Muscles to Identify on the Cadaver and/or Models

- You are required to identify each of the following muscles or associated structures on the cadavers and/or models in lab.
- If the box is shaded in a particular table, it means you are not responsible for that particular origin or insertion.
- Muscle actions are required for every muscle
- Spelling is important! Practice writing and rewriting the names of each muscle and associated structure
- You are not responsible for innervation of the muscles until we get to the nervous system exercises in the lab. (Note: CN = cranial nerve)

AXIAL MUSCLES
Have both origins and insertions on the axial skeleton

Table 1 – Muscles of Facial Expression

<table>
<thead>
<tr>
<th>Name</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buccinator</td>
<td>Presses cheek against molar teeth</td>
<td>Facial (CNVII)</td>
</tr>
<tr>
<td>Frontalis (frontal belly of epicranius)</td>
<td>Draws scalp forward, raises eyebrows, wrinkles forehead</td>
<td>Facial (CNVII)</td>
</tr>
<tr>
<td>Occipitalis (occipital belly of epicranius)</td>
<td>Draws scalp backward</td>
<td>Facial (CNVII)</td>
</tr>
<tr>
<td>Orbicularis oris</td>
<td>Compresses and purses lips (kiss muscle)</td>
<td>Facial (CNVII)</td>
</tr>
<tr>
<td>Orbicularis oculi</td>
<td>Closes eye (blink muscle)</td>
<td>Facial (CNVII)</td>
</tr>
<tr>
<td>Platysma</td>
<td>Pulls lower lip inferiorly, tense skin of neck</td>
<td>Facial (CNVII)</td>
</tr>
<tr>
<td>Zygomaticus</td>
<td>Pulls corners of mouth superiorly, smiling muscle</td>
<td>Facial (CNVII)</td>
</tr>
</tbody>
</table>

Table 2 – Muscles of Mastication (chewing)

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporalis</td>
<td>Parietal and frontal bones (temporal fossa)</td>
<td>Coronoid process of mandible</td>
<td>Elevates and retracts mandible</td>
<td>Trigeminal (CNV)</td>
</tr>
<tr>
<td>Masseter</td>
<td>Zygomatic arch</td>
<td>Angle and ramus of mandible</td>
<td>Elevates and protracts mandible</td>
<td>Trigeminal (CNV)</td>
</tr>
</tbody>
</table>
### Table 3 – Muscles of the Neck

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sternocleidomastoid</td>
<td>Sternum and clavicle</td>
<td>Mastoid process of temporal bone</td>
<td>One side: lateral flexion with rotation of head to opposite side both sides: flexes head &amp; neck</td>
<td>Accessory nerve (CNXI)</td>
</tr>
<tr>
<td>Splenius capitis</td>
<td>Ligamentum nuchae (the connective tissue covering the spinal processes of the cervical vertebrae)</td>
<td>Occipital bone</td>
<td>One side: turns head to same side (rotation) both sides: extends head &amp; neck</td>
<td>Dorsal rami of cervical spinal nerves</td>
</tr>
</tbody>
</table>

### Table 4 – Muscles of Respiration

<table>
<thead>
<tr>
<th>Name</th>
<th>Attachment</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>External intercostals</td>
<td>NA</td>
<td>Elevates ribs during normal inspiration</td>
<td>Ventral rami of thoracic spinal nerves</td>
</tr>
<tr>
<td>Internal intercostals</td>
<td>NA</td>
<td>Depresses ribs during forced exhalation; antagonist to external intercostals</td>
<td>Ventral rami of thoracic spinal nerves</td>
</tr>
<tr>
<td>Diaphragm</td>
<td>Central tendon</td>
<td>Contraction depresses (flattens) diaphragm and expands the thoracic cavity during normal inspiration</td>
<td>Phrenic nerves (from cervical plexus)</td>
</tr>
</tbody>
</table>

### Table 5 – Abdominal Muscles

<table>
<thead>
<tr>
<th>Name</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>External obliques</td>
<td>Both sides: flex vertebral column &amp; compress abdominal wall One side: lateral flexion of vertebral column</td>
<td>Ventral rami of thoracic spinal nerves</td>
</tr>
<tr>
<td>Internal obliques</td>
<td>Both sides: flexes vertebral column &amp; compresses abdominal wall One side: lateral flexion of vertebral column</td>
<td>Ventral rami of thoracic spinal nerves</td>
</tr>
<tr>
<td>Rectus abdominis</td>
<td>Flexes vertebral column &amp; compresses abdominal wall</td>
<td>Ventral rami of thoracic nerve</td>
</tr>
<tr>
<td>Transversus abdominis</td>
<td>Both sides: flexes vertebral column &amp; compresses abdominal wall One side: lateral flexion of vertebral column</td>
<td>Ventral rami of thoracic spinal nerves</td>
</tr>
<tr>
<td>Inguinal ligament</td>
<td>(associated structure)</td>
<td></td>
</tr>
</tbody>
</table>
**APPENDICULAR MUSCLES**
Control the movement of the upper and lower limbs, pelvic and pectoral girdles

Table 6 – Superficial Upper Body Muscles

<table>
<thead>
<tr>
<th>Name</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Muscles that move the pectoral girdle</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trapezius</td>
<td>Superior: elevates clavicle; elevates, retracts, rotates scapula; Inferior: depresses, extends the head</td>
<td>Accessory nerve (CN XI)</td>
</tr>
<tr>
<td>Serratus anterior</td>
<td>Protracts and stabilizes scapula</td>
<td>Long thoracic</td>
</tr>
<tr>
<td>Pectoralis minor</td>
<td>Protracts and depresses scapula</td>
<td>Medial pectoral</td>
</tr>
<tr>
<td><strong>Muscles that move the glenohumeral (shoulder) joint.</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Rotator cuff muscles (4 muscles)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supraspinatus</td>
<td>Stabilize and rotate glenohumeral joint</td>
<td></td>
</tr>
<tr>
<td>Infraspinatus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscapularis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teres minor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teres major</td>
<td>Extends, adducts, and medially rotates arm</td>
<td></td>
</tr>
<tr>
<td>Latissimus dorsi</td>
<td>Extends, adducts, and medially rotates arm; draws arm inferiorly and posteriorly (swimming, climbing rope, hammering)</td>
<td>Thoracodorsal</td>
</tr>
<tr>
<td>Deltoid</td>
<td>Abducts, flexes, extends, and rotates arm</td>
<td>Axillary</td>
</tr>
<tr>
<td>Pectoralis major</td>
<td>Flexes, adducts, and medially rotates arm</td>
<td>Lateral pectoral and medial pectoral</td>
</tr>
</tbody>
</table>
Table 7 – Anterior Compartment of the Arm

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biceps brachii</td>
<td></td>
<td></td>
<td></td>
<td>(Brachial Plexus)</td>
</tr>
<tr>
<td>Long head</td>
<td>Supraglenoid tubercle of scapula</td>
<td>Radial tuberosity</td>
<td>Flexes arm (glenohumeral joint)</td>
<td>Musculocutaneous</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>flexes and supinates forearm (elbow joint)</td>
<td></td>
</tr>
<tr>
<td>Short head</td>
<td>Coracoid process of scapula</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coracobrachialis</td>
<td>Coracoid process of scapula</td>
<td>Medial shaft of humerus</td>
<td>Adducts and flexes arm (glenohumeral joint)</td>
<td>Musculocutaneous</td>
</tr>
<tr>
<td>Brachialis</td>
<td>Distal, anterior surface of humerus</td>
<td>Coronoid process of ulna</td>
<td>Flexes forearm (elbow joint)</td>
<td>Musculocutaneous</td>
</tr>
</tbody>
</table>

Table 8 – Posterior Compartment of the Arm

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triceps brachii</td>
<td></td>
<td></td>
<td></td>
<td>(Brachial Plexus)</td>
</tr>
<tr>
<td>Long head</td>
<td>Infraglenoid tubercle</td>
<td>Olecranon process of ulna</td>
<td>Extends forearm; assists in arm adduction and extension; stabilizes shoulder joint</td>
<td>Radial</td>
</tr>
<tr>
<td>Lateral head</td>
<td>Posterior shaft of humerus</td>
<td></td>
<td>Extends forearm</td>
<td></td>
</tr>
<tr>
<td>Medial head</td>
<td>Posterior shaft of humerus distal to radial groove</td>
<td></td>
<td>Extends forearm</td>
<td></td>
</tr>
</tbody>
</table>

Table 9 – Anterior Compartment of the Forearm

<table>
<thead>
<tr>
<th>Name</th>
<th>Action</th>
<th>Attachment (origin)</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pronator teres</td>
<td>Pronates hand</td>
<td>Medial epicondyle of humerus</td>
<td>Median</td>
</tr>
<tr>
<td>Flexor carpi radialis</td>
<td>Flexes wrist and abducts hand</td>
<td>Medial epicondyle of humerus</td>
<td>Median</td>
</tr>
<tr>
<td>Palmaris longus</td>
<td>Weak wrist flexor; tenses fascia of palm</td>
<td>Medial epicondyle of humerus</td>
<td>Median</td>
</tr>
<tr>
<td>Flexor carpi ulnaris</td>
<td>Flexes wrist and adducts hand</td>
<td>Medial epicondyle of humerus</td>
<td>Ulnar</td>
</tr>
<tr>
<td>Flexor digitorum superficialis</td>
<td>Flexes proximal interphalangeal joint</td>
<td>Medial epicondyle of humerus</td>
<td>Median</td>
</tr>
<tr>
<td>Flexor retinaculum (associated structure)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 10 – Posterior Compartment of the Forearm

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation (brachial plexus)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brachioradialis</td>
<td>Lateral supracondylar ridge of humerus</td>
<td>Styloid process of radius</td>
<td>Flexes forearm (elbow joint)</td>
<td>Radial</td>
</tr>
<tr>
<td>Extensor carpi radialis longus</td>
<td></td>
<td></td>
<td>Extends wrist, abducts hand</td>
<td>Radial</td>
</tr>
<tr>
<td>Extensor carpi ulnaris</td>
<td></td>
<td></td>
<td>Extends wrist, adducts hand</td>
<td>Radial</td>
</tr>
<tr>
<td>Abductor pollicis longus</td>
<td></td>
<td></td>
<td>Abducts thumb; extends wrist</td>
<td>Radial</td>
</tr>
<tr>
<td>Extensor pollicis longus</td>
<td></td>
<td></td>
<td>Extends MP and IP joints of thumb; extends wrist</td>
<td>Radial</td>
</tr>
</tbody>
</table>

### Table 11 – Anterior Compartment of the Thigh

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation (lumbar plexus)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sartorius</td>
<td>Anterior superior iliac spine</td>
<td>Tibial tuberosity, medial side</td>
<td>Flexes, abducts, and laterally rotates thigh; flexes leg and rotates leg medially (sitting cross-legged on floor)</td>
<td>Femoral</td>
</tr>
<tr>
<td>Quadriceps femoris group: four muscles with a common insertion point</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rectus femoris</td>
<td>Anterior inferior iliac spine</td>
<td>Patella via quadriceps tendon and then tibial tuberosity via patellar ligament</td>
<td>Extends leg; flexes thigh</td>
<td>Femoral</td>
</tr>
<tr>
<td>Vastus lateralis</td>
<td></td>
<td></td>
<td>Extends leg</td>
<td>Femoral</td>
</tr>
<tr>
<td>Vastus medialis</td>
<td></td>
<td></td>
<td>Extends leg</td>
<td>Femoral</td>
</tr>
<tr>
<td>Vastus intermedius</td>
<td></td>
<td></td>
<td>Extends leg</td>
<td>Femoral</td>
</tr>
</tbody>
</table>

### Table 12 – Iliopsoas Group

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation (lumbar plexus)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iliacus</td>
<td>Iliac fossa</td>
<td>Lesser trochanter of femur</td>
<td>Flexes thigh</td>
<td>Femoral</td>
</tr>
<tr>
<td>Psoas major</td>
<td>T₁₂-L₅ vertebrae</td>
<td>Lesser trochanter of femur</td>
<td>Flexes thigh</td>
<td>Branches of lumbar plexus</td>
</tr>
</tbody>
</table>
Table 13 – Medial Compartment of the Thigh

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pectineus</td>
<td></td>
<td></td>
<td>Adducts thigh; flexes (weak) thigh</td>
<td>Femoral or obturator</td>
</tr>
<tr>
<td>Adductor longus</td>
<td></td>
<td></td>
<td>Adducts thigh; flexes (weak) thigh</td>
<td>Obturator</td>
</tr>
<tr>
<td>Adductor magnus</td>
<td></td>
<td></td>
<td>Adducts thigh; flexes or extends and laterally rotates thigh depending on starting position</td>
<td>Obturator nerve and tibial division of sciatic nerve</td>
</tr>
<tr>
<td>Adductor brevis</td>
<td></td>
<td></td>
<td>Adducts thigh</td>
<td>Obturator</td>
</tr>
<tr>
<td>Gracilis</td>
<td>Inferior ramus and body of pubis</td>
<td>Upper medial surface of tibia</td>
<td>Adducts &amp; flexes (weak) thigh; flexes leg</td>
<td>Obturator</td>
</tr>
</tbody>
</table>

Table 14 – Posterior Compartment of the Thigh

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamstrings group: (3 muscles)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Semitendinosus</td>
<td>Ischial tuberosity</td>
<td>Proximal medial surface of tibia</td>
<td>Extends thigh &amp; flexes leg; medially rotates leg</td>
<td>Tibial division of sciatic nerve</td>
</tr>
<tr>
<td>Semimembranosus</td>
<td>Ischial tuberosity</td>
<td>Medial condyle of tibia</td>
<td>Extends thigh &amp; flexes leg; medially rotates leg</td>
<td>Tibial division of sciatic nerve</td>
</tr>
<tr>
<td>Biceps femoris (long head)</td>
<td>Ischial tuberosity</td>
<td>Head of fibula</td>
<td>Extends thigh; flexes and laterally rotates leg</td>
<td>Tibial division of sciatic nerve</td>
</tr>
</tbody>
</table>

Table 15 – Gluteal Muscles

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gluteus maximus</td>
<td>Iliac crest, sacrum, coccyx</td>
<td>Iliotibial tract of tensor fascia lata</td>
<td>Extends thigh; laterally rotates thigh</td>
<td>Inferior gluteal</td>
</tr>
<tr>
<td>Gluteus medius</td>
<td>Iliac crest</td>
<td>Greater trochanter of femur</td>
<td>Abducts thigh; medially rotates thigh</td>
<td>Superior gluteal</td>
</tr>
<tr>
<td>Gluteus minimus</td>
<td>Lateral surface of ilium</td>
<td>Greater trochanter of femur</td>
<td>Abducts thigh; medially rotates thigh</td>
<td>Superior gluteal</td>
</tr>
<tr>
<td>Tensor fascia latae</td>
<td>Iliac crest &amp; anterior superior iliac spine</td>
<td>Iliotibial tract</td>
<td>Abducts thigh; medially rotates thigh</td>
<td>Superior gluteal</td>
</tr>
<tr>
<td>Iliotibial tract (associated structure)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 16 – Anterior Compartment of the Leg

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation (sacral plexus)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tibialis anterior</td>
<td>Lateral condyle and proximal shaft of tibia</td>
<td>Metatarsal I and first (medial) cuneiform</td>
<td>Dorsiflexes foot; inverts foot</td>
<td>Deep fibular</td>
</tr>
<tr>
<td>Extensor digitorum longus</td>
<td></td>
<td></td>
<td>Extends toes 2-5; dorsiflexes foot</td>
<td>Deep fibular</td>
</tr>
<tr>
<td>Extensor hallucis longus</td>
<td></td>
<td></td>
<td>Extends great toe; dorsiflexes foot</td>
<td>Deep fibular</td>
</tr>
</tbody>
</table>

### Table 17 – Lateral Compartment of the Leg

<table>
<thead>
<tr>
<th>Name</th>
<th>Action</th>
<th>Innervation (sacral plexus)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibularis (peroneus) longus</td>
<td>Everts foot; weak plantar flexor</td>
<td>Superficial fibular</td>
</tr>
<tr>
<td>Fibularis (peroneus) brevis</td>
<td>Everts foot; weak plantar flexor</td>
<td>Superficial fibular</td>
</tr>
</tbody>
</table>

### Table 18 – Posterior Compartment of the Leg

<table>
<thead>
<tr>
<th>Name</th>
<th>Origin</th>
<th>Insertion</th>
<th>Action</th>
<th>Innervation (sacral plexus)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastrocnemius</td>
<td>Lateral and medial condyles of femur</td>
<td>Calcaneus via calcaneal tendon</td>
<td>Plantar flexes foot and flexes leg</td>
<td>Tibial</td>
</tr>
<tr>
<td>Soleus</td>
<td>Head and proximal shaft of fibula; medial border of tibia</td>
<td>Calcaneus via calcaneal tendon</td>
<td>Plantar flexes foot</td>
<td>Tibial</td>
</tr>
<tr>
<td>Tibialis posterior</td>
<td></td>
<td></td>
<td>Plantar flexes foot; inverts foot</td>
<td>Tibial</td>
</tr>
<tr>
<td>Flexor digitorum longus</td>
<td></td>
<td></td>
<td>Plantar flexes foot; flexes MP, PIP, and DIP joints of toes 2-5</td>
<td>Tibial</td>
</tr>
<tr>
<td>Flexor hallucis longus</td>
<td></td>
<td></td>
<td>Plantar flexes foot; flexes MP, PIP, and DIP joints of great toe</td>
<td>Tibial</td>
</tr>
</tbody>
</table>