



The Human Body- An Orientation

Anatomy- *the study of the structures of the body and how they relate to one another.*

-Topics-

1. **Gross/Macroscopic-** large body structures
2. **Systemic-** body structures studied by systems
3. **Surface-** internal structures as they relate to the skin's surface
4. **Comparative-** human structures vs. structures of other animals

-Mastering of Anatomy-

To master the subject of anatomy, one must pay close attention to...

1. Observation (associate one topic with another)
2. Manipulation (See how things relate to your own body)
3. Mastery of Terminology/Language (use vocabulary in everyday conversation)

Physiology- *the study of the function of the body's parts*

Systemic physiology- *the study of function of the systems of the body:*

- Cardiovascular
- Renal
- Neurophysiology

***Note:** STRUCTURE DEFINES FUNCTION

-Anatomical Position-

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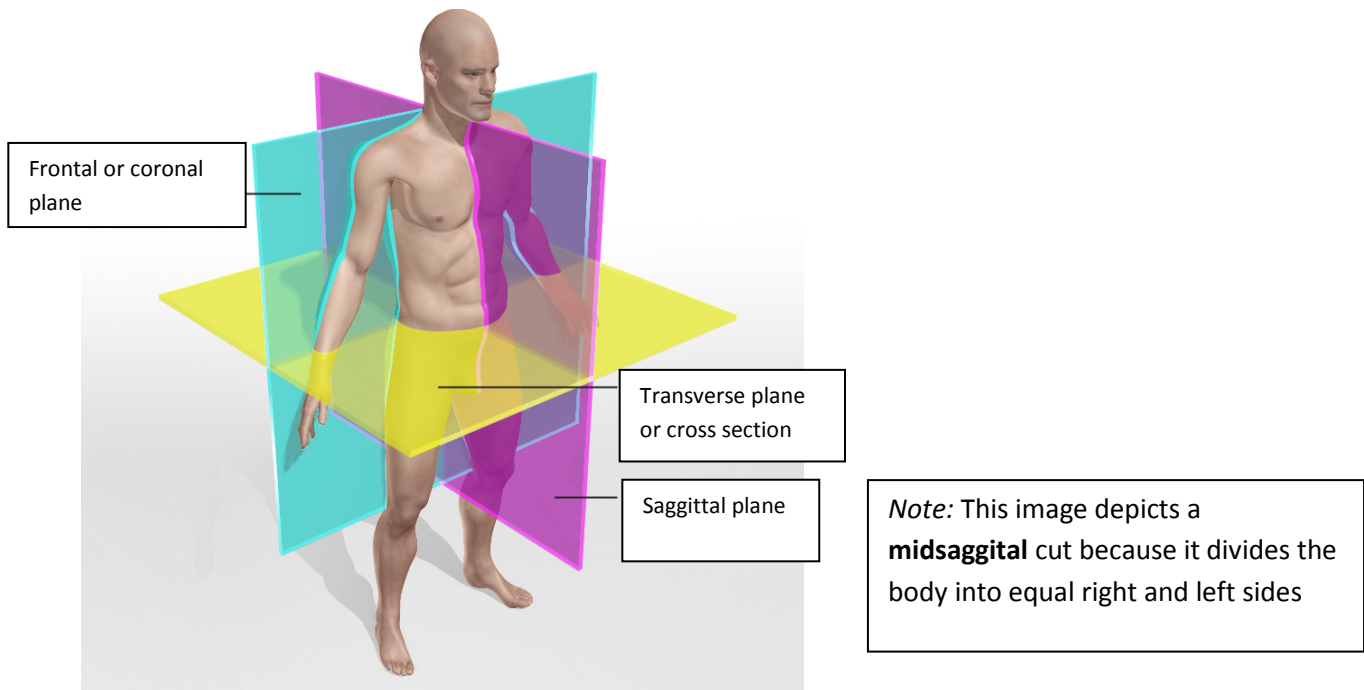
When referring to the body in anatomy, the body is assumed to be in anatomical position.

Anatomical position- *the body is erect, feet apart, palms forward with thumbs pointing away from the body*



-3 Body Planes-

- **Frontal** (coronal)- vertical cut; divides the body into anterior (front) and posterior (back)
- **Sagittal Plane**- cut divides right to left; a midsagittal cut splits the body into equal right and left parts
- **Transverse** (cross section)- horizontal cut; divides superior (top) and inferior (bottom)



-6 Levels of Structural Organization-

1. **Chemical Level** – atoms combine to form molecules
2. **Cellular Level**- cells are made of molecules
3. **Tissue Level**- tissues consist of similar types of cells
4. **Organ Level**- organs are made of different tissues
5. **Organ systems Level**- organ systems consist of different organs that work closely together
6. **Organismal Level**- human organisms are made up of many organ systems

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-5 Organ Systems Studied in BSCI 201-

- Integumentary
 - Skeletal
 - Muscular
 - Nervous
 - Endocrine