

Chapter 2: Medical Language Within the Context of Anatomy and Physiology

Building a Medical Terminology Foundation 2e – Student Companion by Kimberlee Carter; Marie Rutherford; and Connie Stevens

This book is intended as a companion to *Building a Medical Terminology Foundation 2e* (<https://ecampusontario.pressbooks.pub/medicalterminology2/>).

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Medical Language Related to the Body as a Whole

If you would like to review the textbook chapter content, please visit **Chapter 2: Medical Language Within the Context of Anatomy and Physiology [New Tab]**.

Learning Objectives

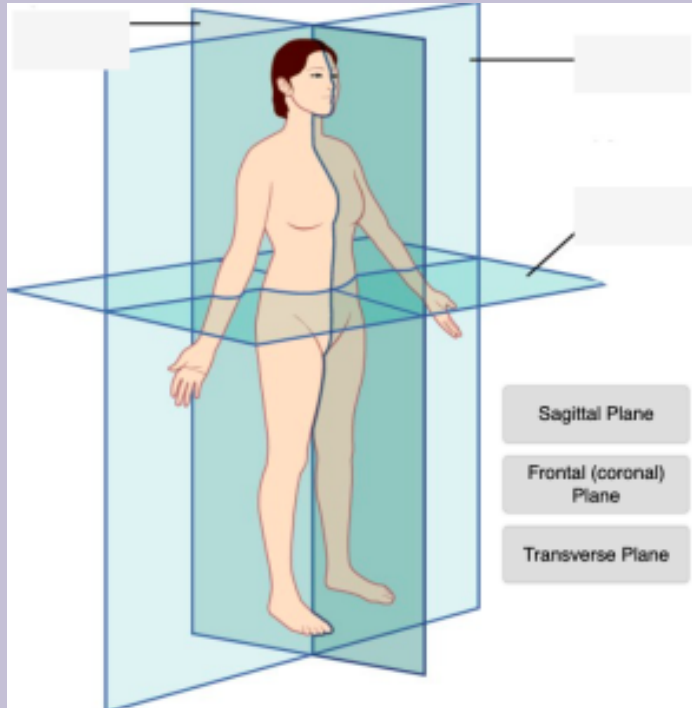
- Connect medical language learning to the context of anatomy and physiology
- Introduce the basic architecture and levels of organization of the human body
- Evaluate the anatomical position, regional terms, directional terms, body planes, and body quadrants for anatomical positioning
- Describe body cavities and the functions of associated membranes

Body Planes

Use the anatomic reference system to identify the body planes below:

Body Planes (Text Version)

1. Sagittal Plane
2. Frontal (coronal) Plane
3. Transverse Plane



Body Planes Diagram (Text Version)

This illustration activity shows the human body standing upright in the anatomical position. Three anatomical planes are illustrated with transparent lines identifying the location of the three planes: the _____[Blank 1] which divides the left and right side of the body, the _____[Blank 2] dividing front and back portions of the body, and the _____[Blank 3] dividing top and bottom portion of the body.

Check your answers: ¹

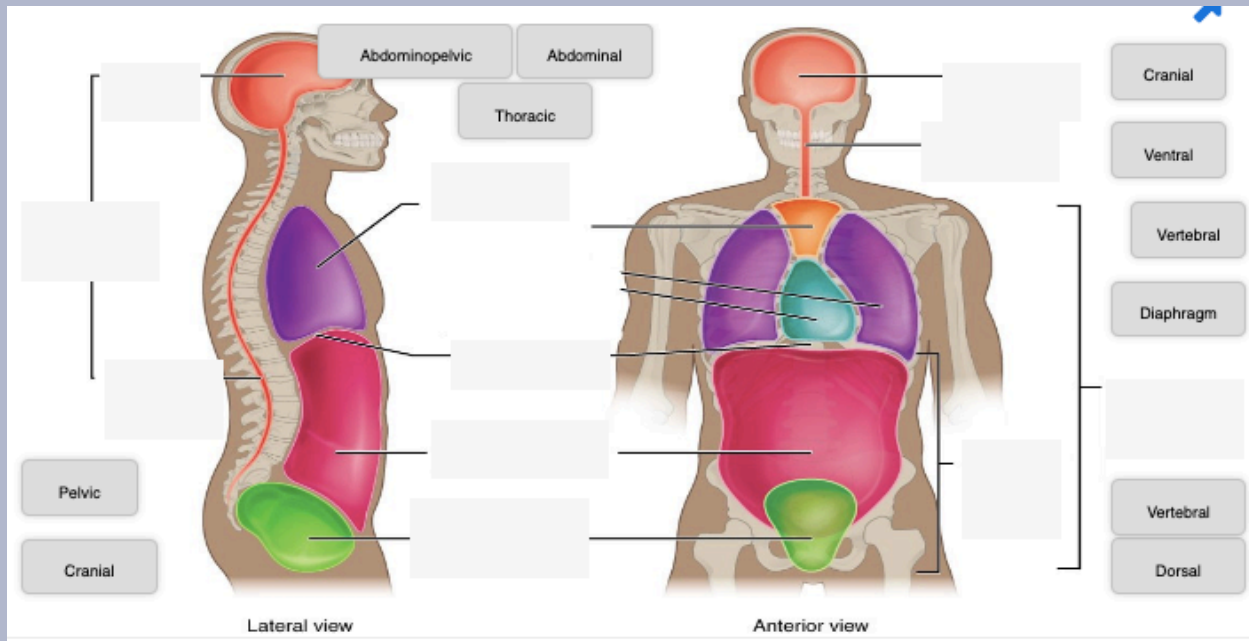
Activity source: Medical language with the Context of Anatomy and Physiology Body by Tiffany Hunt, illustration from Anatomy and Physiology (OpenStax) licensed under CC BY 4.0./ Text version added.

Body Cavities

Use the anatomic reference system to identify the body cavities:

Body Cavities (Text Version)

- | | | |
|-------------------|--------------|---------------|
| 1. Abdominopelvic | 5. Cranial | 9. Dorsal |
| 2. Abdominal | 6. Ventral | 10. Cranial |
| 3. Thoracic | 7. Vertebral | 11. Vertebral |
| 4. Pelvic | 8. Diaphragm | |



Body Cavities Diagram (Text Version)

This diagram activity shows two views of the human head and torso. The right image shows the lateral view, and the left image shows an anterior view of the human head and torso. The image is highlighting the several cavities or hollowed out spaces where organs and structures are positioned. The lateral view show four cavities: the head cavity known as the _____[Blank 1], the upper back cavity known as the _____[Blank 2], the lower back area known as the _____[Blank 3], and the chest cavity known as the _____[Blank 4] cavity. Adjoining lines for both views identify the _____[Blank 5] which is a muscular partition dividing the lungs from the location below it known as the _____[Blank 6] and followed by the lower _____[Blank 7]. The anterior view identifies the _____[Blank 8], _____[Blank 9], _____[Blank 10], _____[Blank 11] cavities, and sections.

Check your answers: ²

Activity source: Medical language with the Context of Anatomy and Physiology Dorsal by Tiffany Hunt, illustration from Anatomy and Physiology (OpenStax) licensed under CC BY 4.0./Text version added.

Directional Terms

Practice pronouncing and defining the following directional terms:

Medical Language with the Context of Anatomy and Physiology Directional Terms (Text version)

1. Cranial Cavity

- KRĀ-nē-āl kah-vi-tē
- The space formed inside the skull that the brain occupies.

2. Homeostasis

- HŌ-mē-ō-STĀ-sīs
- Biological process that results in stable equilibrium

3. Posterior (or Dorsal)

- pōs-TĒ-rē-or(Original Term)
- Describes the back or direction toward the back of the body.

4. Anterior (or Ventral)

- an-TĒR-ē-ōr (Original Term)
- Describes the front or direction toward the front of the body.

5. Deep

- DĒP (Original Term)
- Describes a position farther from the surface of the body.

6. Distal

- DIS-tāl (Original Term)
- Describes a position in a limb that is farther from the point of attachment or the trunk of the body.

7. Inferior (or Caudal)

- in-FĒR-ē-ōr (Original Term)
- Describes a position below or lower than another part of the body proper; near or toward the tail.

8. Lateral

- LĀT-ēr- āl (Original Term)
- Describes the side or direction toward the side of the body.

9. Medial

- MĒD-ē-āl (Original Term)
- Describes the side or direction toward the side of the body.

10. Peritoneum

- (per-it-ō-NĒ-ŭm)
- Serous membrane surrounding several organs in the abdominopelvic cavity. This reduces friction between the abdominal and pelvic organs and the body wall.

11. Proximal

- PROK-sī-māl (Original Term)

- Describes a position in a limb that is nearer to the point of attachment or the trunk of the body.

12. **Superficial**

- SOO-pĕr-FISH-ăl (Original Term)
- Describes a position in a limb that is nearer to the point of attachment or the trunk of the body.

13. **Superior (or Cranial)**

- soo-PĒ-rē-or(Original Term)
- Describes a position above or higher than another part of the body proper.

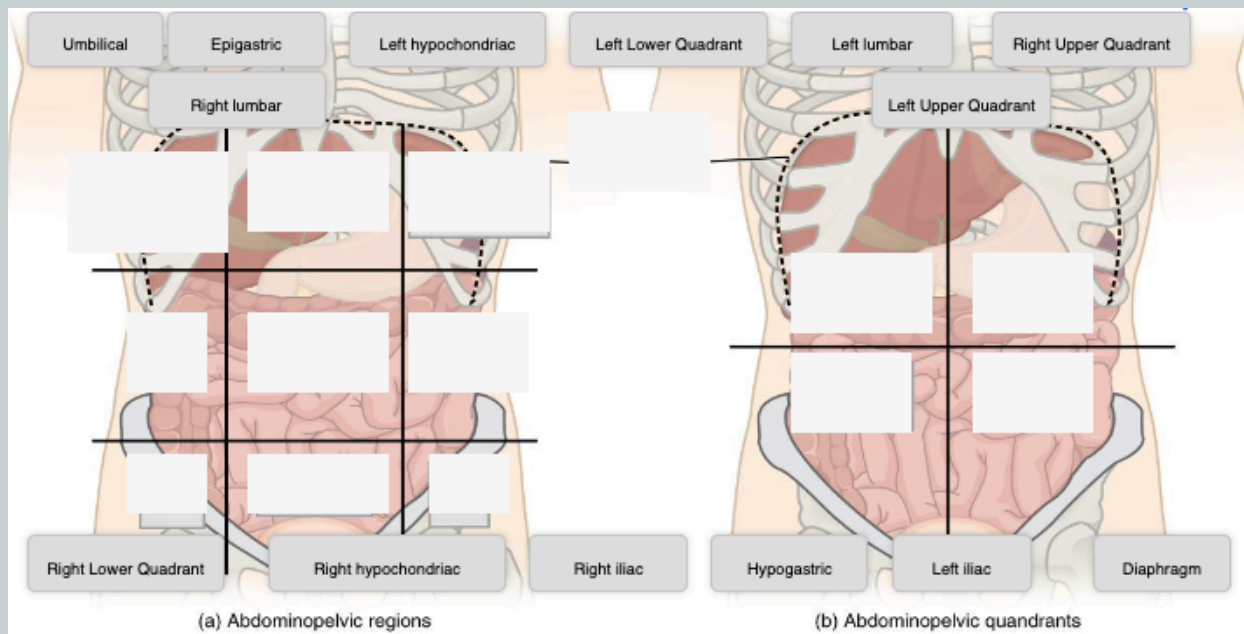
Activity Source: Medical Language with the Context of Anatomy and Physiology Directional Terms from *Medical Terminology* by Grimm et al., licensed under CC BY 4.0./Re-recording of some H5P audio by Tania Deane and David McCuaig and text version added.

Regions and Quadrants of the Body

Use the anatomic reference system to identify the regions and quadrants of the body pictured below:

Regions and Quadrants of the Body (Text Version)

- | | | |
|-------------------------|--------------------------|-------------------------|
| 1. Umbilical | 6. Right Hypochondriac | 11. Left Upper Quadrant |
| 2. Epigastric | 7. Right Iliac | 12. Hypogastric |
| 3. Left Hypochondriac | 8. Left Lower Quadrant | 13. Left Iliac |
| 4. Right Lumbar | 9. Left Lumbar | 14. Diaphragm |
| 5. Right Lower Quadrant | 10. Right Upper Quadrant | |



Regions and Quadrants of the Body Diagram (Text version)

This diagram activity shows two views of the abdominopelvic region. Image A shows the abdominopelvic region divided in nine sections with nine boxes. Image B shows the abdominopelvic region divided in four sections known as quadrants with a line dividing the four sections for each quadrant. For image A at the top are three white boxes identified working from right to left labeled as _____[Blank 1], followed by _____[Blank 2], and _____[Blank 3] region. The middle three boxes working from right to left identified as _____[Blank 4], followed by the _____[Blank 5], and _____[Blank 6] region. The three lower boxes working from right to left is the _____[Blank 7], followed by _____[Blank 8], and _____[Blank 9] region. Image B shows two upper white boxes and are from right to left is the _____[Blank 10] followed by the _____[Blank 11]. The two lower boxes from right to left is the _____[Blank 12] followed by _____[Blank 13].

Check your answers: ³

Activity source: Medical language with the Context of Anatomy and Physiology Dorsal by Tiffany Hunt, illustration from Anatomy and Physiology (OpenStax) licensed under CC BY 4.0./Text version added.

Test Your Knowledge

Test your knowledge by answering the questions below:

Test Your Knowledge (Text Version)

1. The smallest unit of any of these pure substances (elements) is a(n) _____ [Blank 1].
 1. Cell
 2. Atom
 3. Organ
2. Describes a position closer to the surface of the body.
 1. Superficial
 2. Anterior
 3. Superior
3. The plane that divides the body or organ horizontally into upper and lower portions is called the _____ [Blank 2].
 1. Sagittal Plane
 2. Transverse Plane
 3. Frontal Place
4. The cavity that includes the cranial cavity and spinal cavity is called the _____ [Blank 3].
 1. Posterior cavity
 2. Anterior cavity
 3. Ventral Cavity
5. The name of the layer of the membrane that covers the organs is the _____ [Blank 4].
 1. Serous layer
 2. Visceral layer
 3. Parietal layer

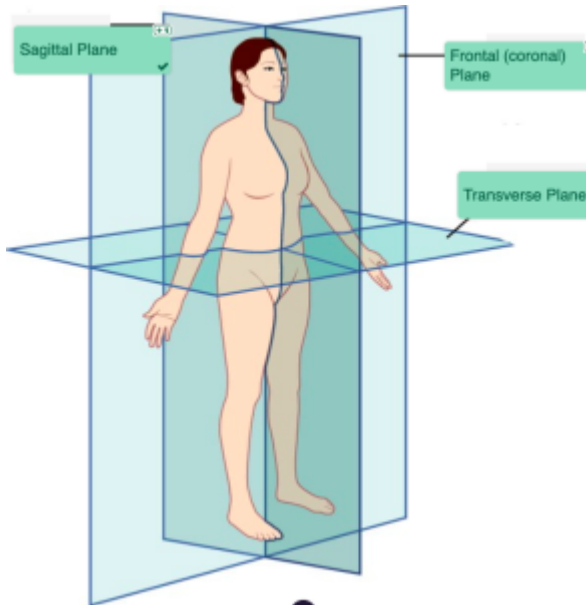
Check your answers: ⁴

Activity source: Medical language with the Context of Anatomy and Physiology Reinforcement Activity by Tiffany Hunt, licensed under CC BY 4.0./Text version added.

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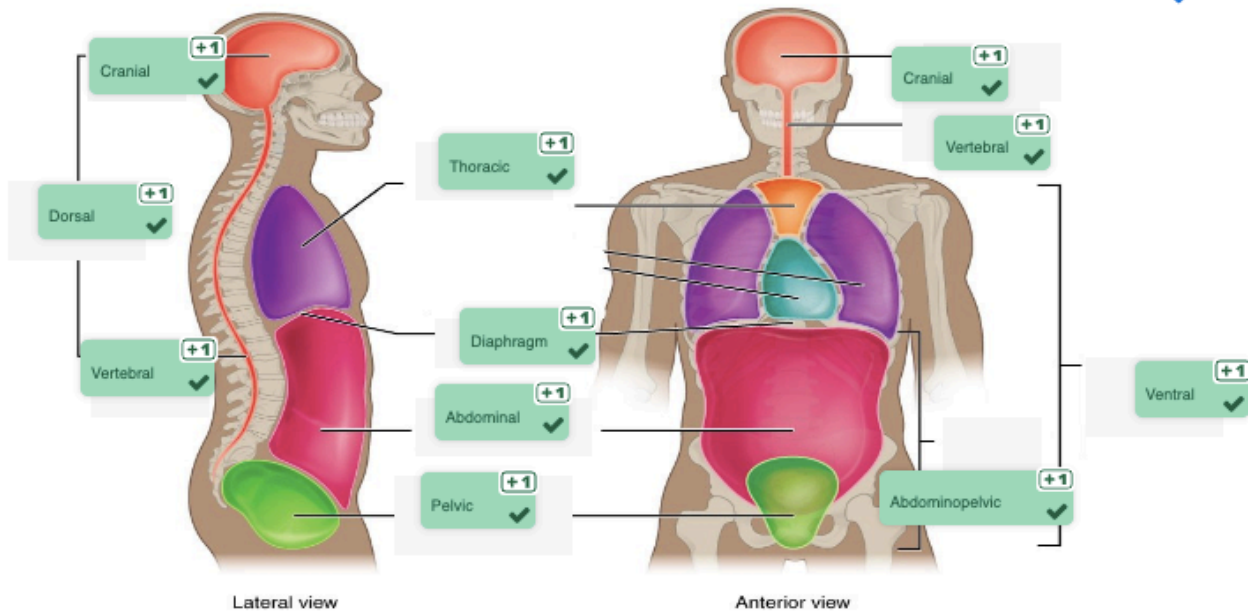
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Notes



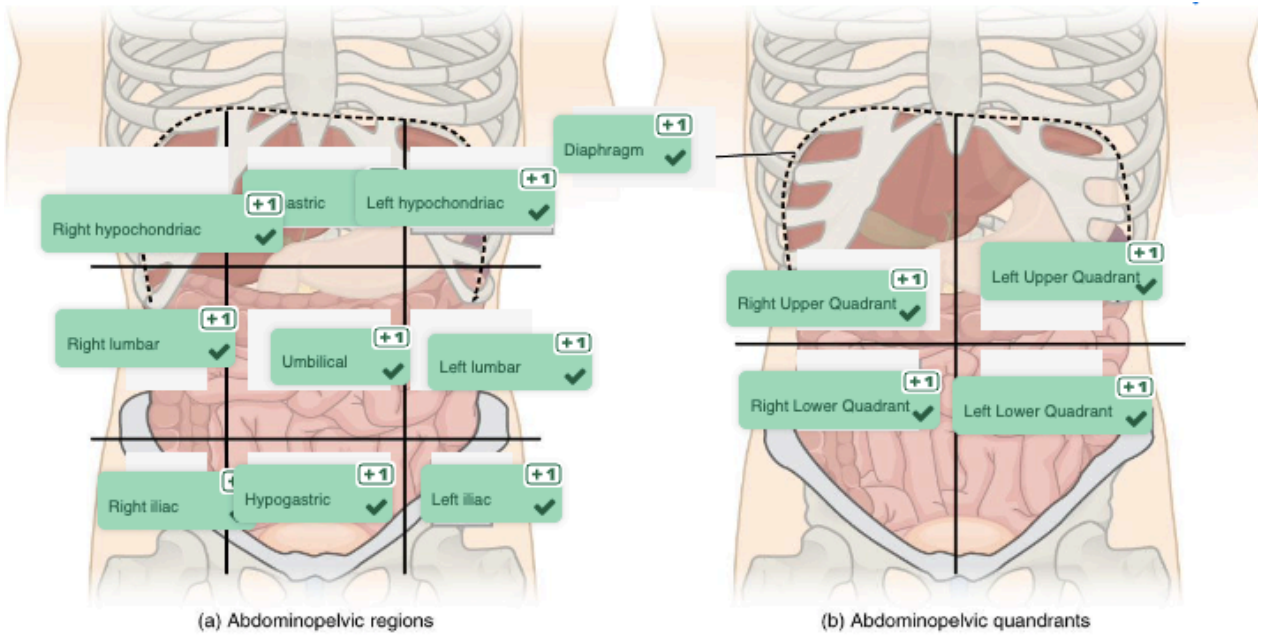
1.

Check your answers: Body Planes Diagram This illustration activity shows the human body standing upright in the anatomical position. Three anatomical planes are illustrated with transparent lines identifying the location of the three planes: the **sagittal plane** which divides the left and right side of the body, the **frontal plane** dividing front and back portions of the body, and the **transverse plane** dividing top and bottom portion of the body.



2.

Check your answers: Body Cavities Diagram (Text Version) This diagram activity shows two views of the human head and torso. The right image shows the lateral view, and the left image shows an anterior view of the human head and torso. The image is highlighting the several cavities or hollowed out spaces where organs and structures are positioned. The lateral view show four cavities: the head cavity known as the **cranial**, the upper back cavity known as the **dorsal**, the lower back area known as the **vertebral**, and the chest cavity known as the **thoracic** cavity. Adjoining lines for both views identify the **diaphragm** which is a muscular partition dividing the lungs from the location below it known as the **abdominal cavity** and followed by the lower **pelvic cavity**. The anterior view identifies the **cranial**, **vertebral**, **ventral**, **abdominopelvic** cavities, and sections.



3. **Check your answers: Regions and Quadrants of the Body Diagram (Text Version)** This diagram activity shows two views of the abdominopelvic region. Image A shows the abdominopelvic region divided in nine sections with nine boxes. Image B shows the abdominopelvic region divided in four sections known as quadrants with a line dividing the four sections for each quadrant. For image A at the top are three white boxes identified working from right to left labeled as **right hypochondriac**, followed by **epigastric**, and **left hypochondriac** region. The middle three boxes working from right to left identified as **right lumbar**, followed by the **umbilical**, and **left lumbar** region. The three lower boxes working from right to left is the **right iliac**, followed by **hypogastric**, and **left iliac** region. Image B show two upper white boxes and are from right to left is the **right upper quadrant** followed by the **left upper quadrant**. The two lower boxes from right to left is the **right lower quadrant** followed by **left lower quadrant**.
4. 1. Atom, 2. Superficial, 3. Transverse plane, 4. Posterior cavity, 5. Visceral layer