



BODY CAVITIES

A lecture in Anatomy

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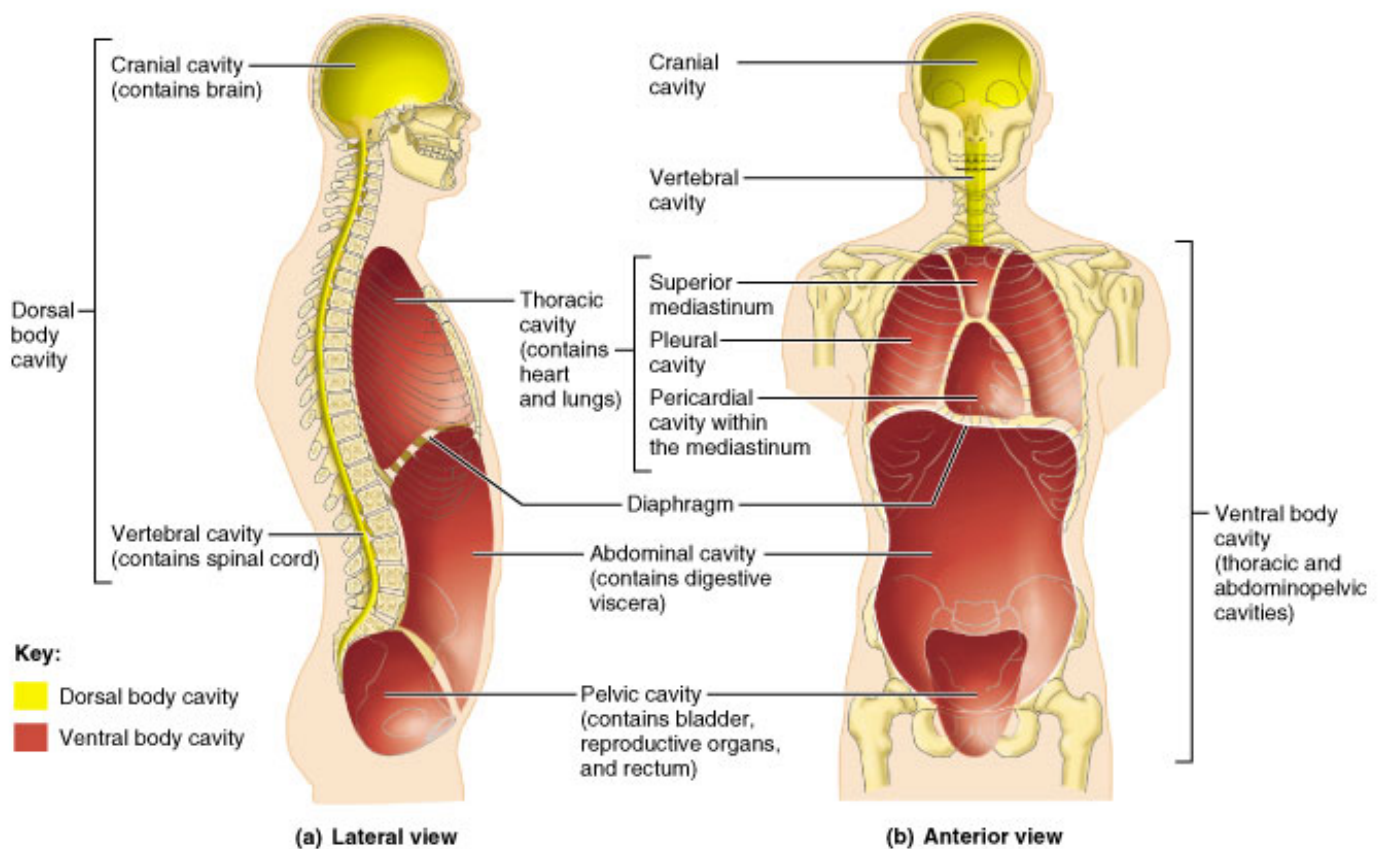
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BODY CAVITIES AND SEROUS MEMBRANES

The body maintains its internal organization by means of membranes, sheaths, and other structures that separate compartments. There are two cavities in human body: dorsal (posterior) cavity and the ventral (anterior) cavity are the largest body compartments. These cavities contain and protect delicate internal organs. The ventral cavity allows for significant changes in the size and shape of the organs as they perform their functions. The lungs, heart, stomach, and intestines, for example, can expand and contract without distorting other tissues or disrupting the activity of nearby organs.



The posterior (dorsal) and anterior (ventral) cavities are each subdivided into smaller cavities.

DORSAL BODY CAVITY

This cavity is subdivided into a cranial cavity and vertebral cavity.

Cranial cavity

lies in the skull and encases the brain.

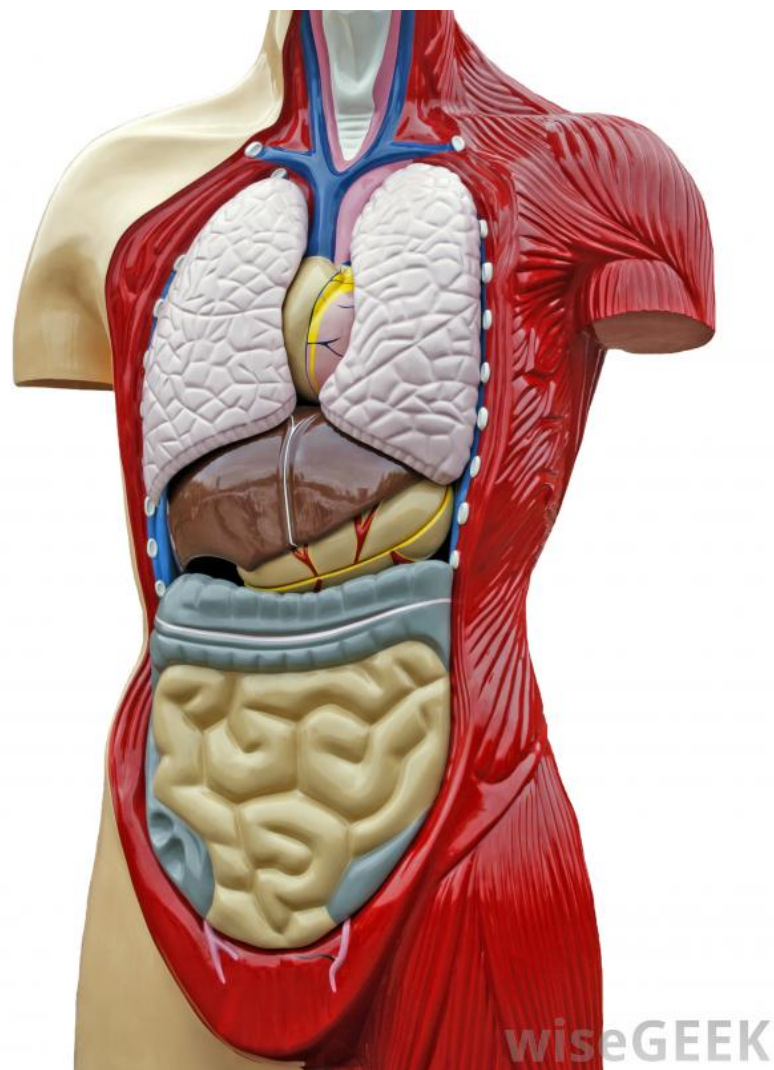
Vertebral cavity

Runs through the vertebral column to enclose the spinal.

Just as the brain and spinal cord make up a continuous, uninterrupted structure, the cranial and spinal cavities that house them are also continuous. The brain and spinal cord are protected by the bones of the skull and vertebral column and by cerebrospinal fluid, a colorless fluid produced by the brain, which cushions the brain and spinal cord within the posterior (dorsal) cavity.

VENTRAL BODY CAVITY

The anterior (ventral) cavity has two main subdivisions: the thoracic cavity and the abdominopelvic cavity.



Thoracic cavity

Is more superior subdivision of the anterior cavity, and it is enclosed by the rib cage. The diaphragm forms the floor of the thoracic cavity and separates it from the more inferior abdominopelvic cavity. It has 3 parts; 2 lateral containing the lungs surrounded by the pleura and one central 'Mediastinum' which contains the heart surrounded by pericardium. The mediastinum also houses esophagus and trachea.

Abdominopelvic cavity

Is the largest cavity in the body. Although no membrane physically divides the abdominopelvic cavity, it can be useful to distinguish between the abdominal cavity, the division that houses the digestive organs, and the pelvic cavity, the division that houses the organs of reproduction.

DIAPHRAGM

A dome shaped muscle separates the thoracic and abdominal cavities from each other.

ABDOMINAL REGIONS AND QUADRANTS

To promote clear communication, the abdomen is divided into quadrants. For instance the location of a patient's abdominal pain or a suspicious mass, health care providers typically divide up the cavity into either nine regions or four quadrants.

The more detailed regional approach subdivides the cavity with one horizontal line immediately inferior to the ribs and one immediately superior to the pelvis, and two vertical lines drawn as if dropped from the midpoint of each clavicle (collarbone). There are nine resulting regions. The simpler quadrants approach, which is more commonly used in medicine, subdivides the cavity with one horizontal and one vertical line that intersect at the patient's umbilicus (navel).

