

# The Muscular System

6 page study note

## Axial Muscles

### MUSCLES OF THE THORAX

**External intercostals**  
 - lie deep, parallel to external intercostals  
 - flexes ribs posteriorly & inferiorly  
 - inspiration

### Internal intercostals

- most superficial intercostal muscle  
 - flexes ribs anteriorly & inferiorly  
 - inhaling between ribs  
 - rib elevation



### MUSCLES OF THE ABDOMEN

**External oblique**  
 - most superficial of abdominal abdominal wall  
 - flexes ribs anteriorly & inferiorly

**Internal oblique**  
 flexes abdominal column & compresses abdominal wall used in forced expiration

**Transverse abdominis**  
 spans 4 spaces & separates around umbilical column

**Rectus abdominis**  
 - lies on either side of linea alba  
 - separated by myofascial compartments  
 - functions to flex trunk & aids in forced expiration



**Linea alba**  
 - site of connective tissue down middle of abdomen for muscle attachment

## Axial Muscles

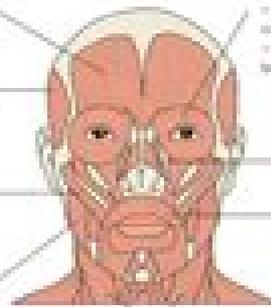
**Levator scapulae**  
 - extends from base of the skull and causes neck to rotate

**Longus capitis**  
 - extends from hyoid bone to cervical process of vertebrae  
 - flexion & extension anteriorly

**Longus colli**  
 - extends from hyoid bone to angle of vertebrae  
 - extension & anteriorly rotating one to other

**Longus cervicis**  
 - power for muscle extending from hyoid bone to angle of vertebrae  
 - flexion & anteriorly rotating one to other

### FACE & NECK MUSCLES



**Stylohyoid muscle**  
 - horizontally runs  
 - horizontally crosses over when contracted  
 - originates on hyoid & mandibular space

**Geniohyoid**  
 - compresses lower hyoid  
 - stabilizes flexion of neck

**Geniohyoid**  
 - horizontally runs  
 - horizontally runs  
 - originates on mandible & anteriorly

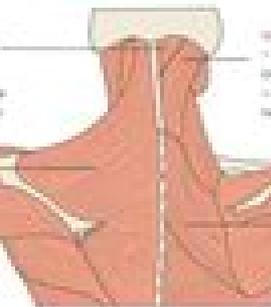
### STERNOCLEIDOMASTOID

- flexes neck with unilateral contraction  
 - rotates head to opposite side with unilateral contraction for turning

### NECK & BACK MUSCLES

**Semispinalis capitis**  
 - anterior head with unilateral contraction  
 - turns head slightly to opposite side with unilateral contraction

**Longus colli**  
 - stabilizes & moves the capsule  
 - extends vertically from occipital bone to lower thoracic vertebrae of the spine



**Semispinalis cervicis**  
 - anterior neck with unilateral contraction  
 - anterior flexion & lateral rotation of head with unilateral contraction

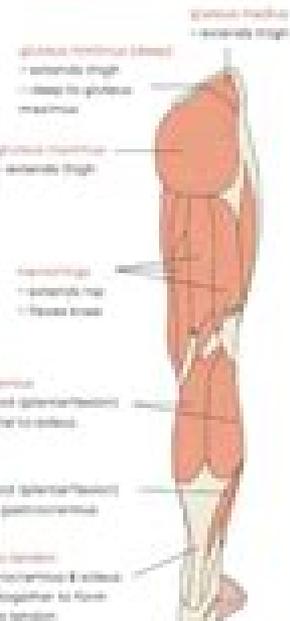
**Longus cervicis**  
 - rotates the capsule into the bridge  
 - helps move capsule anteriorly & medially

## Lower Limb Muscles

### Quick note:

In correct anatomical terms, "leg" only refers to the region of the lower limb below the knee, while "thigh" refers to the region from the knee to the hip.

### POSTERIOR THIGH & LEG MUSCLES



**Gluteus maximus**  
 - extends thigh  
 - deep to gluteus medius

**Gluteus medius**  
 - extends thigh

**Biceps femoris**  
 - extends hip  
 - flexes knee

**Gastrocnemius**  
 - flexes foot (plantar flexion)  
 - supinated to extend

**Soleus**  
 - flexes foot (plantar flexion)  
 - deep to gastrocnemius

**Plantaris tendon**  
 - gastrocnemius & soleus meet together to form Achilles tendon

# Muscular System Anatomy Study Guide

**Marcel A. Müller**

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