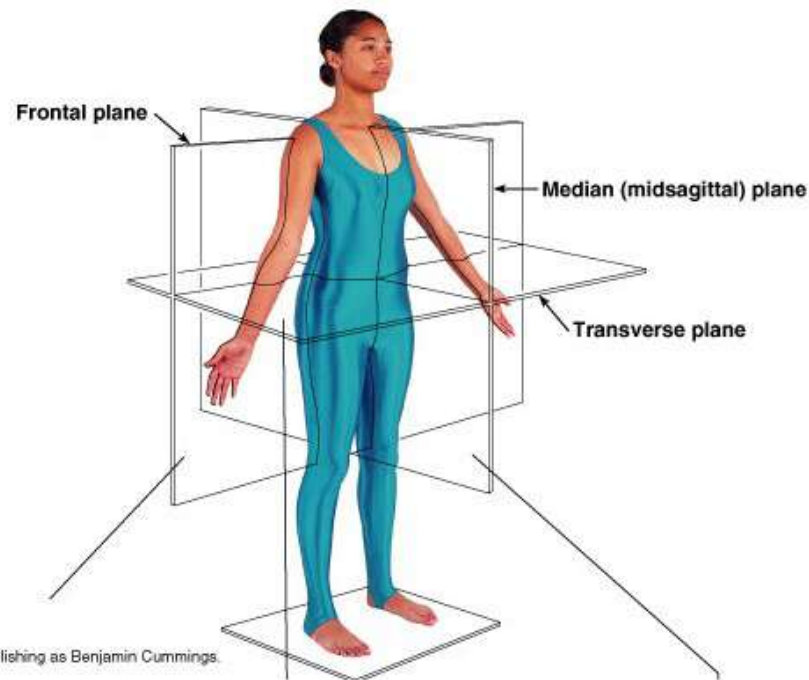


Body Planes, Directions, and Cavities



Basic Terms to Know...

- **Anatomy**- study of the structure and shape of the body and its parts
- **Physiology**-study of how the body and its parts work or function
- **Gross anatomy**- large structures, easily observable
- **Microanatomy**- very small structures, can only be viewed with a microscope

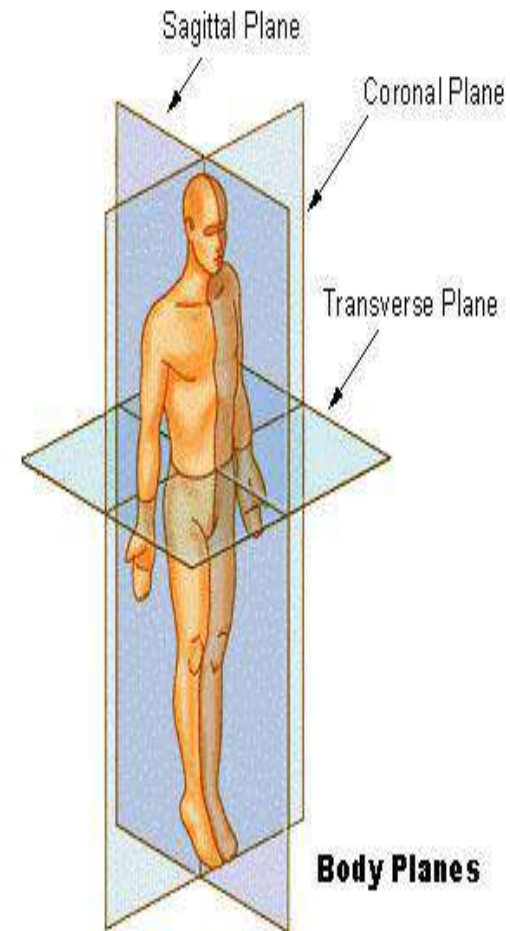
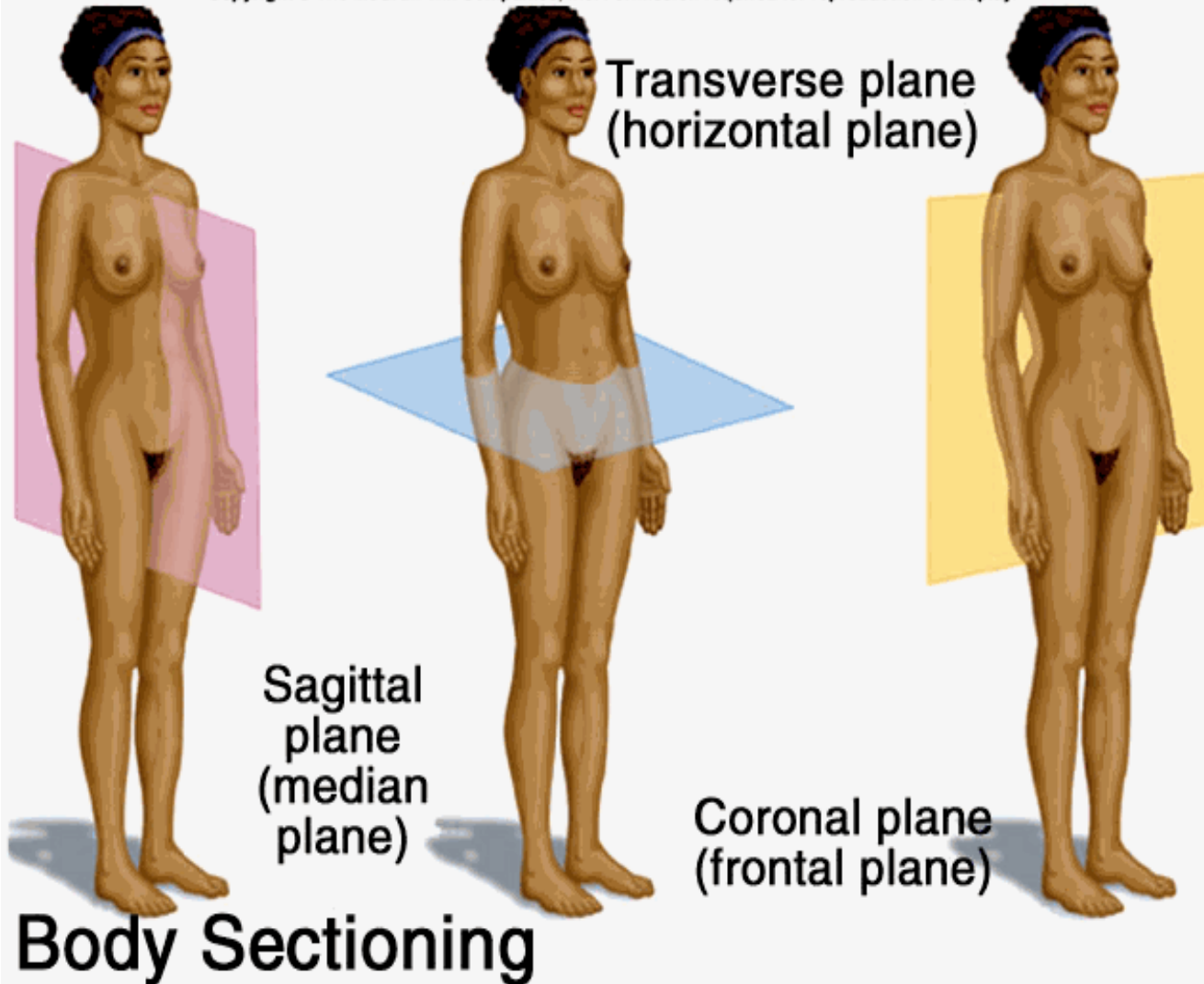
Body Planes

There are **three** body planes:

- a) **Transverse or Horizontal**- divides the body into a top and bottom.
- b) **Mid-Sagittal or Median**- divides the body into an equal right and left side.
- c) **Frontal or Coronal**- divides the body into a front and a back side.

What They Look Like

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Body Planes

QuickTime and a
decompressor
are needed to see this picture.

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.



Body Cavities

There are **two main** body cavities:

Ventral: (Belly) Which is subdivided into.....

a) Abdominopelvic- which consists of the abdominal and pelvic regions, and contains the digestive and reproductive organs.

b) Thoracic- which is the upper torso or chest region, and contains the heart and lungs.

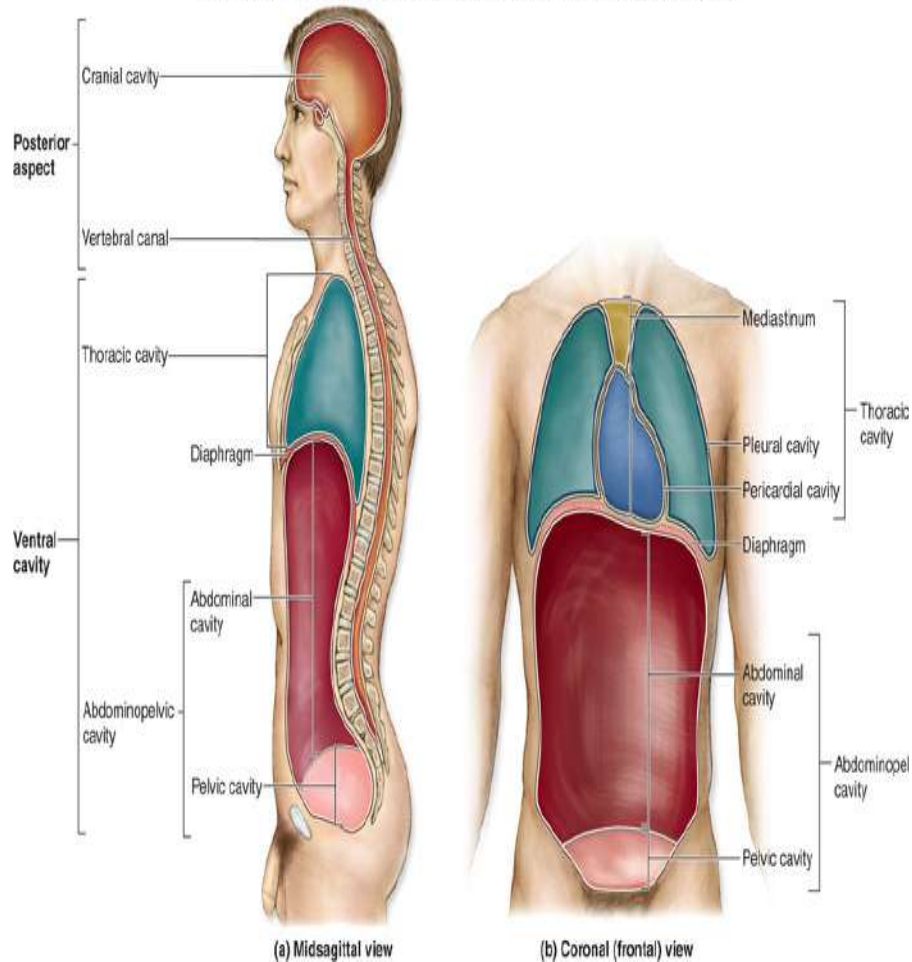
Dorsal: (Back) Which is subdivided into.....

a) Cranial- which contains the head and includes the brain.

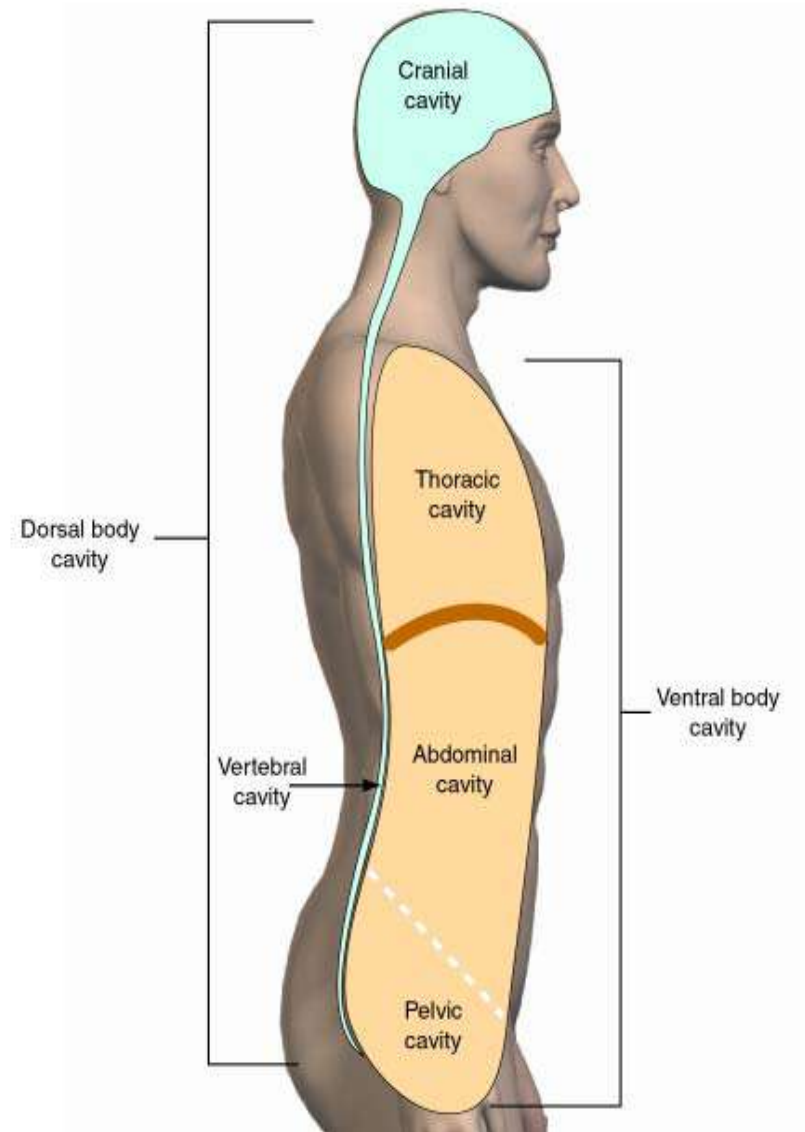
b) Vertebral- which includes the spinal column.

Body Cavities

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Dorsal and Ventral Body Cavities



Body Cavities

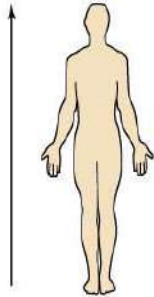
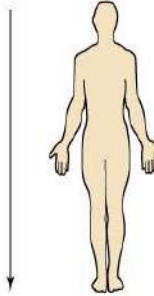
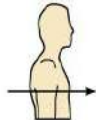
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OK, sooooo.....



1. Which cavity is the heart found in?
2. Which cavity contains the spinal cord?
3. Which cavity contains the ovaries?
4. Which cavity contains the stomach?
5. Which cavity contains the lungs?
6. Which cavity consists of the abdominopelvic and thoracic cavities?

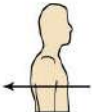
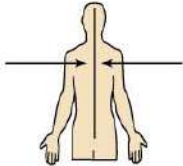
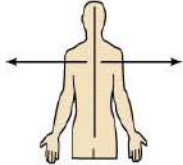
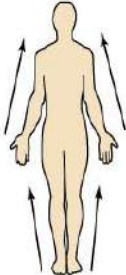
TABLE 1.1**Orientation and Directional Terms**

Term	Definition	Illustration	Example
Superior (cranial or cephalad)	Toward the head end or upper part of a structure or the body; above		The forehead is superior to the nose.
Inferior (caudal)*	Away from the head end or toward the lower part of a structure or the body; below		The navel is inferior to the breastbone.
Ventral (anterior)†	Toward or at the front of the body; in front of		The breastbone is anterior to the spine.

*The term *caudal*, literally “toward the tail,” is synonymous with *inferior* only to the inferior end of the spine.

†*Ventral* and *anterior* are synonymous in humans; this is not the case in four-legged animals. *Ventral* refers to the “belly” of an animal and thus is the inferior surface of four-legged animals. Likewise, although the dorsal and posterior surfaces are the same in humans, the term *dorsal* refers to an animal’s back. Thus, the dorsal surface of four-legged animals is their superior surface.

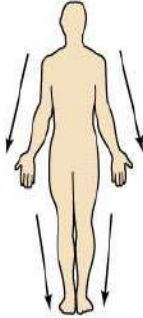
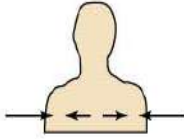
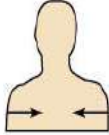
TABLE 1.1**Orientation and Directional Terms (continued)**

Term	Definition	Illustration	Example
Dorsal (posterior) [†]	Toward or at the backside of the body; behind		The heart is posterior to the breastbone.
Medial	Toward or at the midline of the body; on the inner side of		The heart is medial to the arm.
Lateral	Away from the midline of the body; on the outer side of		The arms are lateral to the chest.
Proximal	Close to the origin of the body part or the point of attachment of a limb to the body trunk		The elbow is proximal to the wrist (meaning that the elbow is closer to the shoulder or attachment point of the arm than the wrist is).

*The term *caudal*, literally "toward the tail," is synonymous with *inferior* only to the inferior end of the spine.

[†]*Ventral* and *anterior* are synonymous in humans; this is not the case in four-legged animals. *Ventral* refers to the "belly" of an animal and thus is the inferior surface of four-legged animals. Likewise, although the dorsal and posterior surfaces are the same in humans, *dorsal* refers to an animal's back. Thus, the dorsal surface of four-legged animals is their superior surface.

TABLE 1.1**Orientation and Directional Terms (continued)**

Term	Definition	Illustration	Example
Distal	Farther from the origin of a body part or the point of attachment of a limb to the body trunk		The knee is distal to the thigh.
Superficial (external)	Toward or at the body surface		The skin is superficial to the skeleton.
Deep (internal)	Away from the body surface; more internal		The lungs are deep to the rib cage.

*The term *caudal*, literally "toward the tail," is synonymous with *inferior* only to the inferior end of the spine.

†*Ventral* and *anterior* are synonymous in humans; this is not the case in four-legged animals. *Ventral* refers to the "belly" of an animal and thus is the inferior surface of four-legged animals. Likewise, although the dorsal and posterior surfaces are the same in humans, the term *dorsal* refers to an animal's back. Thus, the dorsal surface of four-legged animals is their superior surface.

The Amazing Human Body

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Fun Facts.....

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