

What is an Anatomical Plane?

Worksheet

An anatomical plane is an imaginary flat surface that divides the body into sections. The three standard planes are sagittal (left-right), frontal/coronal (front-back), and transverse/axial (top-bottom).

Questions

1. Which plane divides the body into left and right?
 - A) Frontal
 - B) Transverse
 - C) Sagittal
 - D) Oblique
2. The frontal (coronal) plane separates the body into which parts?
 - A) Superior and inferior
 - B) Anterior and posterior
 - C) Left and right
 - D) Proximal and distal
3. A horizontal 'cross-section' slice uses which plane?
 - A) Sagittal
 - B) Transverse
 - C) Frontal
 - D) Midline
4. What distinguishes a midsagittal plane from a parasagittal plane?
 - A) Midsagittal is horizontal
 - B) Midsagittal creates exactly equal halves; parasagittal does not
 - C) They are the same thing
 - D) Parasagittal only applies to the brain
5. A CT scan slice shows the body divided into top and bottom halves at the waist. Which plane was used?
6. An MRI image splits the brain into exact left and right halves. Which plane?
7. A diagram shows the body sliced to separate the chest (front) from the back. Which plane?
8. Define: What is the sagittal plane?
9. Define: What is the frontal (coronal) plane?
10. Define: What is the transverse (axial) plane?

Answer Key

1. C) Sagittal - The sagittal plane splits the body into left and right sections.
2. B) Anterior and posterior - The frontal plane divides front (anterior) from back (posterior).
3. B) Transverse - Transverse (axial) planes are horizontal, creating upper/lower cross-sections.
4. B) Midsagittal creates exactly equal halves; parasagittal does not - Midsagittal passes through the exact midline; parasagittal is any sagittal cut off-center, giving unequal parts.
5. The cut separates superior from inferior sections. A horizontal cut that creates upper/lower parts is the transverse plane. Therefore this is a transverse (axial) section.
6. The cut separates left from right. A plane that creates equal left/right halves through the midline is the midsagittal plane. Therefore this is the (mid)sagittal plane.
7. The cut separates anterior from posterior structures. A vertical plane dividing front from back is the frontal (coronal) plane. Therefore this is the frontal plane.
8. A vertical plane dividing the body into left and right parts.
9. A vertical plane dividing the body into anterior (front) and posterior (back) parts.
10. A horizontal plane dividing the body into superior (upper) and inferior (lower) parts.

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