

Anatomical terms

1.1 Define

- a) anatomical position - the standard body position for an anatomical reference point.
The body is erect with feet slightly apart and palms face forward with thumbs pointing away from the body
- b) directional terms - allow to explain where one body structure is in relation to another
- c) regional terms - used to designate specific areas within the axial and appendicular part of the major body divisions
- d) axial part - makes up the main axis of the body, includes head, neck and trunk
- e) appendicular part - consists of appendages or limbs, which are attached to body's axis
- f) sagittal plane - vertical plane that divides the body into right and left parts
- g) median (mid-sagittal) plane - sagittal plane that lies directly in the midline
- h) para-sagittal planes - all other sagittal planes, offset from midline
- i) frontal (coronal) planes - lie vertically and divide the body into anterior and posterior parts
- j) transverse (horizontal) plane - runs horizontally from right to left, dividing the body into superior and inferior parts
↳ transverse section = cross section
- k) oblique sections - cuts made diagonally between the horizontal and vertical planes

1.2 Describe the body cavities

1.2.1 Dorsal body cavity

- protects fragile nervous system organs
- 2 subdivisions
 - ↳ cranial cavity - in the skull, encases the brain
 - ↳ vertebral (spinal) cavity - runs within the bony vertebral column, encloses the delicate spinal cord

1.2.2 Ventral body cavity

- more anterior and larger of closed body cavities
- houses internal organs called viscera
- 2 subdivisions

↳ thoracic cavity - superior subdivision surrounded by the ribs and muscles of the chest

↳ pleural cavities - lateral subdivision, envelope a lung

↳ mediastinum - medial subdivision

↳ pericardial cavity - encloses the heart and surrounds the remaining thoracic organs

↳ abdominopelvic cavity - inferior subdivision

↳ abdominal cavity - superior portion, contains the stomach, intestines, spleen, liver, and other organs

↳ pelvic cavity - inferior part, contains urinary bladder, some reproductive organs and the rectum

• Membranes in the ventral body cavity

↳ serosa (serous membrane) - double-layered membrane that covers ventral cavity and outer surfaces of organs; separated by serous fluid

↳ parietal serosa - part of membrane lining the cavity walls

↳ visceral serosa - covers organs in cavity

• Abdominopelvic regions and quadrants

↳ 4 quadrants

↳ right upper quadrant (RUQ)

↳ left upper quadrant (LUQ)

↳ right lower quadrant (RLQ)

↳ left lower quadrant (LLQ)

↳ 9 regions

↳ umbilical region - centermost region deep to and surrounding the umbilicus (naval)

↳ epigastric region - superior to the umbilical region

↳ pubic (hypogastric) region - located inferior to the umbilical region

↳ right and left inguinal (iliac) regions - lateral to hypogastric region

↳ right and left lateral (lumbar) regions - lateral to umbilical region

↳ right and left hypochondriac regions - lateral to epigastric region and deep to ribs

1, 2, 3 Other body cavities

• oral and digestive cavities - oral cavity is continuous with the cavity of the digestive organs, which opens to the body exterior at the anus

• nasal cavity - located within posterior of nose, part of respiratory system

• orbital cavities - house the eyes and present them in an anterior position

• middle ear cavities - lie medial to eardrums, contain tiny bones that transmit sound vibrations to hearing receptors

• synovial cavities - joint cavities, enclosed within fibrous capsules that surround freely movable joints of the body