

Introduction to Human Anatomy and Physiology

Chapter 1



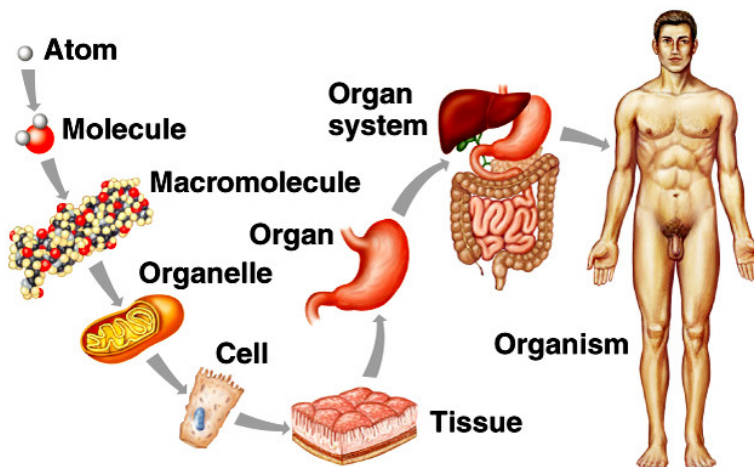
<http://www.jcpe.ie/resources/webquests/TheHumanBodyLTDOct/Images/humanbody.jpg>

Mrs. Michaelsen - Chetek High School

1.3 Levels of Organization:

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1.3 Levels of Organization:

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A. The human body is the sum of its parts and these parts can be studied at a variety of levels of organization.

1. Atoms
2. Two or more atoms comprise a
3. Macromolecules
4. Organelles

1.3 Levels of Organization Continued:

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5. Cells
6. Tissues
7. Groups of tissues form
8. Groups of organs function together as
9. Organ systems functioning together make up an

1.4 Characteristics of Life

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A. Fundamental characteristics of life are traits shared by all organisms.

1. *Movement*
2. *Responsiveness*
3. *Growth*
4. *Reproduction*
5. *Respiration*

Table 1.1 (p.5)

1.4 Characteristics of Life Continued

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6. *Digestion*
7. *Absorption*
8. *Circulation*
9. *Assimilation*
10. *Excretion*

- Taken together, these 10 characteristics constitute

1.5 Maintenance of Life

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- A. Maintenance of a stable internal environment is called
- B. Homeostasis is regulated through

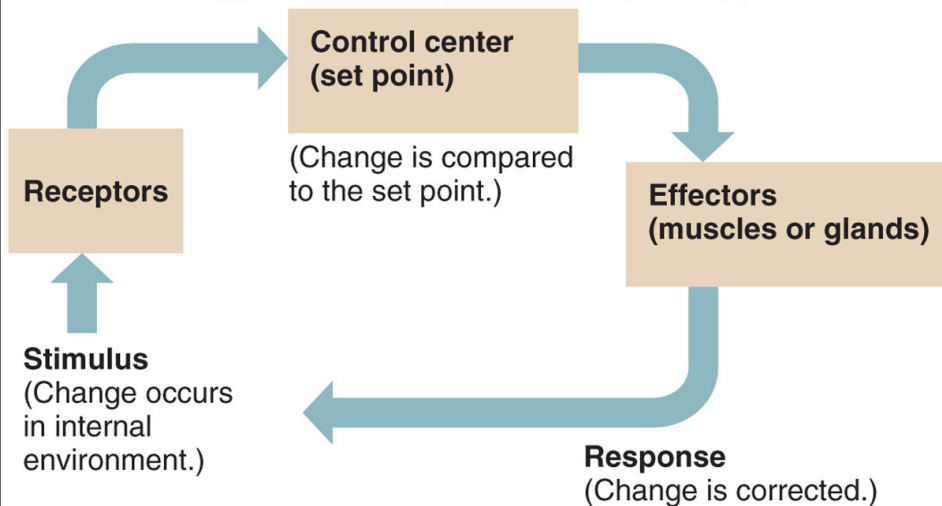
Examples include:

1. Homeostatic mechanisms regulate
2. Another homeostatic mechanism employs

Parts of a Homeostatic Mechanism

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1.5 Maintenance of Life continued

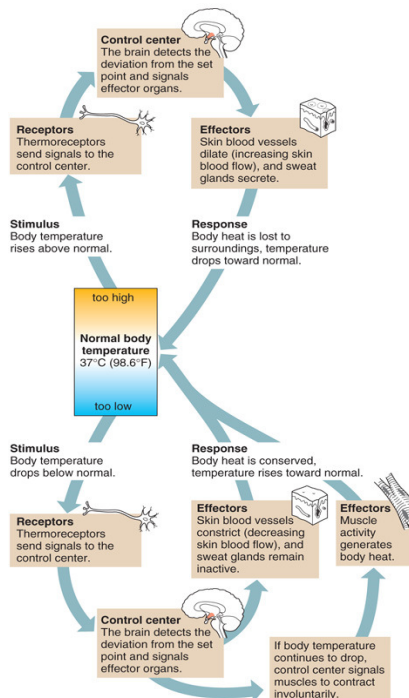
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- C. Many of the body's homeostatic controls are

- D. Each individual uses homeostatic mechanisms to keep body levels within a

Body Temperature Regulation

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1.6 Organization of the Human Body

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- A. Major features of the human body include its cavities, membranes, and organ systems.

1.6 Organization of the Human Body

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Body Cavities

- B. Appendicular portion

- C. Axial portion
 - 1. Organs within these cavities are called

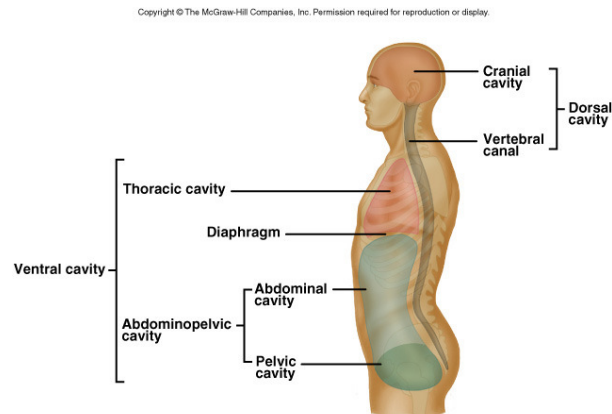
1.6 Organization of the Human Body

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- D. The dorsal cavity can be divided into two areas:

1.

2.



1.6 Organization of the Human Body

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- E. The ventral cavity is made up of the following:

1. Thoracic cavity

- a. The **mediastinum** divides
- b. **Pleural** cavity contains

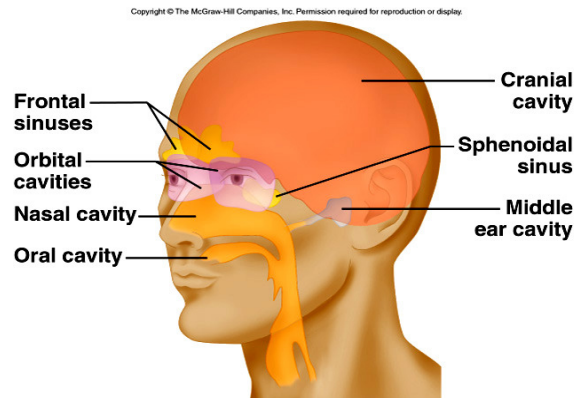
2. Abdominopelvic cavity

- b. The abdominopelvic cavity can be divided into the

- ❖ A broad, thin muscle called the

1.6 Organization of the Human Body

F. Smaller cavities within the head include the



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1.6 Organization of the Human Body

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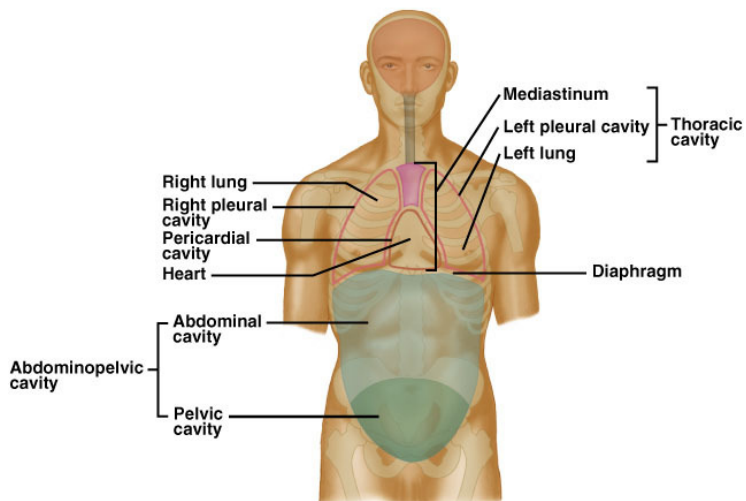
Thoracic and Abdominopelvic Membranes:

- A. The **thoracic** cavity is lined with pleural membranes;
- B. The **heart** is surrounded by pericardial membranes.
- C. Peritoneal membranes line the **abdominopelvic** cavity;

Thoracic and Abdominopelvic Membranes

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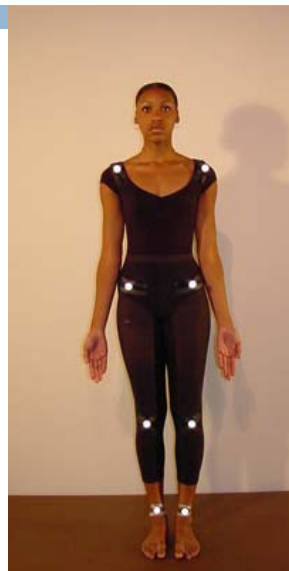


1.7 Anatomical Terminology

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A. Anatomical Position

1.



1.7 Anatomical Terminology Continued

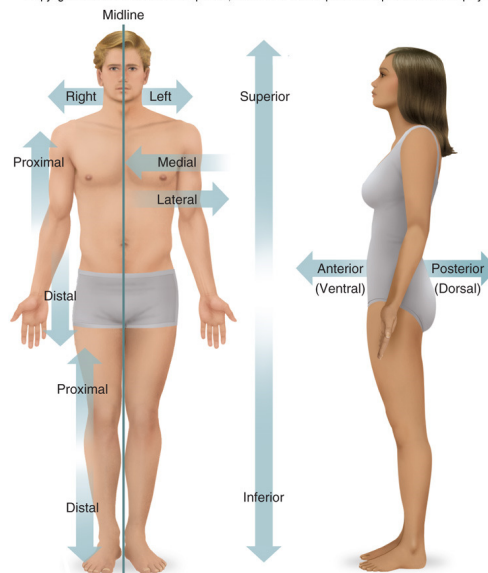
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Relative Positions:

- A. Terms of relative position describe the location of one body part with respect to another.
- B. Terms of relative position include:
 - c. We will go through these on the board.

Relative Positional Terms

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1.7 Anatomical Terminology Continued

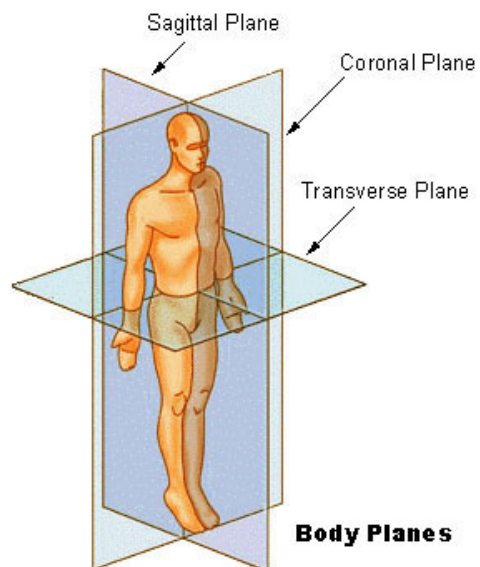
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Body Sections:

- A. A sagittal section

- B. A transverse section

- C. A coronal section.



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http://training.seer.cancer.gov/module_anatomy/images/illu_body_planes.jpg

1.7 Anatomical Terminology Continued

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Body Regions

1. The abdominal area can be divided into

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