

Human Body Systems Interactions – Study Guide

Levels of Organization Fill-in-the-Blank

1. Cells work together to form **tissue**
2. **Tissue** work together to form organs.
3. Organs work together to form **organ systems**.
4. **organism** make up organisms.
5. Word = **cell**
6. Sentence = **tissue**
7. Paragraph = **organ**
8. Chapter = **organ system**
9. Book = **organism**

Word Bank for Questions 1-9

cell organ tissue organism organ system

Human Body System Matching

1. <u> G </u> Nervous System	A. The major organs of this system are the lungs. This system allows the body to breathe.
2. <u> E </u> Integumentary System	B. The major organs of this systems are glands that produce chemicals to help control body functions such as growth and development.
3. <u> K </u> Digestive System	C. White blood cells in this system fight pathogens (germs).
4. <u> J </u> Skeletal System	D. The major organs of this system include the tonsils, the spleen, and other lymph nodes that help remove dead pathogens (germs) and other wastes from the body by contracting of skeletal muscles.
5. <u> L </u> Excretory System	E. The major organ of this system is the skin. This system covers and protects the body.
6. <u> D </u> Lymphatic System	F. The 3 types of tissue in this system include smooth, striated, and cardiac. This system provide shape, support, and movement for the body.
7. <u> A </u> Respiratory System	G. The major organs of this system include the brain and spinal cord. This system controls the body.
8. <u> B </u> Endocrine System	H. The major organs of this system include the kidneys and the bladder. The kidneys filter the blood and produce urine that is stored in the bladder until the body is ready to release the waste.
9. <u> F </u> Muscular System	I. The major organs of this system are the heart and the blood vessels. This system provides transportation for nutrients, oxygen, and other substances throughout the body.
10. <u> I </u> Cardiovascular System	J. The human body has 206 bones that help protect the internal organs and a variety of joints that allow movement. This system also produces red blood cells in the marrow of the bones.
11. <u> H </u> Urinary System	K. This system has many organs including the stomach and the intestines. This system is responsible for breaking down food for the body.
12. <u> C </u> Immune System	L. This system consists of 4 other systems that help the body removes wastes. These systems include the integumentary (sweating), respiratory (exhaling carbon dioxide), urinary (releasing urine), and digestive systems (releasing feces).

Systems Interactions

Action	Which body systems are in use during this action?	How do you know these systems are part of this action?
Brushing your teeth	Skeletal Muscular Nervous Respiration Cardiovascular	respiration and cardiovascular provides blood with oxygen and energy to move your muscles; the muscles are moving the bones to lift and maneuver the toothbrush to clean the teeth which are also bones; the nervous system is directing the action using information from the senses (eyes, touch, taste)
Scoring a touchdown	Muscular Skeletal Nervous Cardiovascular Respiratory	Nervous receives and interprets stimuli "messages (eyes, touch, taste. Respiratory gives cells needed gases for cell processes. Cardiovascular transports needed materials (macromolecules and gases) to cells, Digestive takes those materials and breaks them down for cells "energy." Skeletal and muscular aid in movement of materials into digestive system. Excretory works with Integumentary for sweating and removing waste, cooling body for homeostasis.
Texting	Muscular Skeletal Nervous	Nervous receives and interprets stimuli (sound and sight), Respiratory gives cells needed gases for cell processes. Cardiovascular transports needed materials (energy/ gases) to cells, Digestive takes those materials (macromolecules)and breaks them down for cells to use. skeletal and muscular aid in movement of body to make text.
Eating breakfast	Skeletal Muscular Nervous Respiration Cardiovascular	Nervous receives and interprets stimuli, Respiratory gives cells needed gases for cell processes. Cardiovascular transports needed materials (macromolecules and gases) to cells, Digestive takes those materials (macromolecules)and breaks them down for cells to use. skeletal and muscular aid in movement of materials into digestive system.

How does the skeletal system interact with the...

1. ...muscular system? Muscular system works with skeletal system to move parts of the body.
2. ...respiratory system? Skeletal system works with respiratory system to protect the lungs.
3. ...cardiovascular system? Skeletal system works with cardiovascular to provide blood to the body.
4. ...nervous system? Skeletal system works with nervous system to send messages to muscles to move and receive information regards to movement.
5. ...digestive system? Skeletal system works with digestive system to provide needed materials to cells and tissues that move the body.
6. ...immune system? Skeletal system works with the immune system to make cell for the immune response