

# 1. Introduction to Anatomy



# What is Anatomy?

“ **Anatomy** - The study of the *structure* of the human body

- Greek=to cut up, or dissect
- relationships revealed by dissection (cutting apart)
- imaging techniques

“ **Physiology** - The study of *function* of the human body

# History of Anatomy

- “ In Western Civilization: began around the Mediterranean Sea
  - . Mesopotamia
- “ The Greeks
  - . Hippocrates (~400 B.C.): Father of Medicine
  - . Aristotle (384-322 B.C.): structure and function
- “ Alexandria in Egypt
  - . First Medical School, cadaver dissection
  - . Herophilus (300 B.C.): Father of Anatomy
- “ Rome (after Alexandria fell)
  - . Galen (A.D. 130-201): “the supreme authority”

# History of Anatomy

- “ After the Fall of Rome (476 A.D.): the dark ages
  - . Medical knowledge saved by Byzantium and the Islamic world
  - . monasteries
- “ 1200’s
  - . Out of the dark ages
  - . Medical schools in Salerno, Bologna Italy
- “ 1400’s: Renaissance
  - . Leonardo de Vinci (1452-1519)
- “ Vesalius: the “Reformer of Anatomy” (1514-1564)
  - . Based on cadaver dissection again; corrected Galen
  - . The father of modern anatomy
- “ The emergence of modern medicine

” **Anatomical terminology**

- . Based on ancient Greek or Latin

” Provides standard nomenclature worldwide (Nomina anatomica)

” **Branches of anatomy**

- . Gross anatomy: Structures that can be seen with the eye (Muscles, bones, various organs)
- . Microscopic anatomy (histology): Structures that cannot be seen with the eye, need to use a microscope
- . Developmental anatomy (embryology), comparative anatomy, Radiologic anatomy (x-ray, CT, MRI) etc

- “ **Systemic** – study of anatomy by system  
(study one body system at a time. This is the approach we will use in this course)
- “ **Regional** – study of anatomy by region  
(study one region of the body at a time and learn everything about the region)

## 2. The Skeletal System

- . Protects and supports body organs
- . Provides a framework for muscles
- . Blood cells formed within bones (red bone marrow)
- . Stores minerals (calcium and phosphorus)

# Body Regions

- ❖ The human body is partitioned into two main regions, called the **axial** and **appendicular** regions.
  - the **axial region** includes the head, neck, and trunk which comprise the main vertical axis of our body
  - our limbs, or appendages, attach to the body's axis and make up the **appendicular region**



# Reclining Position

- “ If the body is lying face down, it is in the *prone* position.
- “ If the body is lying face up, it is in the *supine* position.

# Sections and Planes

A **coronal** plane, also called a **frontal plane**, is a **vertical plane** that divides the body into anterior (front) and posterior (back) parts.

# Sections and Planes

- ❖ A **transverse** plane, also called a **cross-sectional plane** or horizontal plane, cuts perpendicularly along the **long axis** of the body or organ separating it into both superior (upper) and inferior (lower) parts.

# Sections and Planes

- ❖ A **sagittal** plane or median plane, extends through the body or organ **vertically** and divides the structure into **right and left halves**.