Biceps brachii
    - **b.** Brachialis
    - **c.** Brachioradialis
- **I.** Muscles of the forearm
  - **1.** Anterior muscles
    - **a.** Pronator teres
    - **b.** Flexor carpi radialis

- **c.** Palmaris longus
- **d.** Flexor carpi ulnaris
- **e.** Flexor digitorum superficialis
- **f.** Flexor pollicis longus

2. Posterior muscles

- **a.** Extensor carpi radialis longus
- **b.** Extensor carpi radialis brevis
- **c.** Extensor digitorum
- **d.** Extensor carpi ulnaris
- **e.** Supinator

J. Muscles that cross the hip and knee joints

1. Anterior and medial muscles

- **a.** Iliopsoas
  - **i.** Iliacus
  - **ii.** Psoas major
- **b.** Sartorius
- **c.** Adductor magnus
- **d.** Adductor longus
- **e.** Gracilis
- **f.** Quadriceps femoris
  - **i.** Rectus femoris
  - **ii.** Vastus lateralis
  - **iii.** Vastus medialis
  - **iv.** Vastus intermedius
- **g.** Tensor fasciae latae

2. Posterior muscles

- **a.** Gluteus maximus
- **b.** Gluteus medius
- **c.** Gluteus minimus
- **d.** Piriformis
- **e.** Hamstrings
  - **i.** Biceps femoris
  - **ii.** Semitendinosus
  - **iii.** Semimembranosus

K. Muscles of the leg

1. Anterior and lateral muscles

- **a.** Tibialis anterior
- **b.** Fibularis longus
- **c.** Fibularis brevis

2. Posterior muscles

- **a.** Triceps surae
  - **i.** Gastrocnemius
  - **ii.** Soleus
- **b.** Flexor digitorum longus
- **c.** Flexor hallucis longus
- **d.** Tibialis posterior