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Course/Year/Sec: BSN 1-YA-7 Teacher: Dr. Ramon B. Lirio

EXERCISE NO. 6

MUSCULAR SYSTEM

GIO. To study the skeletal muscle groups making up the muscular system.

SIO.

1. Explain the different functions of the muscular system.

➤ **Movement of the body** – everything that our mind conceives were being translated into actions through skeletal muscle contractions.

➤ **Maintenance of posture** – with proper tone, muscles helps us to maintain posture through a steady or constant state of partial contraction.

➤ **Respiration** – the main muscle for breathing is the diaphragm. With its contraction, it allows air to enter the lungs. Moreover, other muscles of the thorax carry out the movements necessary for respiration.

➤ **Production of body heat** - When skeletal muscles contract, heat is given off as a by-product. This released heat is critical to the maintenance of body temperature.

➤ **Communication** - Skeletal muscles are involved in all aspects of communication, including speaking, writing, typing, gesturing, and facial expressions.

➤ **Constriction of organs and vessels** - The contraction of smooth muscle within the walls of internal organs and vessels causes those structures to constrict. This constriction can help propel and mix food and water in the digestive tract, propel secretions from organs, and regulate blood flow through vessels.

➤ **Contraction of the heart** - The contraction of cardiac muscle causes the heart to beat, propelling blood to all parts of the body.

2. Describe the three types of muscle tissues and their important features.

- **Skeletal muscle** is attached to bones, has cylindrical cells, is striated, multinucleate, and voluntary control.
- **Smooth muscle** is in walls of hollow organs, spindle-shaped cells, nonstriated, uninucleate, and involuntary.
- **Cardiac** is the heart, branched cells, striated, uni or dinucleate, and involuntary.

3. Enumerate the different bases of nomenclature of the muscle and give examples of each.

Nomenclature

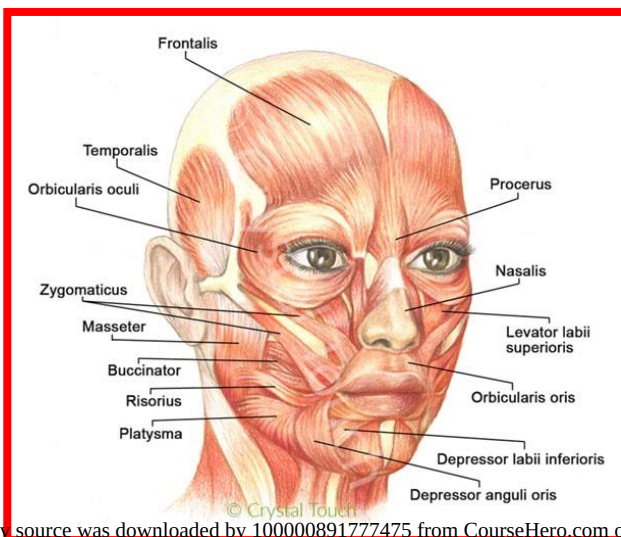
- Muscles are named according to:

- | | |
|---------------------------|--------------------------|
| ➤ Location | Ex. tibialis anterior |
| ➤ Origin/insertion | Ex. sternocleidomastoid |
| ➤ Size | Ex. gluteus maximus |
| ➤ Shape | Ex. deltoid (triangular) |
| ➤ Function | Ex. Masseter |

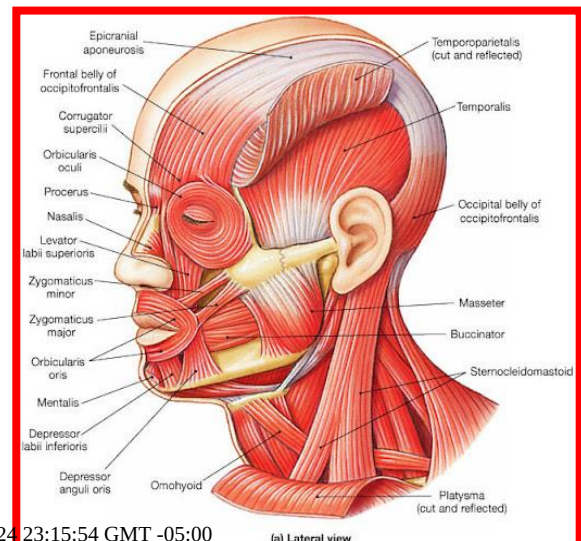
4. Illustrate and label muscles forming the following groups. In the labels, indicate their bases of nomenclature.

AXIAL MUSCLES

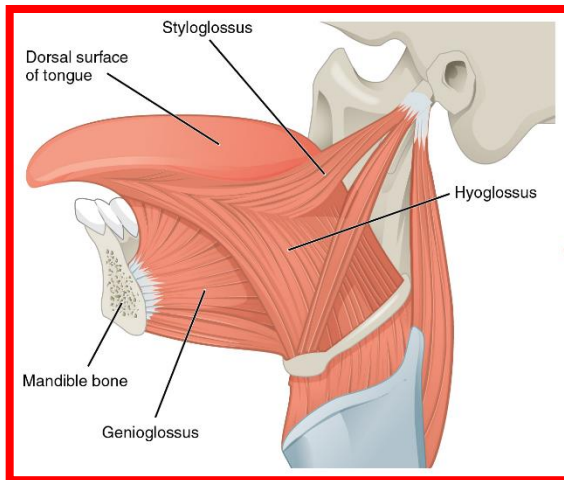
a.1. muscles of facial expression



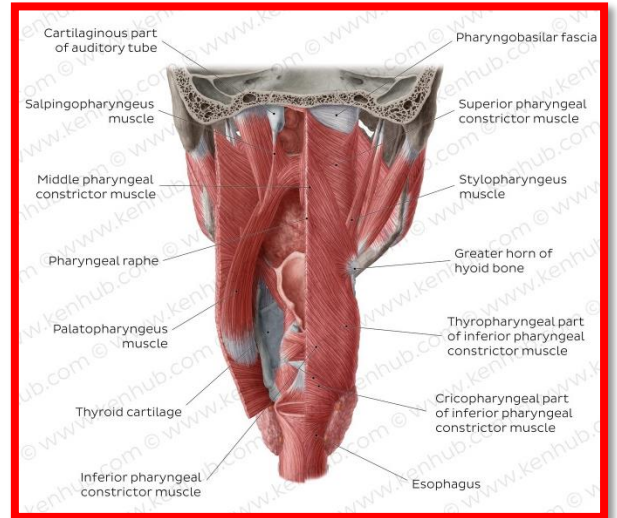
a.2. muscles of mastication



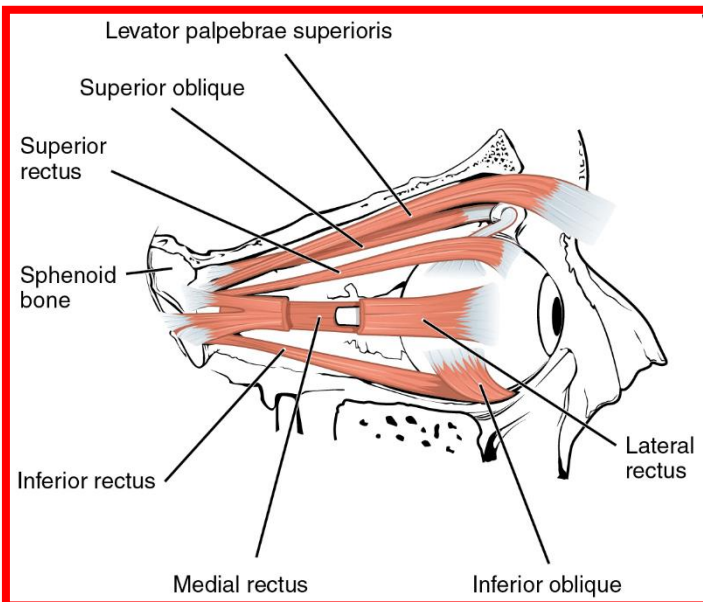
a.3. muscle of tongue



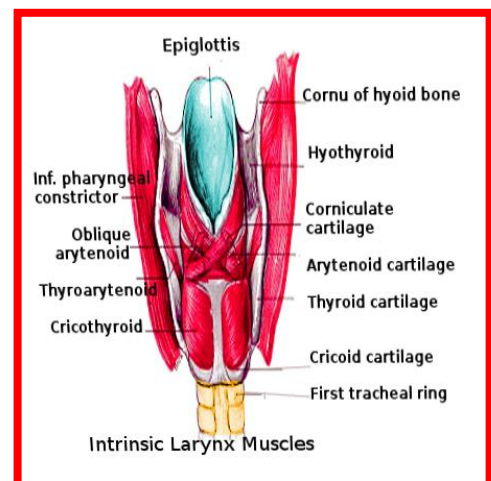
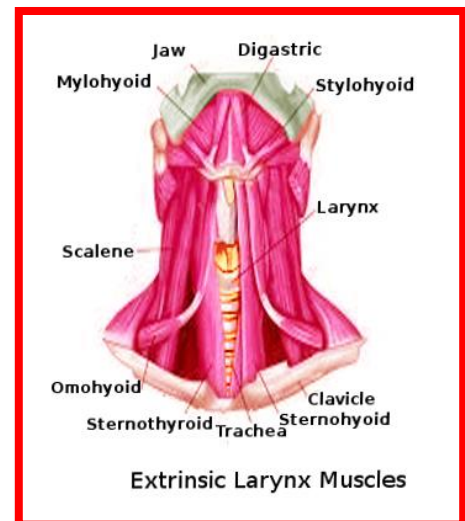
a.4. muscles of pharynx



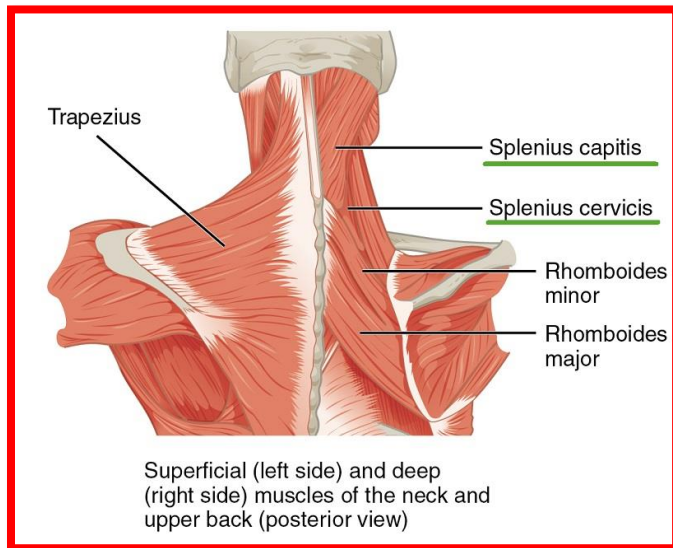
a.5. extraocular eye muscles



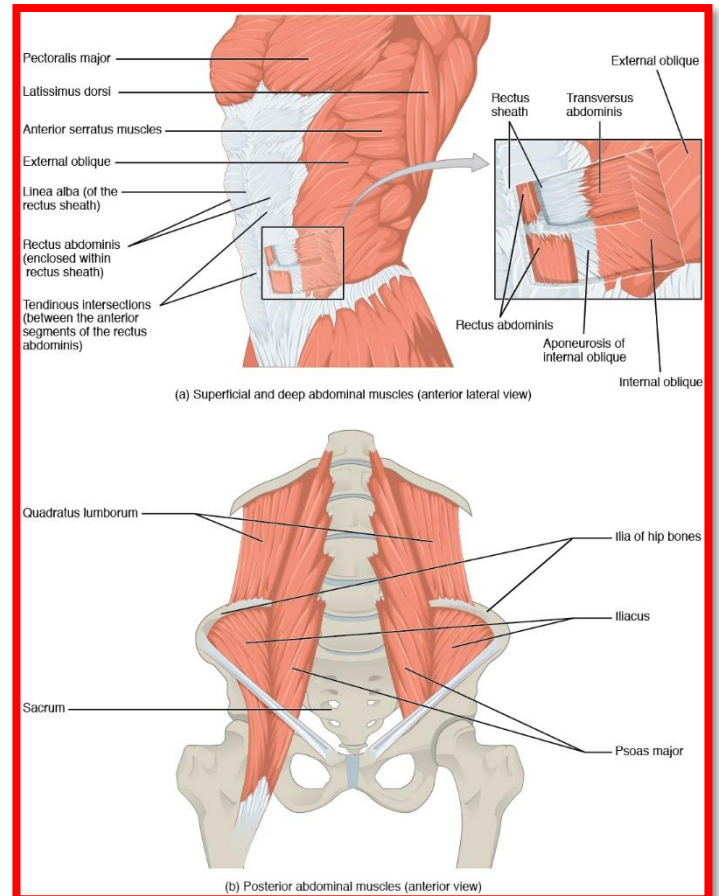
a.6. extrinsic & intrinsic laryngeal



a.7.intrinsic muscles of vertebral



a.8.muscles of thoracic and column abdomino-pelvic wall

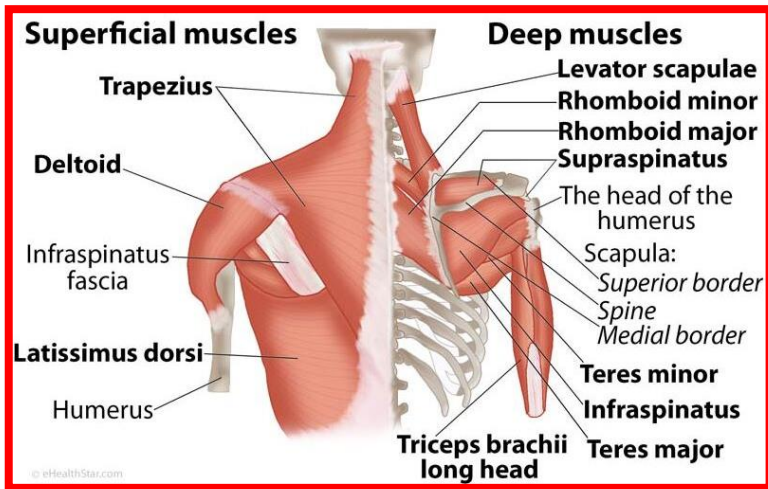


APPENDICULAR MUSCLES

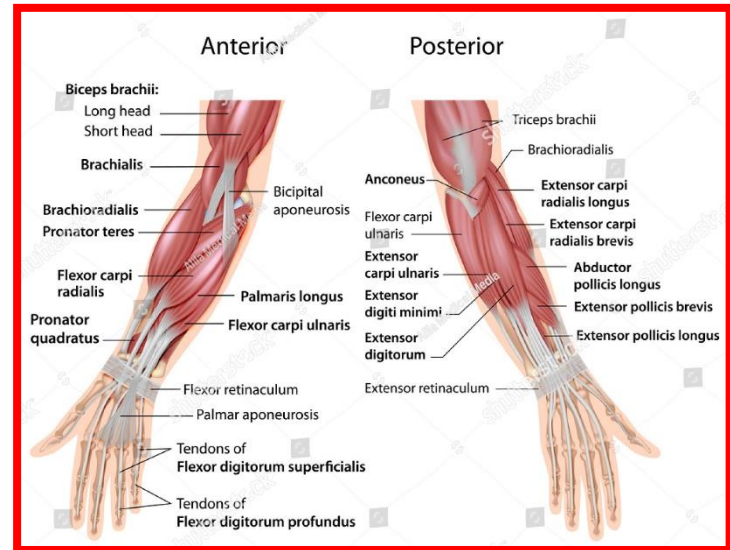
A.

MUSCLES OF UPPER EXTREMITIES

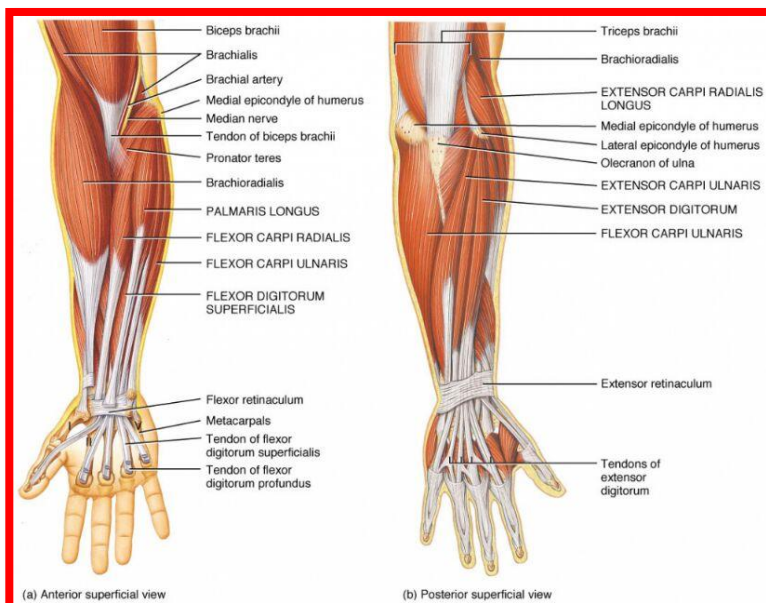
a.1 shoulder



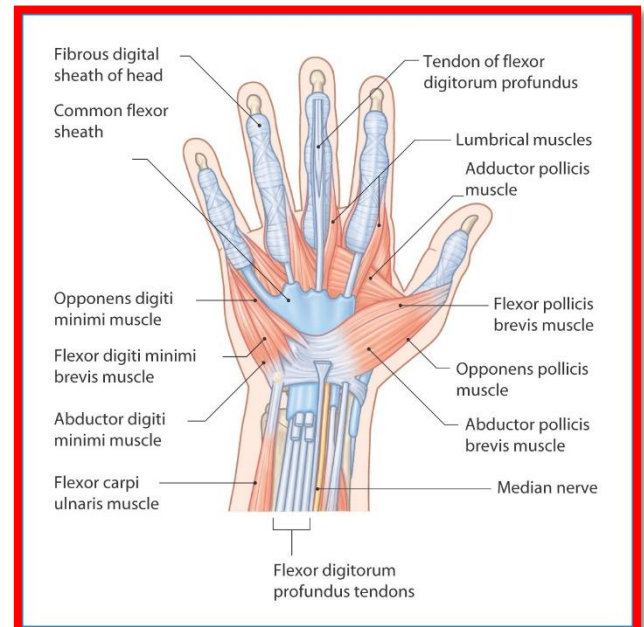
a.2 arm (anterior & posterior)



a. 3. forearm (anterior and posterior)



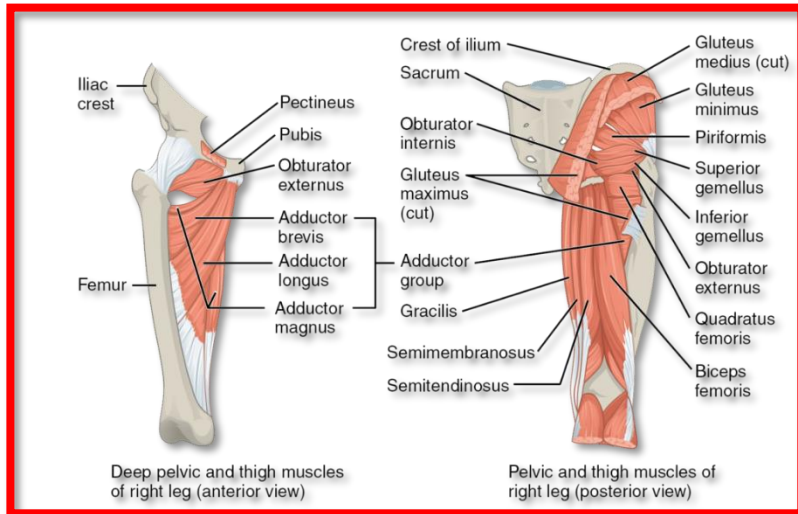
a.4 hand (palm)



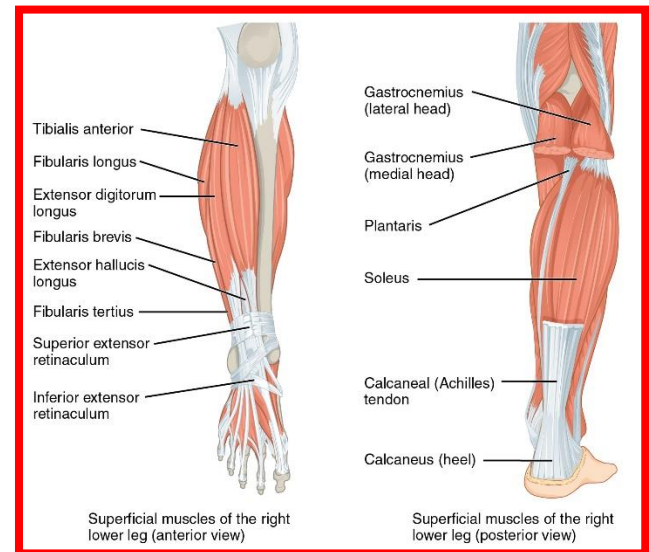
B.

MUSCLES OF LOWER EXTREMITIES

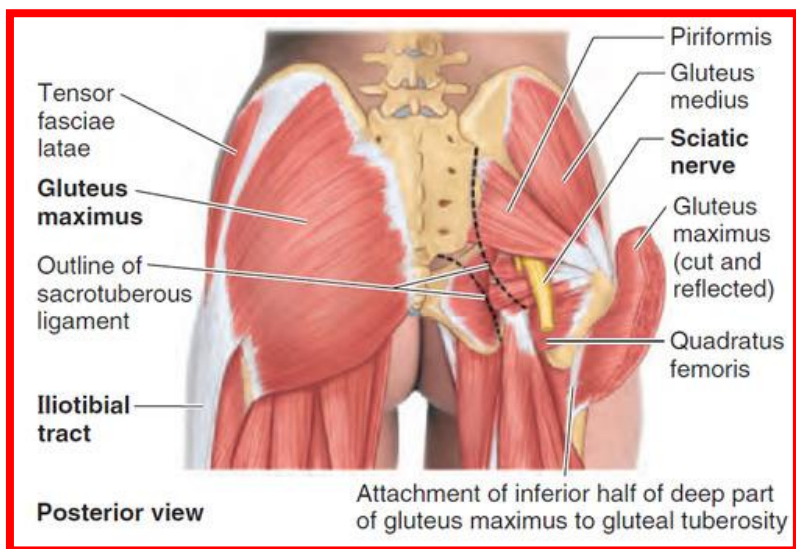
b.1 thigh (anterior and posterior)



b.2.leg (anterior &posterior)



b.3 gluteal region



b.4. posterior leg

