

INTRODUCTION

Human Anatomy (Greek to cut up) is the study of the many structures that make up the body and how those structures relate to each other.

SUB-SPECIALTIES OF ANATOMY

Gross

Studies done without the use of microscopes

Surface

Regional

Systemic

Microscopic

Studies done using the microscope. Light and electron microscopes.

Cytology

Histology

Developmental

Comparative

Pathological

Radiographic

Examination with electronic equipment

X-Rays

Computer-Assisted Tomography

Magnetic Resonance Imaging

Ultrasound

Thermography

LEVELS OF ORGANIZATION

Cells	Tissues	Organs	Systems	Organism
	Epithelium		Integumentary	
	Connective		Skeletal	
	Muscle		Muscular	
	Nervous		Nervous	
			Endocrine	
			Cardiovascular	
			Lymphatic	
			Respiratory	
			Digestive	
			Urinary	
			Reproductive	

ANATOMICAL TERMINOLOGY

Anatomical Position

Directional Terms

Term	Definition	Example
Superior	Above or on top of	The nose is superior to the mouth.
Inferior	Below	The breastbone, sternum, is inferior to the neck.
Cranial or Cephalic	Towards the head	The head is cranial to the neck.
Caudal	Towards the tail	The waist is caudal to the chest
Anterior	Towards the front or before	The chest is anterior to the vertebrae.
Posterior	Towards the back or behind	The calf is posterior to the shin.
Ventral	Refers to the belly	The nipples are on the ventral surface of the trunk.
Dorsal	Refers to the back	The triceps muscle is on the dorsal side of the arm.
Proximal	Closer to the attachment point	The arm is proximal to the forearm.
Distal	Away from the attachment point	The foot is distal to the leg.
Medial	Towards the midline of the body or organ	The inner leg bone is on the medial side of the leg.
Lateral	Away from the midline of the body or organ	The ears are lateral to the head.
Superficial	Closer to the surface	The skin is a superficial organ.
Deep	More internal	The bones are deep within the body.
Visceral	Refers to the surface of an organ	The visceral pleura is directly upon the lungs.
Parietal	Refers to the wall surrounding the organ	The parietal pleura is on the inner wall of the rib cage.

BODY PLANES AND SECTIONS

Longitudinal plane

 Sagittal Plane

 Midsagittal

 Parasagittal

 Frontal (coronal) plane

Transverse (Horizontal) plane

BODY CAVITIES

I. Dorsal cavity: Bone and meninges form its wall.

 A. Cranial cavity (brain)

 B. Spinal cavity (spinal cord)

II. Ventral cavity: Membranes, muscles, and bones form its wall.

 A. Thoracic cavity

 1. Pleural cavities (lungs)

 2. Pericardial cavity (heart)

 3. Mediastinum (trachea, esophagus & thymus)

B. Abdominopelvic cavity

1. Abdominal cavity (stomach, liver, pancreas, intestines)
2. Pelvic cavity (urinary bladder, rectum, internal reproductive organs)

MEMBRANES

Fist in a balloon.

The ventral cavity contains membranes that are associated with a variety of organs. The **visceral pleura** is directly attached to the lungs while the **parietal pleura** is associated with the inner thoracic wall.

The heart has the **visceral pericardium** as a surface layer and the **parietal pericardium** associated with the pericardial sac surrounding the heart.

The **visceral peritoneum** is the membrane directly covering some of the digestive organs while the **parietal peritoneum** lines the wall of the abdominopelvic cavity.