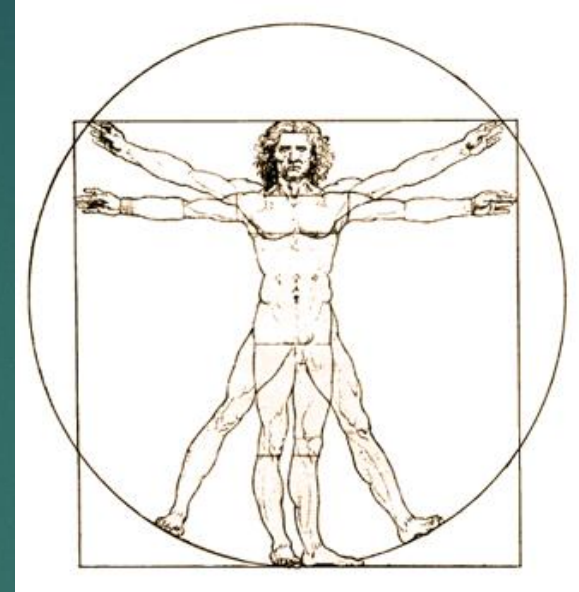


# Week 3

## Anatomy and Core Strengthening Exercises

DEPARTMENT OF STUDENT AFFAIRS  
TUNKU ABDUL RAHMAN UNIVERSITY COLLEGE



# Human Anatomy

- ▶ Anatomy is the study of the structure and relationship between body parts.

What is the importance of anatomy?

- ▶ Knowledge of anatomical structure of the body is basic to understanding musculoskeletal function and how both structure and function are modified by exercise or disease..

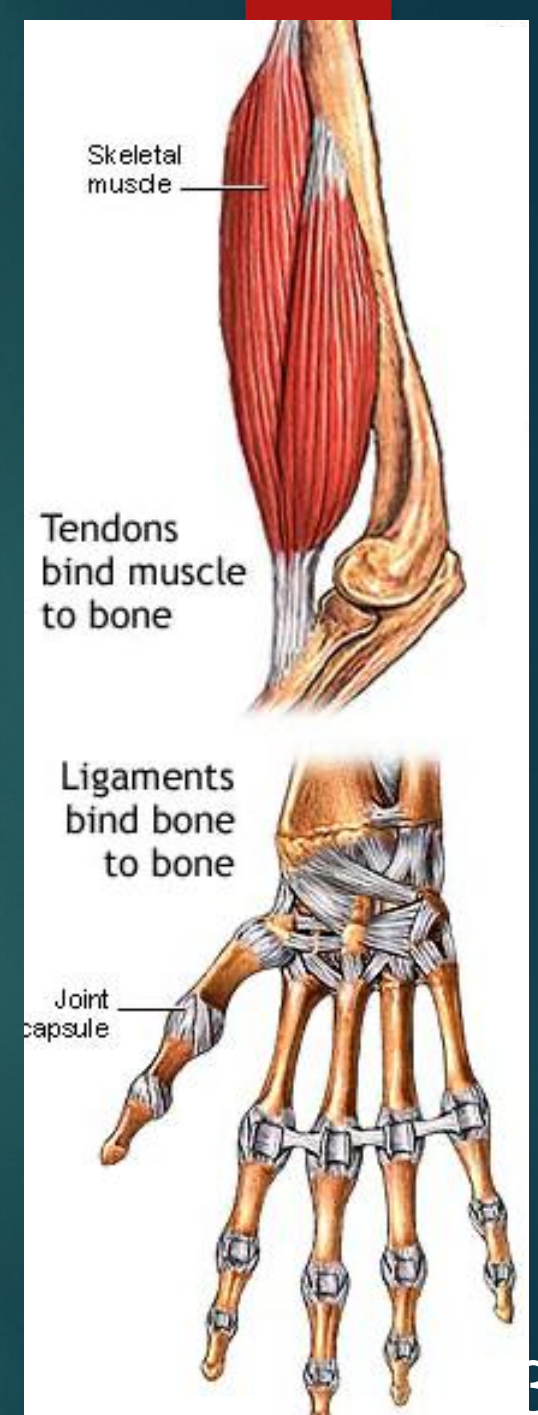
# The Musculoskeletal System

What is musculoskeletal ?

- ▶ The musculoskeletal system is the combination of the muscular and skeletal systems working together and includes the bones, muscles, tendons and ligaments of the body.

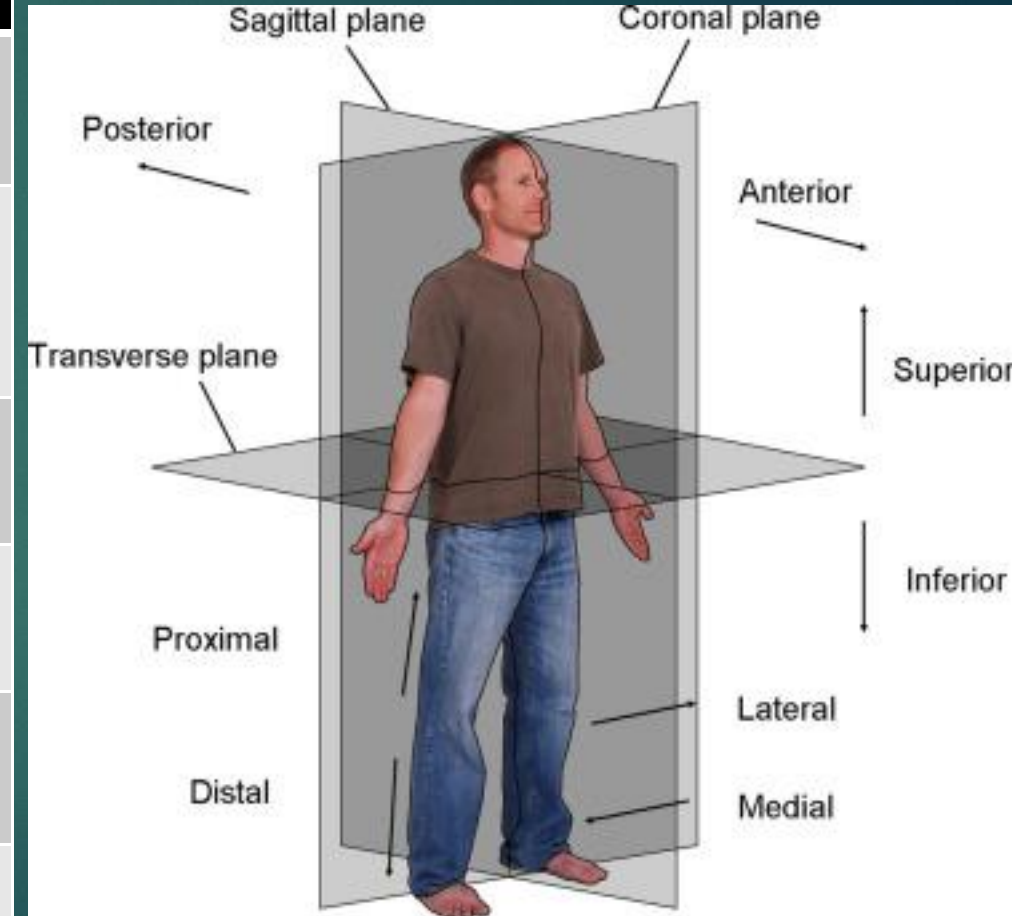
What does the musculoskeletal system do?

- ▶ The musculoskeletal system provides our bodies with shape, protection of our internal organs and the ability to move.
- ▶ Every time you sit, stand, walk, jump and talk you're using the musculoskeletal system.
- ▶ Without this system or if it's injured and not able to function properly, our ability to complete these everyday tasks is greatly hindered.



# Musculoskeletal System Terms

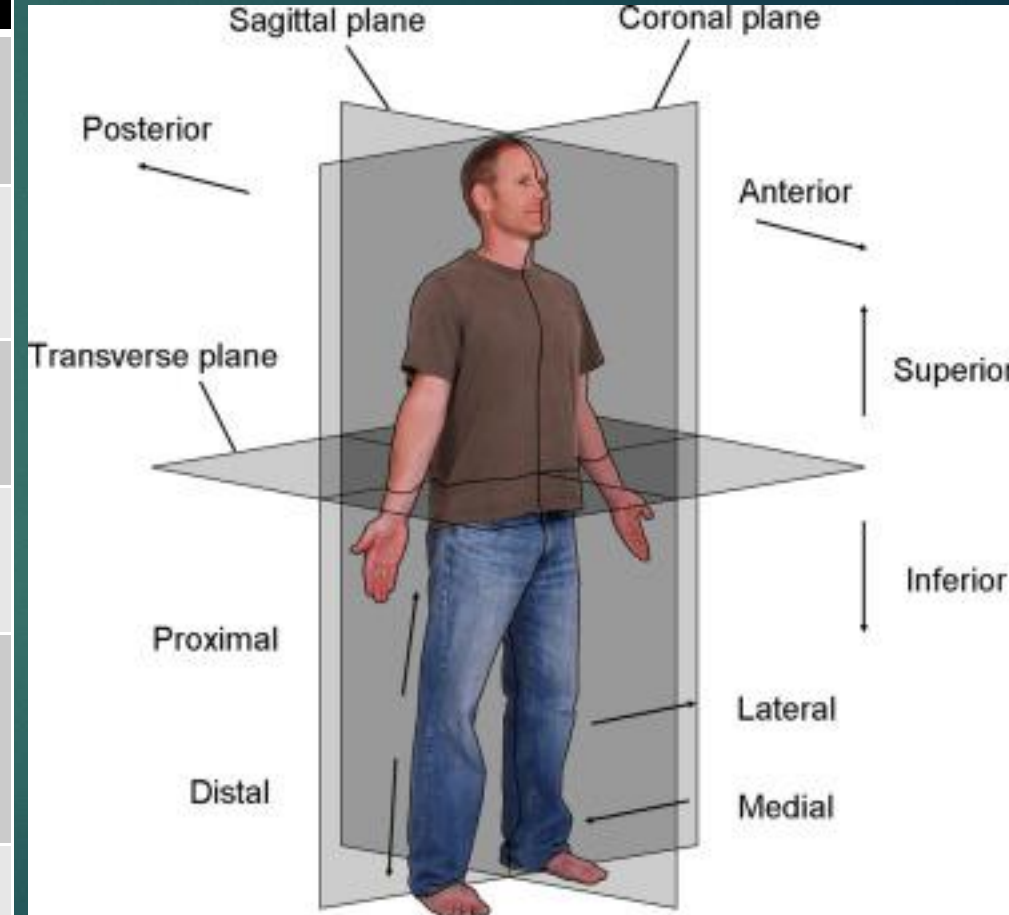
Term	Definition	Example
<b>Anterior</b>	Nearer to or at the front of the body	The mouth is on the anterior part of the head
<b>Posterior</b>	Nearer to or at the back of the body	The spine is on the posterior part of the trunk
<b>Superior</b>	Toward the head	The head is superior to the stomach
<b>Inferior</b>	Away from head	The knee is inferior to the hip
<b>Lateral</b>	Farther from the midline/inside	The lungs are lateral to the heart
<b>Medial</b>	Toward the midline/inside	The big toe is medial to the little toe



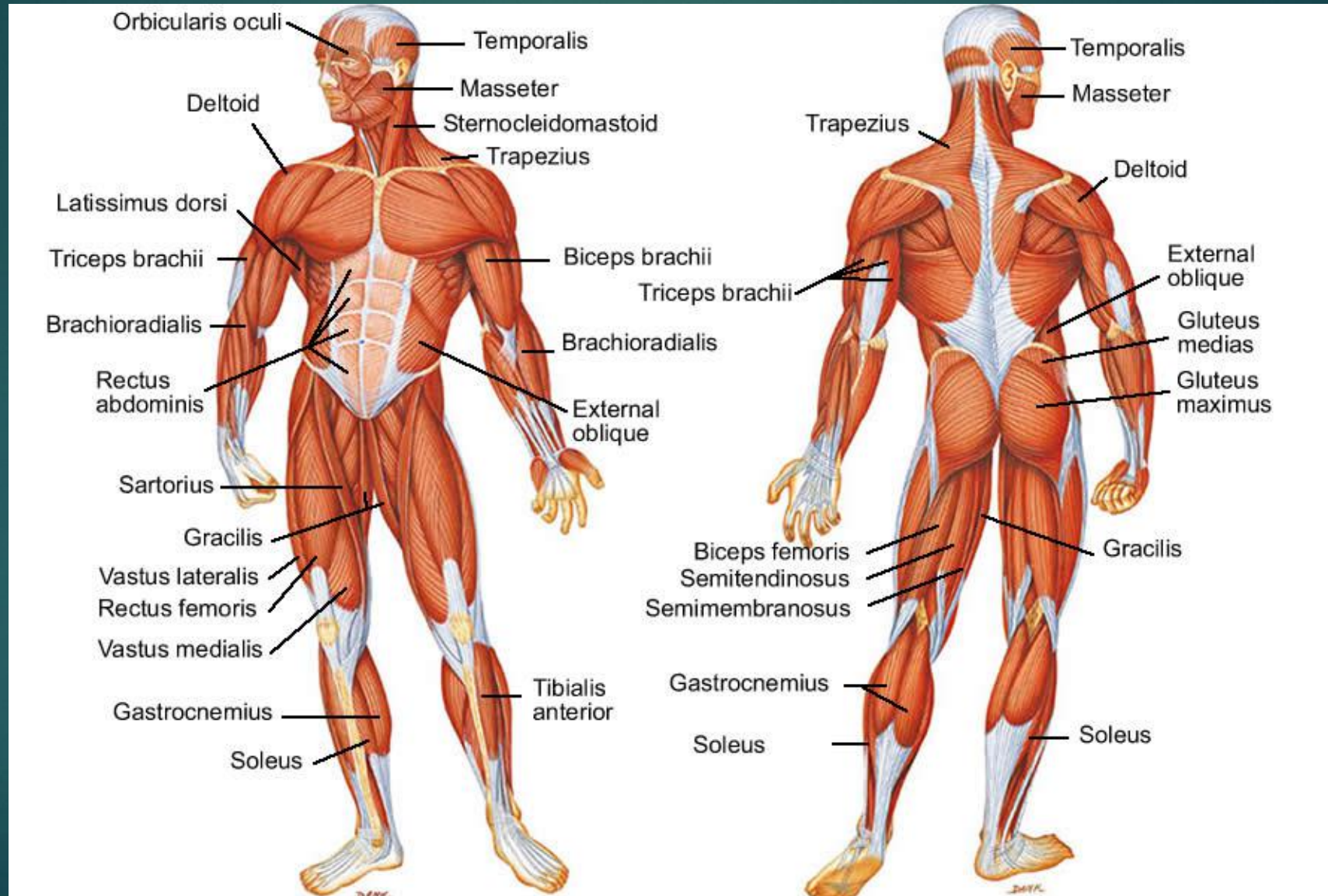


# Musculoskeletal System Terms

Term	Definition	Example
<b>Proximal</b>	Nearer the trunk	The arm bone are proximal to the radius
<b>Distal</b>	Further from the trunk	The finger bones are distal to the wrist bone
<b>Prone</b>	Face down	Lying on stomach about to do a push up
<b>Supine</b>	Face up	Lying on back about to do a sit up/crunch
<b>Superficial</b>	Nearer to the surface of body	The skin is more superficial than the stomach
<b>Deep</b>	Away from the surface of body	The stomach is more deep than the skin

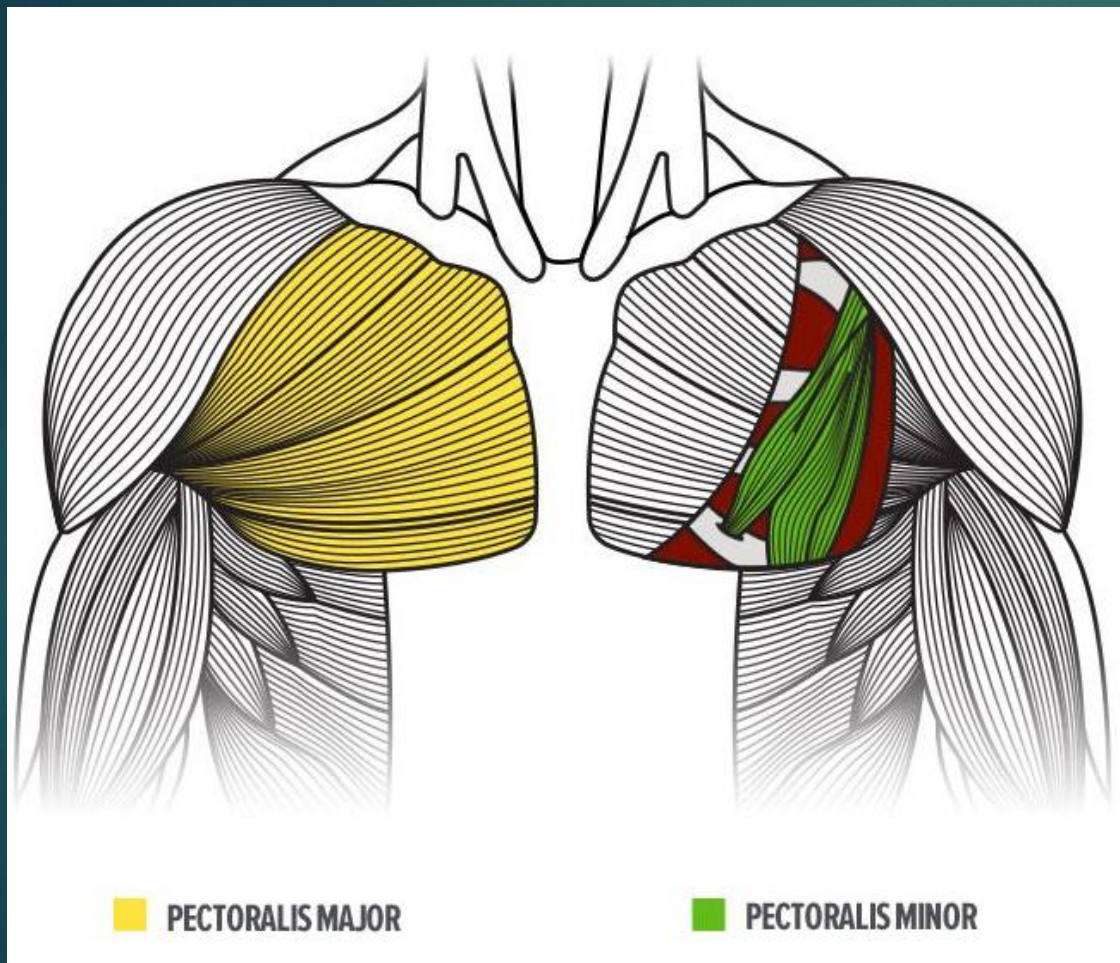


# Musculoskeletal System

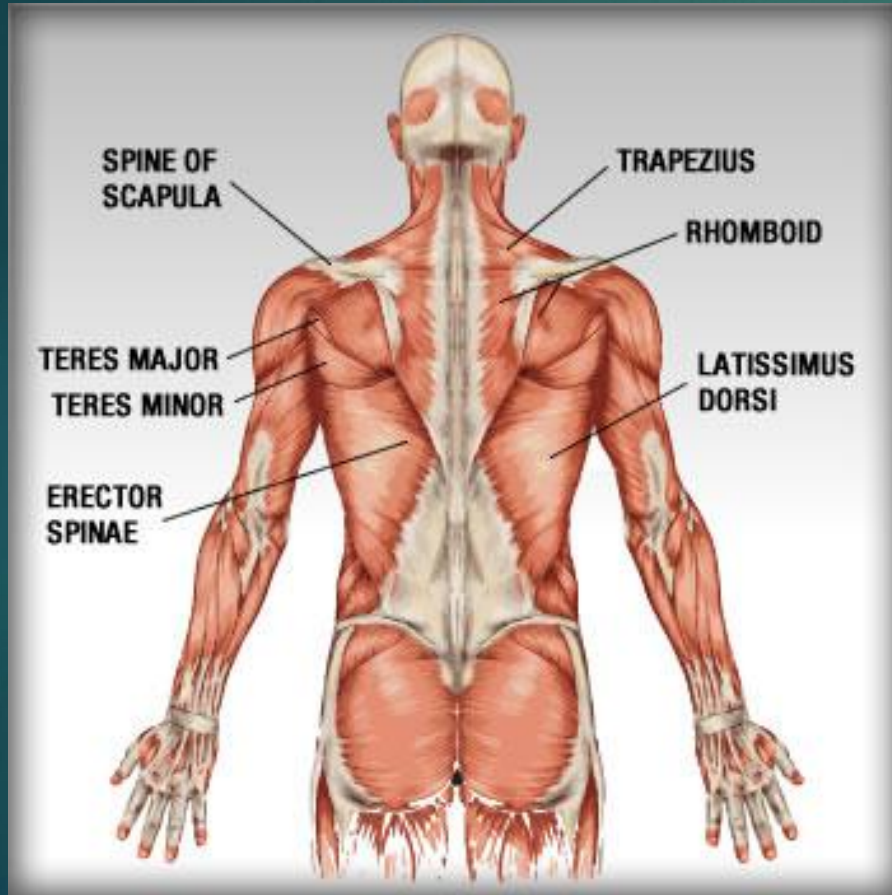




# Chest

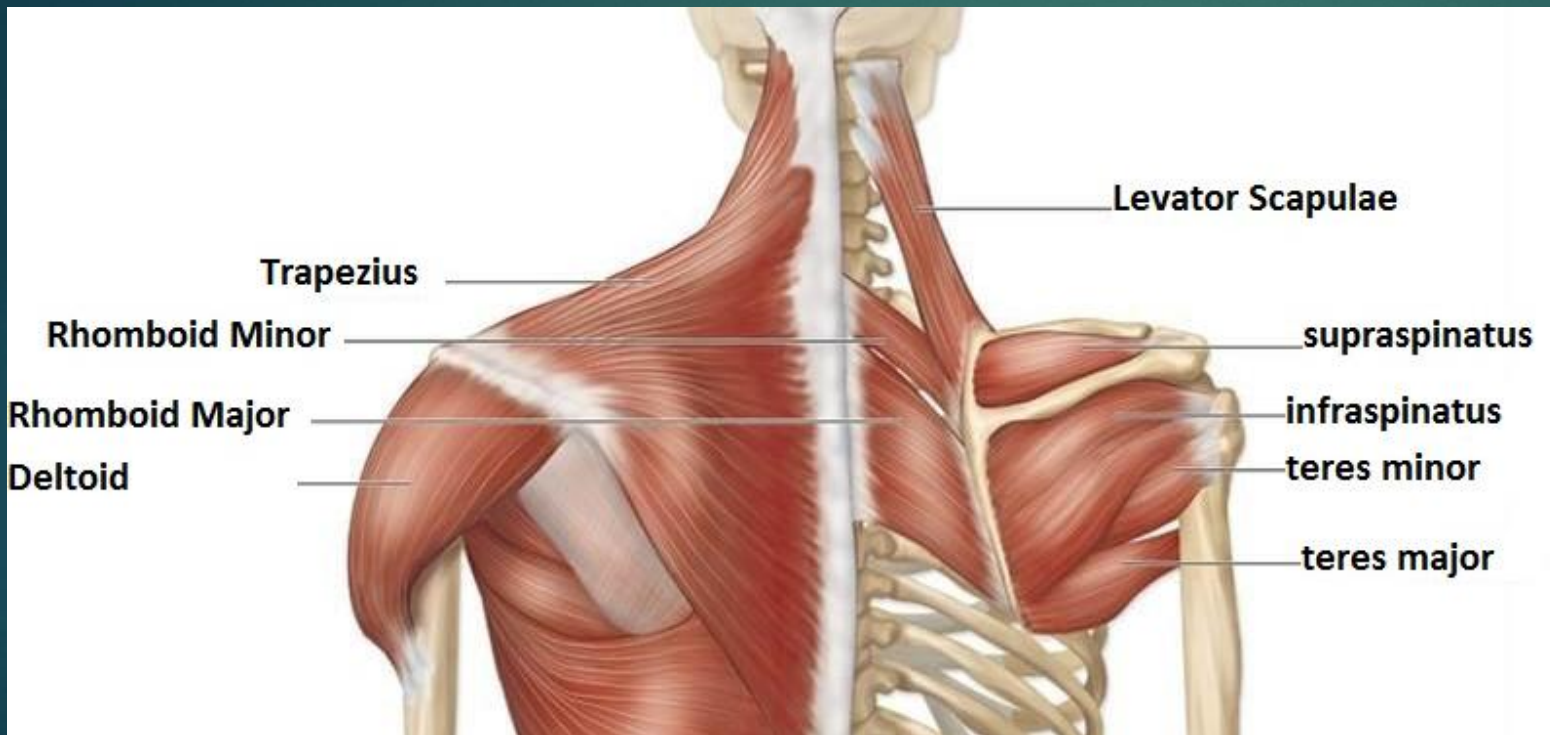


# Back Muscles

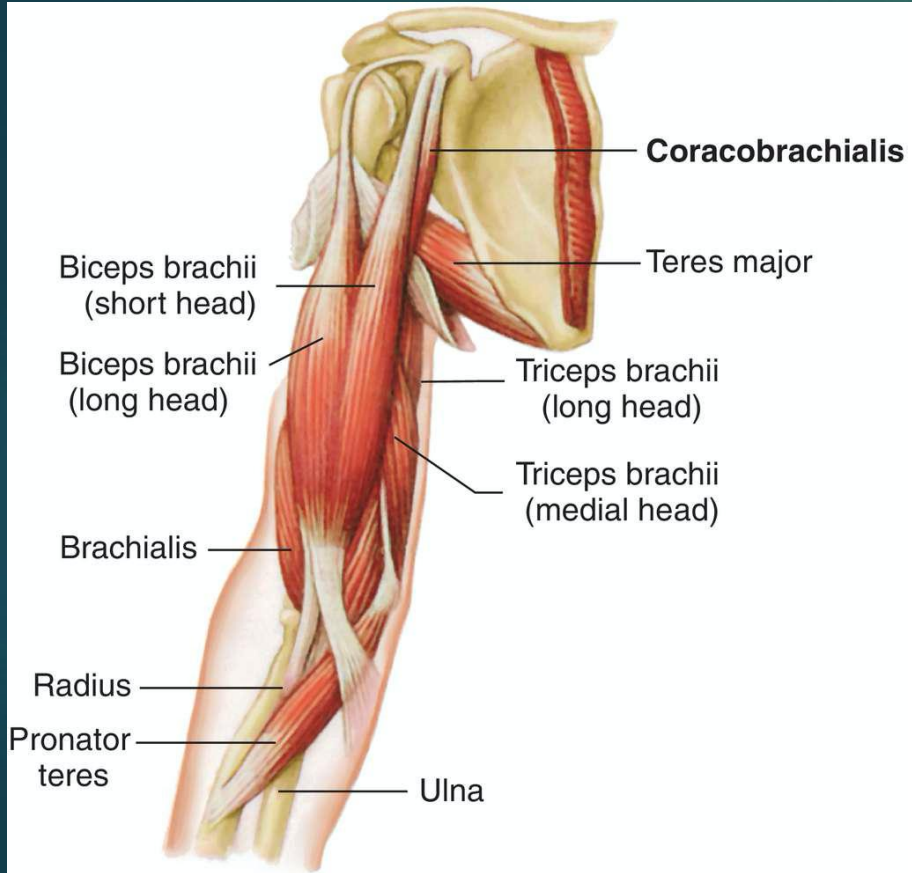




# Shoulder

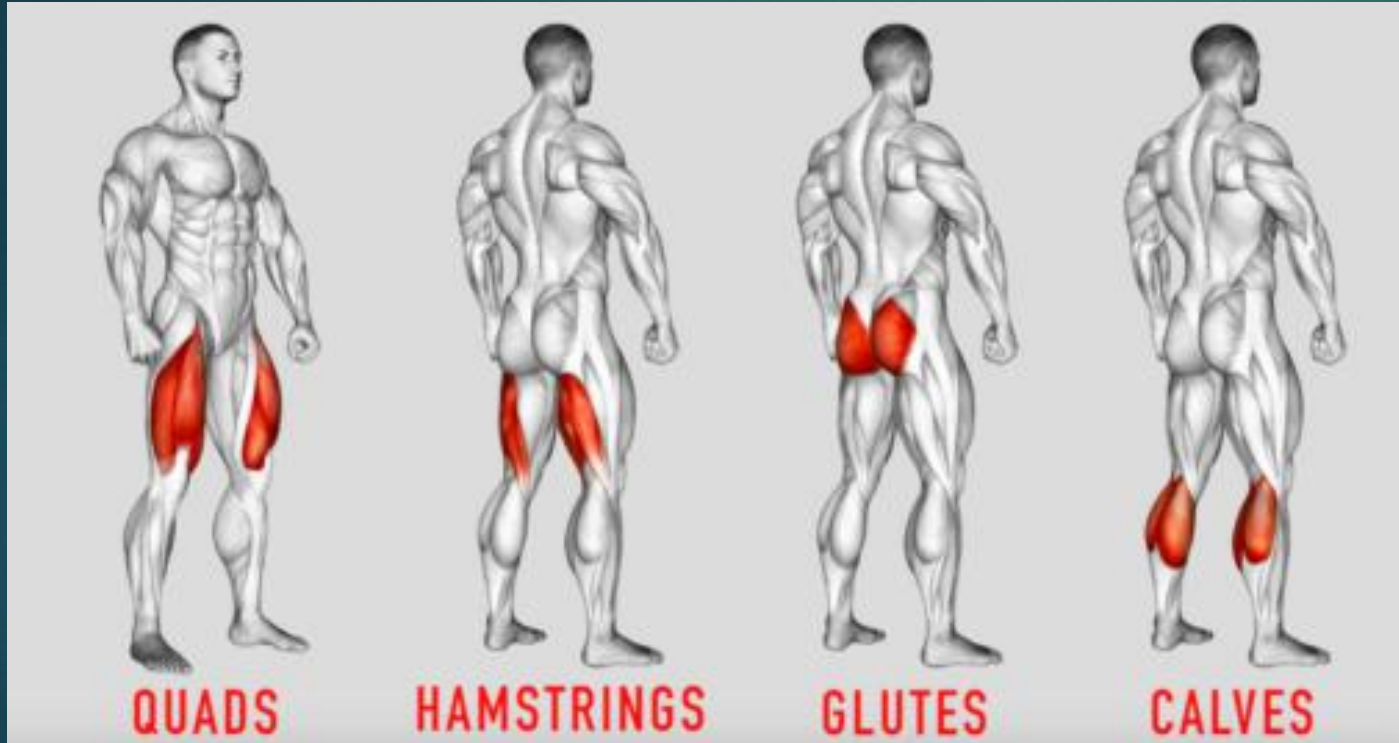


# Arm





# Lower body



## Question:

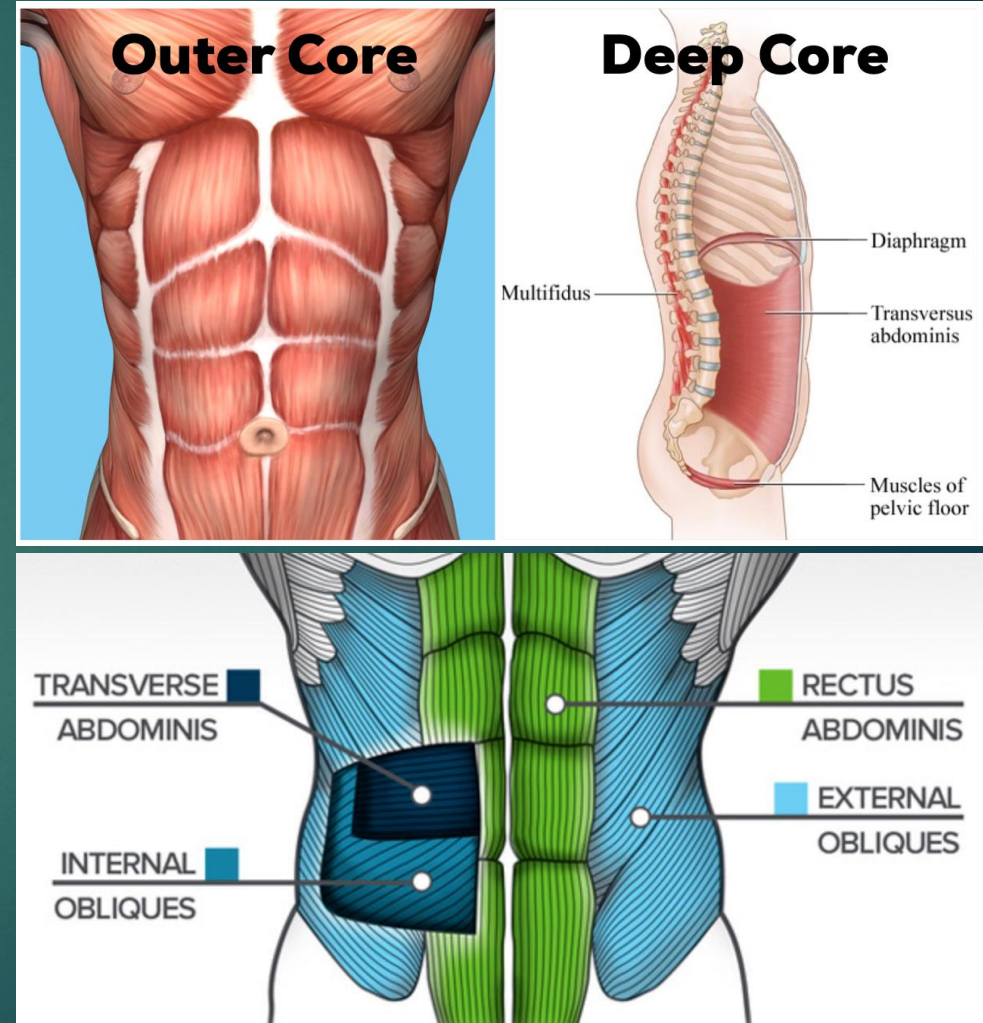
Which muscle is the largest muscle in human body?



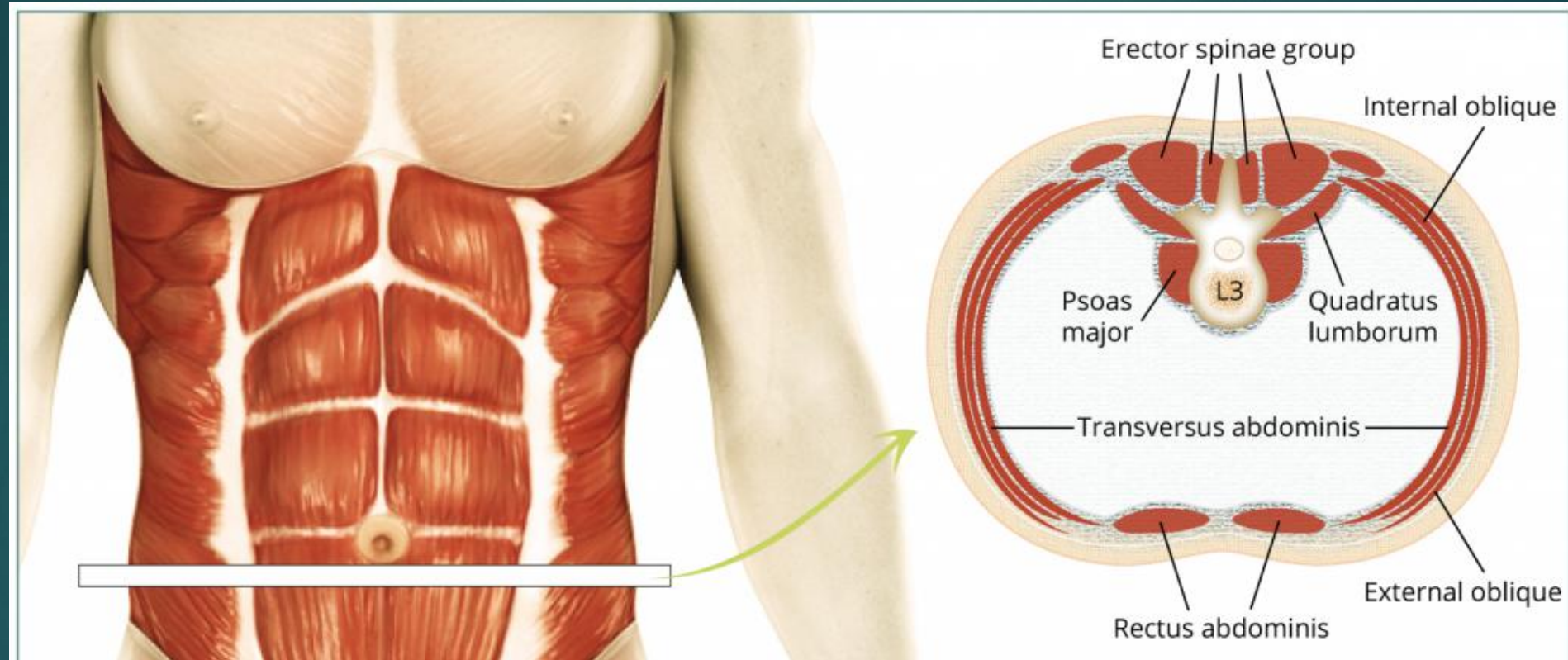


# CORE STRENGTHENING EXERCISES

- ▶ Core-strengthening exercises develop your core muscles, including your abdominal muscles, back muscles and the muscles around the pelvis.
- ▶ Strong core muscles make us easier to do many physical activities.
- ▶ Your core stabilizes your body, allowing you to move in any direction as well as having proper balance. It helps prevent falls and supports your body.
- ▶ So having a strong core is beneficial to everyone because it allows your body to function properly.



# Core Muscles (Transverse view)



# Why core strength is essential?

- ▶ The abdominal area is the only body part which is not supported and protected by the skeletal system
- ▶ Stronger core muscle strength can lower the risk of abdominal and spinal injuries
- ▶ Improve athlete performance especially in the component of “balancing” and “body coordination”



# Examples of core exercises

