

Introduction to Human Anatomy

Introduction to Human Anatomy

A concise, organized overview for students beginning their study of the human body.

1. What Is Anatomy?

Aspect	Description
Definition	The scientific study of the structure of living organisms, especially the human body. • Gross (macroscopic) anatomy – structures visible to the naked eye.
Branches	• Microscopic anatomy – structures seen only with a microscope (histology, cytology).
Goal	To identify where body parts are, how they are organized, and how they relate to one another.

2. Levels of Structural Organization

Level	Example	Key Features
Chemical	Atoms, molecules (e.g., water, proteins)	Basis of all higher structures.
Cellular	Neuron, muscle fiber	Smallest functional unit of life.
Tissue	Skeletal muscle tissue, epithelial tissue	Groups of similar cells performing a common function.
Organ	Heart, liver, skin	Two or more tissue types working together.
Organ System	Cardiovascular system, digestive system	Organs that cooperate to perform a major physiological task.
Organism	The human being	All systems integrated into a living individual.

3. Anatomical Terminology (Directional & Positional Terms)

Term	Meaning	Example
Anterior (ventral)	Front side	Chest is anterior to the spine.

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Posterior (dorsal)	Back side	Shoulders are posterior to the sternum.
Superior (cranial)	Toward the head	The nose is superior to the mouth.
Inferior (caudal)	Toward the feet	The stomach is inferior to the heart.
Medial	Toward the midline	The big toe is medial to the little toe.
Lateral	Away from the midline	The ears are lateral to the eyes.
Proximal	Near the point of attachment (limbs)	The elbow is proximal to the wrist.
Distal	Far from the point of attachment	The fingers are distal to the elbow.
Superficial	Near the surface	Skin is superficial to muscle.
Deep	Farther from the surface	Bones are deep to skin.
Palmar / Plantar	Relating to the palm or sole	Palmar surface of the hand; plantar surface of the foot.

Mnemonic: **A**nterior, **P**osterior, **S**uperior, **I**nferior, **M**edial, **L**ateral, **P**roximal, **D**istal, **S**uperficial, **D**eep.

4. Major Body Cavities & Membranes

Cavity	Primary Organs	Covering Membrane
Dorsal (posterior) cavity	Brain, spinal cord	Cranial and vertebral (spinal) meninges
Ventral (anterior) cavity	Thoracic & abdominal organs	Serous membranes (pleura, pericardium, peritoneum)
Thoracic cavity	Heart, lungs, esophagus	Pleura (lungs) & pericardium (heart)
**Abdominal		