Difference Between Sagittal vs Midsagittal

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Key Difference – Sagittal vs Midsagittal

In anatomy, a hypothetical plane is used to transect and divide the body into different planes in order to define the position of organs and structures in an organism. This transection depends on the symmetry of an organism. There are three hypothetical principal planes to describe the anatomy of a higher level organism. They are sagittal plane, coronal plane, and the transverse plane. The sagittal plane or the median plane is the hypothetical plane that divides the body into two sections. The sagittal plane can be termed as the midsagittal when the plane is in the center of the body and divides the body into two equal halves, the left, and the right. This is the key difference between sagittal and midsagittal.

What is Sagittal?

A sagittal plane is a hypothetical plane that is used to divide the body along a vertical axis. The sagittal plane is similar to an image of an arrow passing the organism from anterior to the posterior of the body. The sagittal plane is situated at a perpendicular position to the coronal plane, which divides the body into upper (anterior) and lower (posterior) parts.

The sagittal plane lies in parallel to the sagittal suture in the brain. The sagittal suture is a fibrous connective tissue joint of the brain which divides the parietal bone into two halves.

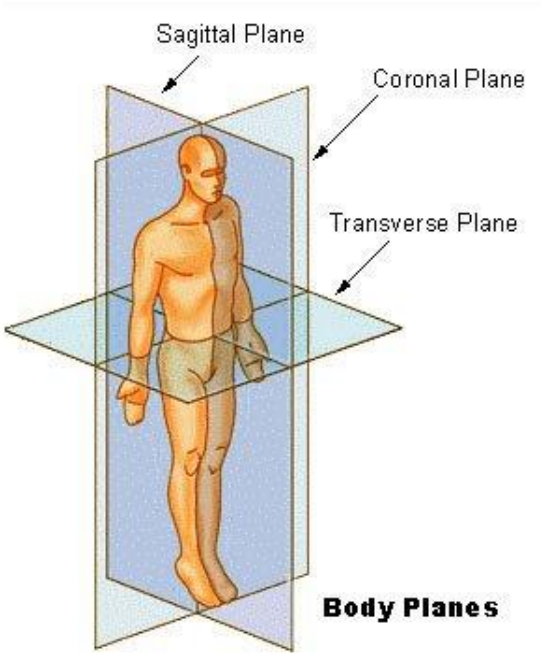

Figure 01: Body Planes

The main two actions that occur in the sagittal plane are extension and flexion which facilitate movement of the body. The two main motions are backward motions and forward motions. The movements of the sagittal plane can be easily observed from the side. Examples of sagittal plane movements include walking, squatting, and lunging.

What is Midsagittal?

Midsagittal is the hypothetical plane that divides the body into two equal halves along a vertical axis" the right half and the left half. The midsagittal is an even plane of the body. It is observed in organisms with bilateral symmetry; for example, in humans.

Midsagittal plane is also termed as the median plane or the midline of an organism. The midsagittal or the median plane passes through the midline structures such as the spinal cord and the navel. It is mainly used to define the position of an organ in the body.

Midsagittal is also involved in the actions such as extension and flexion and in forward movements and backward movements.

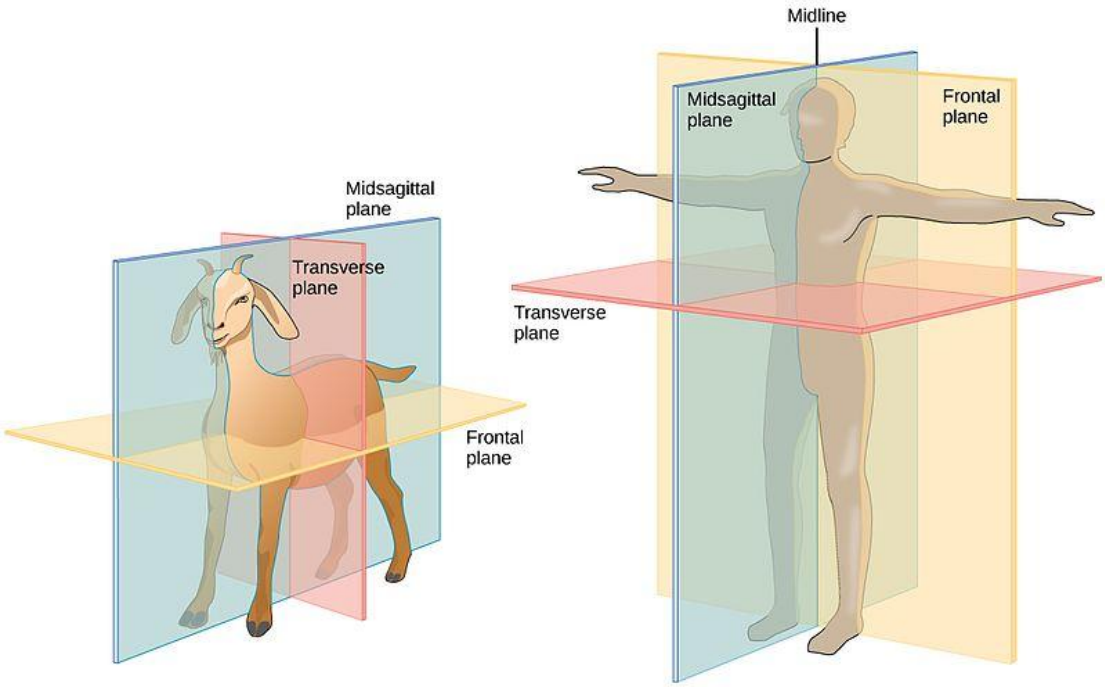

Figure 02: Midsagittal Plane

What are the similarities between Sagittal and Midsagittal?

• Sagittal and Midsagittal planes are hypothetical planes.
• Both divide the body into different parts along a vertical axis.
• Both are used to determine the position of organs in the system.
• Both are involved extension and flexion actions.
• Both are involved in forward and backward movements.

What is the difference between Sagittal and Midsagittal?

Sagittal vs Midsagittal	
A sagittal plane is a hypothetical plane that is used to divide the body along a vertical axis.	Midsagittal is a hypothetical plane that divides the body into two equal halves along the vertical axis, the right half and the left half.
Types	
This can be an be parasagittal or midsagittal.	There are no subtypes.

Symmetry	
No symmetry involved in the sagittal plane.	Midsagittal is seen only in bilateral symmetrical organisms.

Summary – Sagittal vs Midsagittal

In anatomy, it is important to define the position of an organ, especially in medical scenarios, in order to perform dissections and surgeries. Thus scientists introduced hypothetical axes and planes to fulfill this requirement. Sagittal and midsagittal are two such planes used in anatomy. The sagittal plane or the median plane is the hypothetical plane that divides the body into two sections. The sagittal plane can be termed as the midsagittal when the plane is in the center of the body and divides the body into two equal halves: the left and the right. This is the difference between sagittal and midsagittal. The sagittal and the midsagittal planes along the vertical axis are involved in determining certain actions and movements. These include flexion, extension and forward, backward movements.

References:

1. “Anatomical plane.” Wikipedia, Wikimedia Foundation, 16 Aug. 2017, Available here. Accessed 11 Sept. 2017.
2. “Sagittal plane.” Wikipedia, Wikimedia Foundation, 31 Aug. 2017, Available here. Accessed 11 Sept. 2017.

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