

Anatomical Terminology: Self Study

A thorough understanding of anatomical terminology is critical for communication with other medical professionals. In this self study, you will review the anatomical position, terms of direction in anatomy, and the anatomical planes. We will use these terms nearly every day in class, especially in units 2-4.

Anatomical Position

Standing upright

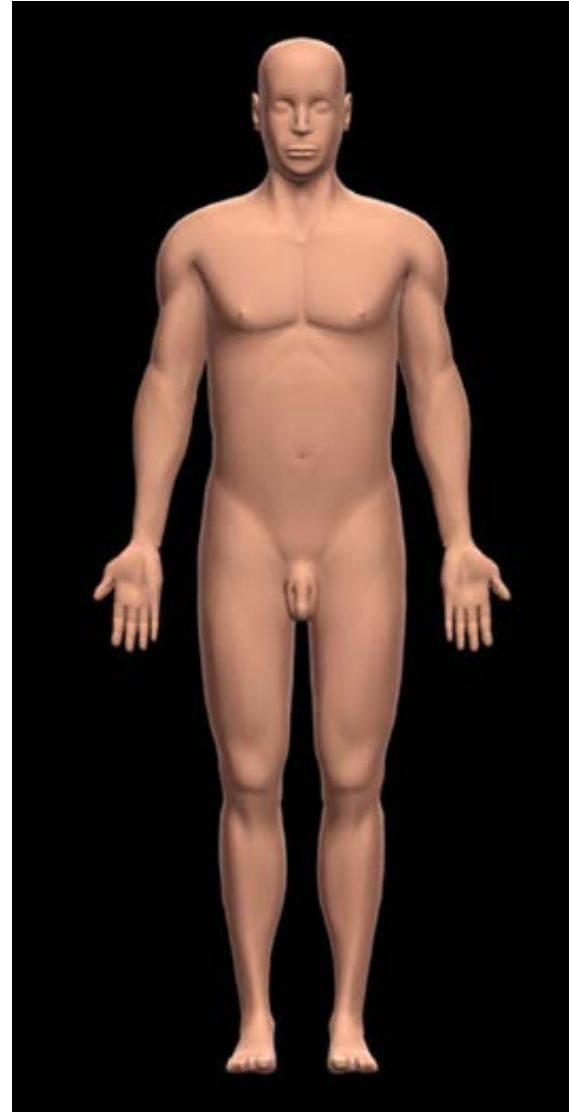
Feet parallel to the floor

Eyes looking forward

Arms at side

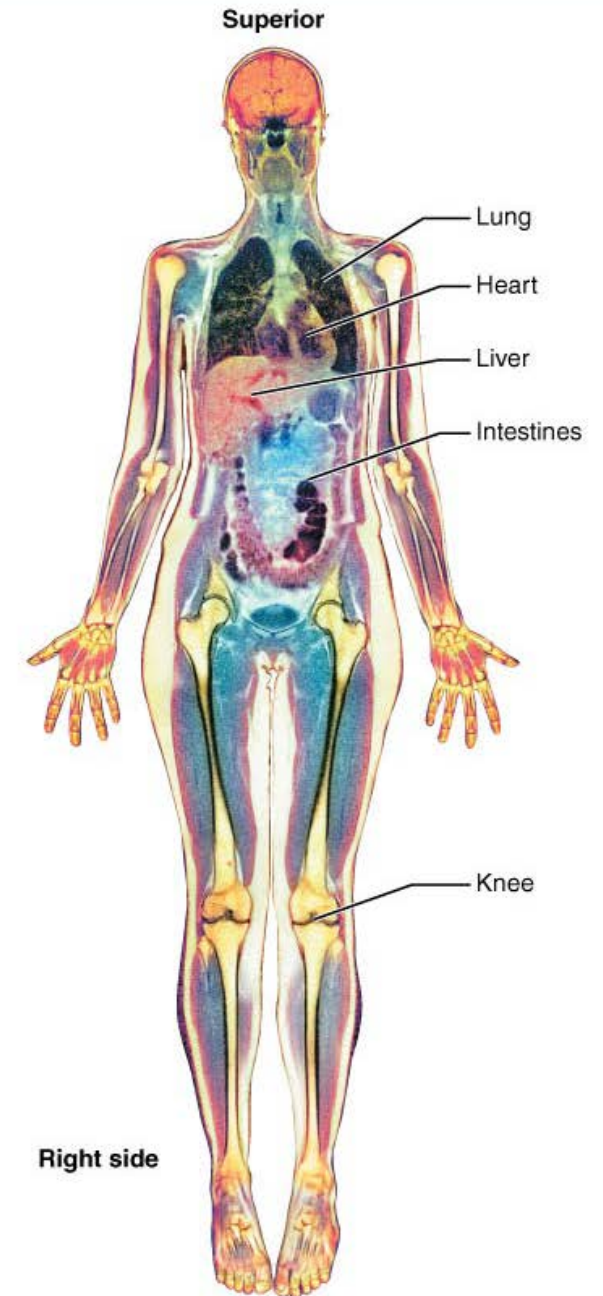
Palms facing forward

Thumbs pointing away from the body



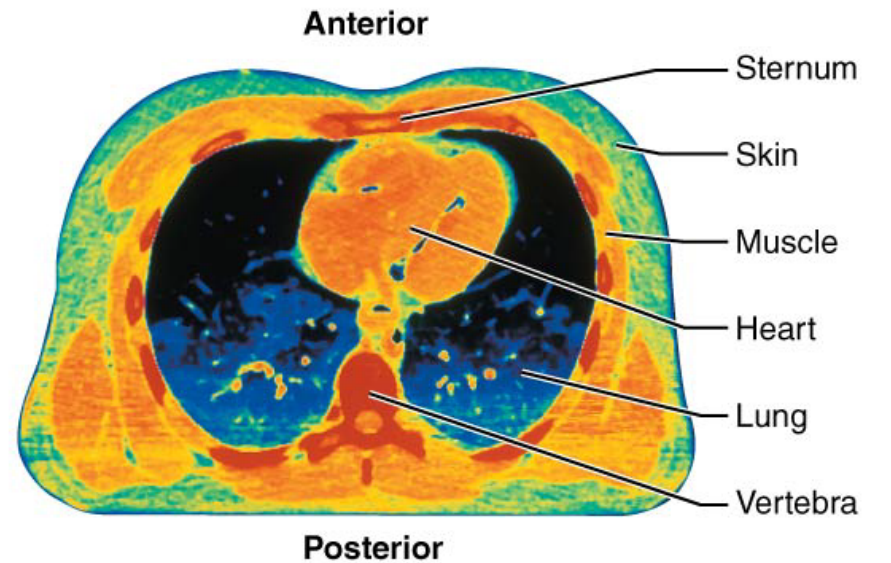
Anatomical Terms of Direction

Term	Definition/Example
Superior (cranial)	Toward the head end or upper part of a structure or the body; above <i>The head is superior to the abdomen.</i>
Inferior (caudal)	Away from the head end or toward the lower part of a structure or the body; below <i>The intestines are inferior to the liver.</i>
Medial	Toward or at the midline of the body; on the inner side of <i>The heart is medial to the lungs.</i>
Lateral	Away from the midline of the body; on the outer side of <i>The thumb is lateral to the pinky.</i>
Proximal	Closer to the origin of the body part or the point of attachment of a limb to the body trunk <i>The elbow is proximal to the wrist.</i>
Distal	Farther from the origin of a body part or the point of attachment of a limb to the body trunk <i>The knee is distal to the thigh.</i>
Ipsilateral	On the same side <i>The right hand and right foot are ipsilateral.</i>
Contralateral	On opposite sides <i>The right hand and left foot are contralateral.</i>



Anatomical Terms of Direction

Term	Definition/Example
Anterior (ventral)*	Toward or at the front of the body; in front of <i>The sternum is anterior to the heart.</i>
Posterior (dorsal)*	Toward or at the back of the body; behind <i>The vertebra is posterior to the heart.</i>
Superficial (external)	Toward or at the body surface <i>The skin is superficial to the skeletal muscles.</i>
Deep (internal)	Away from the body surface; more internal <i>The lungs are deep to the skin.</i>



CT scan, transverse section through thorax

*Whereas the terms *ventral* and *anterior* are synonymous in humans, this is not the case in four-legged animals. *Ventral* specifically refers to the "belly" of a vertebrate 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* specifically refers to an animal's back. Thus, the dorsal surface of four-legged animals is their superior surface.

Frontal, or coronal, plane

Separates anterior and posterior portions of the body.

Coronal usually refers to sections passing through the skull.

Plane is oriented parallel to long axis

Directional term: frontally or coronally



Frontal plane



Sagittal plane

Separates the body into right and left portions.

In a midsagittal section, the plane passes through the midline, dividing the body in half and separating right and left sides.

A parasagittal section misses the midline, separating right and left portions of unequal size.

Plane is oriented parallel to long axis

Directional term: Sagittally



Sagittal plane

Transverse, or horizontal, plane

Divides the body into superior & inferior portions.

Section is at right angles to the frontal and sagittal planes.

Plane is oriented perpendicular to long axis

Directional term: transversely or horizontally



Transverse plane

Anatomical Planes