

Anatomy and physiology essay sample



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Anatomy and Physiology are studied together but differ in many ways but go hand in hand in studying the human body. Anatomy is the study of the relationships of the body structures. Anatomy was first studied by dissections of the body's structures and the relationships the body shares with these structures. Studies of anatomy include: developmental biology, embryology, histology, gross anatomy, cell biology, systemic anatomy, surface anatomy, regional anatomy, pathological anatomy, and imaging anatomy. Physiology is the study of how the parts work and the body's function. Physiology also has several branches of studies which are: Neurophysiology, Endocrinology, Immunology, Exercise physiology, Cardiovascular physiology, Renal physiology, Respiratory physiology, and pathophysiology. (Tortora & Derrickson, 2014)

Anatomical position is the position in which the body stands erect facing the observer with the feet flat on the ground and the palms facing outward (Tortora & Derrickson, 2014). The anatomical directions are used to describe the directional parts of the body. There are several terms that describe different areas of the body. Lateral is used describe a point furthest from the midline (Tortora & Derrickson, 2014) . Proximal is used to describe a limb of the trunk (Tortora & Derrickson, 2014). Medial is an imaginary vertical line dividing the body into equal left and right sides (Tortora & Derrickson, 2014).

Distal is described as the farthest attachment of a limb to the trunk of the body (Tortora & Derrickson, 2014). Other important terms include: superficial (on the surface of the body), superior (upper part of the body), inferior (lower section of the structure), anterior (front of the body), posterior (back of the body), intermediate (between two parts of the body), ipsilateral (the same

side of the body as another part of the body), and contralateral (the opposite side of the body from another structure) (Tortora & Derrickson, 2014).

The body is made up of eleven body systems. The skeletal system is made up of all the joints and bones in the body. The bones are living organs made up of minerals, fibrous tissue, and protein fibers that help protect and support the body from collapsing (Taylor, n. d.). The muscular system is made up of 700 muscles that are attached to the bones and are responsible for the movement of the body (Taylor T. , n. d.). The cardiovascular system consists of the heart and blood vessels. It is also made up of 5 liters of blood that travels through the body via blood vessels; this system is also responsible for transmitting hormones, nutrients, oxygen, and cellular waste (Taylor T. , Inner Body, n. d.). The digestive system is a group of organs that are responsible for converting food into energy and nutrients (Taylor T. , Inner Body, n. d.).

The endocrine system is responsible for the releasing of all the hormones in the body produced by the glands. These glands include the pituitary, thyroid, pineal, parathyroid, adrenal, pancreas, gonads, and the thymus (Taylor T. , Inner Body, n. d.). The nervous system consists of the brain, sensory organs, spinal cord, and the other nerves that connect the organs with the rest of the body (Taylor T. , Inner Body , n. d.). The respiratory system provides oxygen to the body; the major parts of the respiratory system include the lungs, airway, muscles, and respiratory system (Taylor T. , Inner Body, n. d.). The immune system is the body's defense against infectious pathogenic viruses, bacteria, and fungi as well as parasitic animals and protists (Taylor T. , Immune System, n. d.).

The urinary system consists of the kidneys, ureters, urinary bladder, and the urethra (Taylor T. , Urinary System, n. d.). This system helps make up the urinary tract and filter wastes from the kidneys. The reproductive system consists of the gonads; this includes the testes for men and ovaries for women. The last system is the integumentary system which includes the hair, nails, and skin. This system is the largest of the body (Taylor T. , Integumentary System, n. d.). These systems all play a role in the body's function and structure and are essential for everyday life.

The two main cavities of the body include the thoracic cavity and the cranial cavity. The cranial cavity is the hollow space in the head formed by the cranial bones. This cavity includes the brain, backbone, and spinal cord. The cranial cavity has a shock-absorbing fluid that helps protect the spinal cord and the brain (Tortora & Derrickson, 2014). The thoracic cavity is formed by the muscles of the chest, the ribs, the breastbone, and vertebral column (Tortora & Derrickson, 2014). The pericardial cavity, pleural cavities, and the mediastinum cavity. The major organs in the thoracic cavity include: the heart, thymus, the trachea, esophagus, and several major blood vessels (Tortora & Derrickson, 2014).

When speaking with a doctor it is important to know the area you are area in which you are having problems with and the orientation of where the problem lies. While many people know layman's terms it is even more important to know where the direction of the problem is coming from to better assist in diagnosis. For instance if you say your kidneys hurt but you are holding onto your stomach in pain the doctor will suggest the stomach or intestines are actually the root of the problem. While you might not

understand medical terminology a diagnosis can be easily obtained if you know all your symptoms and what organs or body systems are included in this pain.

References

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