

Anatomical Position and Terms of Reference Video Transcript

Welcome to the AFLCA Exercise Theory video series supplementing Chapter 7, basics of anatomy. In this video, we are going to cover the concepts of anatomical position and terms of reference.

Anatomical position is a universally accepted starting point when referring to body structures and movements. In anatomical position, the body is standing upright. Arms are alongside the body, palms facing forward. Legs are straight with toes pointing forward. All major joints, such as the knees, hips, elbows, shoulders and spine, are extended.

The **midline** is an imaginary vertical line that divides the body equally into right and left sides.

Terms of reference describe the spatial relationship between body structures, and can also describe body movements during exercise.

Superior and inferior are terms of reference that describe if one body part is situated above or below another body part. My nose is superior to my navel. My navel is inferior to my nose. An example using muscle terminology: My rectus abdominis is superior to my rectus femoris. My rectus femoris is inferior to my rectus abdominis.

Anterior and posterior are terms of reference that describe if one body part is situated more to the front side or back side of the body as compared to another body part. For example: My chest is anterior as compared to (or in relation to) my back. My back is posterior in relation to my chest.

An example using muscle terminology: My pectoralis major is anterior to my latissimus dorsi. My latissimus dorsi is posterior to my pectoralis major.

Medial and lateral are terms of reference that describe if one body part is situated closer to the midline as compared to another body part. For example: My heart is medial to my shoulder. My shoulder is lateral to my heart.

Think about this one: My pinky finger is medial to my thumb. My thumb is lateral to my pinky finger. Being in correct anatomical position with your hands is important for that example!

Proximal and distal are terms of reference that describe if one body part is closer to the torso as compared to another body part. These terms are usually used to describe points along the arms and legs. For example: My elbow is proximal to my wrist. My wrist is distal to my shoulder.

An example using muscle terminology: My hamstrings are more proximal than the gastrocnemius. My gastrocnemius is more distal than my hamstrings.

Superficial and deep are terms of reference that describe if one body part is closer or further away from the surface of the body. For example: This image represents a torso cross section. My skin is superficial to my spine. My spine is deep to my skin. Since your skin is your most superficial body part, everything is deep to the skin.

These terms are used to describe layers of muscle, if one muscle is situated over top or underneath another muscle. For example: The trapezius is oriented over top of several muscles, such as the infraspinatus. Therefore, the trapezius is superficial to the infraspinatus. The infraspinatus is deep to the trapezius.

Prone and supine are terms of reference that describe the body's horizontal position. If you are prone, you are in a horizontal position, face down. For example, as in a plank. If you are supine, you are in a horizontal position, face up. For example, when doing abdominal crunch.

Finally, the term palmar refers to the anterior surface (or palm) of the hand, and the term plantar refers to the bottom (or sole) of the foot.

This video introduced the concepts of anatomical position and terms of reference, which will be helpful as you learn the muscles and joint actions involved in exercise.

Be sure to check out the other videos and resources that are part of this online learning module supplementing the AFLCA Exercise Theory manual.