

## Anatomy &amp; Physiology Body Systems

Body System	Organs	Functions
Integumentary System	Skin, Hair, Nails	It waterproofs the body and cushions and protects the deeper tissues from injury. It excretes salts and urea in perspiration and helps regulate body temperature.
Skeletal System	Bones, cartilage, ligaments, joints	It supports the body and provides a framework that the skeletal muscles can use to cause movement. It also has a protective function (for example, the skull encloses and protects the brain). Also, blood cells are formed within bones and the bones also store minerals.
Muscular System	Skeletal muscles, tendons	Their function is to contract. It also allows manipulation of the environment, locomotion, and facial expression. It maintains posture and produces heat.
Nervous System	Brain, spinal cord, nerves, and sensory receptors	The Nervous System works as a team. The sensory receptors detect these changes and send messages to the central nervous system (brain and spinal cord) so that it is constantly informed about what is going on. The CNS then assesses this information and response by activating the appropriate body muscles or glands.
Endocrine System	Pituitary, thyroid, parathyroids, adrenals,	It controls body activities, but it acts slowly. Glands secrete hormones that

	thymus, pancreas, pineal, ovaries, and testes	regulate processes such as growth, reproduction, and nutrient use by body cells.
Cardiovascular System	Heart and blood vessels	Using the blood as the transporting fluid, the cardiovascular system carries oxygen, nutrients, hormones, and other substances to and from the tissue cells where exchanges are made. The heart acts as the "blood pump," propelling blood through the blood vessels to all body tissue.
Lymphatic System	Lymphatic vessels, lymph nodes, and other lymphoid organs such as the spleen, thymus, and tonsils	The lymphatic vessels return fluid leaked from the blood to the blood vessels so that blood can be kept continuously circulating through the body. The lymph nodes help to cleanse the blood and house the cells involved in immunity.
Respiratory System	Nasal passages, pharynx, larynx, trachea, bronchi, and lungs	The Respiratory System's function is to keep the body constantly supplied with oxygen and to remove carbon dioxide. The gaseous exchanges occur through the walls of the air sacs of the lungs.
Digestive System	Oral cavity (mouth), esophagus, stomach, small and large intestines, and rectum	This role is to break down food into absorbable units that enter the blood and are delivered to the body cells. The undigested food that remains in the tract leaves the body through the anus as feces. The breakdown activities that begin in the mouth are completed in the small intestines.

Urinary System	Kidneys, ureters, bladder, and urethra	It removes the nitrogen-containing wastes from the blood and flushes them from the body in urine. It also maintains the body's water and salt balance and regulates the acid-base balance of the blood.
Reproductive System	Sperm, testes, scrotum, penis, accessory glands, and the duct system. The female duct system consists of the uterine tubes, uterus, and vagina	Its function is to produce offspring. Testes produce sperm and male sex hormone: ducts and glands aid in delivery of viable sperm to the female reproductive tract. Ovaries produce eggs and female sex hormones. The uterus provides the site for the development of the fetus once fertilization has occurred.

Necessary Life Functions: Maintaining boundaries, movement, responsiveness, digestion, metabolism, excretion, reproduction, growth

Necessities of Life: Nutrients, oxygen, water, and appropriate temperature and atmospheric pressure