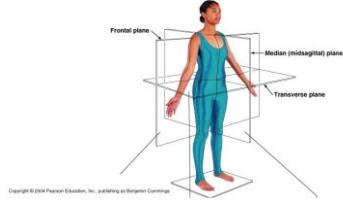


# Body Planes, Directions, and Cavities



1



**OK, sooooo.....**

How would you describe where each of the following organs is found:

1. the heart?
2. the spinal cord?
3. the kidneys?
4. the stomach?
5. the lungs?
6. the liver?

To study the anatomy and physiology of the body special terms are used to describe positions, locations and directions.

[https://www.youtube.com/watch?v=gxyy7AP\\_eGQ](https://www.youtube.com/watch?v=gxyy7AP_eGQ)

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## Describing the Human Body

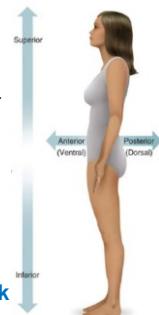
### Anatomical Position

- is the “starting point” for describing positions and directions
- is a normal standing position
- = **upright** with feet, face and shoulders facing **forward**; arms down & palms facing **forward**



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- **External:** on the **outside**
- **Internal:** on the **inside**
- The \_\_\_\_\_ surface is covered with hair.
- **Superior (Cranial):** toward the **top**
- **Inferior (Caudal):** toward the **bottom**
- The mouth is \_\_\_\_\_ to the nose.
- **Anterior (Ventral):** towards the **front**
- **Posterior (Dorsal):** towards the **back**
- The naval is on the \_\_\_\_\_ surface of the body.



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### Anatomical Directional Terms

- are like directions on a map
- = can be used to describe the locations of structures **in relation to** other structures or locations in the body.
- each directional term has a **complementary** one



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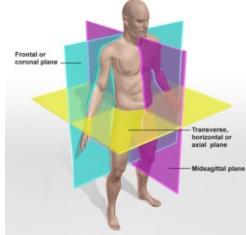
- **Superficial:** **at** the body surface
- **Deep:** **under** the body surface
- The patient had \_\_\_\_\_ wounds from a chain saw.
- **Proximal**: **near** point of reference
- **Distal**: **away** from reference point
- The fingers are \_\_\_\_\_ to the toes.
- **Medial**: **toward** the midline of the body
- **Lateral**: **away** from the midline of the body
- Your eyes are \_\_\_\_\_ to your nose.
- **Central**: locations around the **center** of the body
- **Peripheral**: surrounding or **outer** regions of the body
- The patient had \_\_\_\_\_ chest pains.

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### • Anatomical Planes

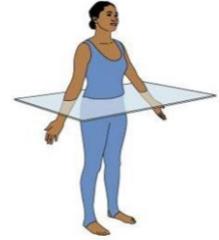
- A **plane** is an imaginary line drawn through the body or organ to separate it into **specific sections**.
- **Directional terms** create planes
- There are three body planes



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### ➤ Transverse Plane

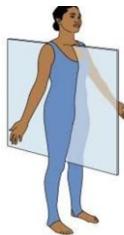
- = **horizontal** plane
- divides the body into a **top & bottom** half
- directional terms associated with transverse:
  - Superior – body parts above
  - Inferior – body parts below



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### ➤ Sagittal (Medial) Plane

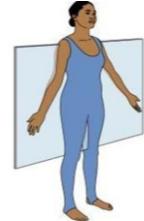
- divides the body into a **right and left** side
- if the division is equal it is called **Mid-Sagittal**
- directional terms associated with mid-sagittal:
  - Medial –close to midline
  - Lateral –away from the midline



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### ➤ Frontal or Coronal Plane

- divides the body into **front and back** sections
- directional terms associated with frontal:
  - Ventral (Anterior) - in front of plane or front of the body
  - Dorsal (Posterior) - in back of plane or back of body



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## Soooooooo.....What if....

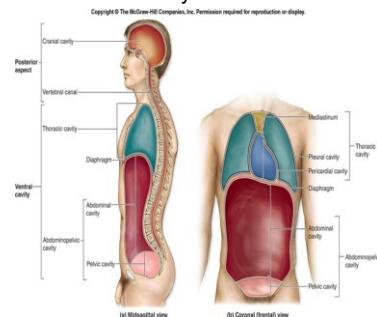
- You are a surgeon and planning to do open heart surgery.... you would need to make a \_\_\_\_\_ cut into the chest cavity.
- You have a patient that has gangrene in the lower portion of their leg and you need to amputate..... You would make a \_\_\_\_\_ cut through the leg.
- The abdominal muscles and muscles of the back are separated by the \_\_\_\_\_ plane.



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### • Body Cavities

- = spaces within body that contain vital organs
- there are two main body cavities



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### ➤ Dorsal Cavity

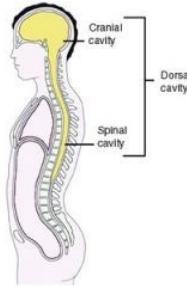
- one long, continuous cavity at the **back** of body
- divided into two sections, each surrounded by bone:

#### a) Cranial Cavity

- surrounded by skull
- = contains the **brain**

#### b) Spinal Cavity

- surrounded by vertebrae
- = contains the **spinal cord**



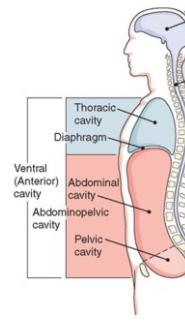
### ➤ Ventral Cavity

- located on the **front** of the body

cavities by the **diaphragm**

#### a) Thoracic Cavity

- upper chest or torso
- contains the **heart and lungs**



#### b) Abdominopelvic Cavity

- separated into upper & lower part
  - i) Abdominal Cavity  
= contains **digestive organs**
  - ii) Pelvic Cavity  
= contains the **reproductive organs, bladder & rectum**

\*\*NO structure separates the Abdominal and Pelvic cavities

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