

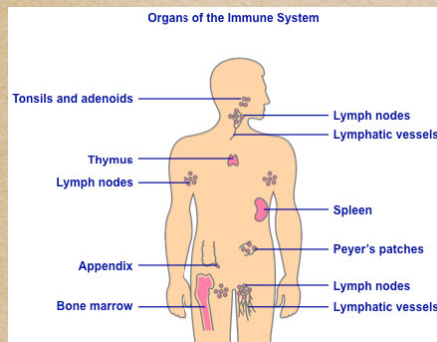
ITM International Training Massage school

Amsterdam, Berlin, Chiang Mai

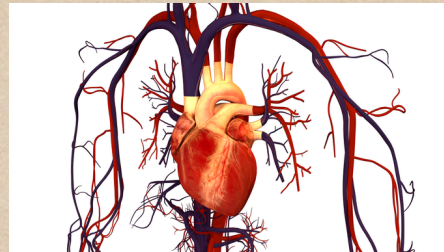


The 12 systems of our body

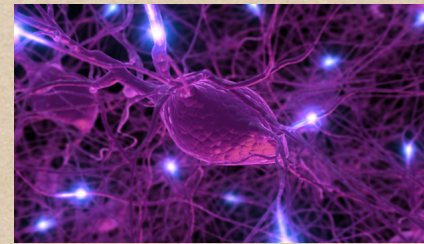
Immune system



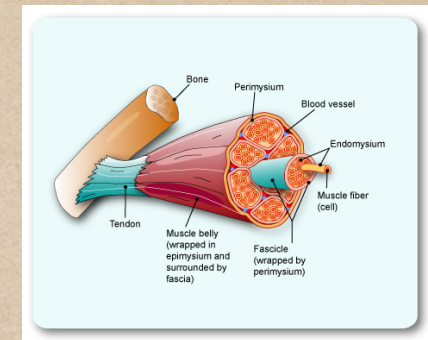
Circulatory system



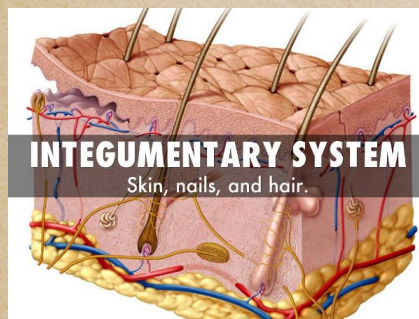
Nervous system



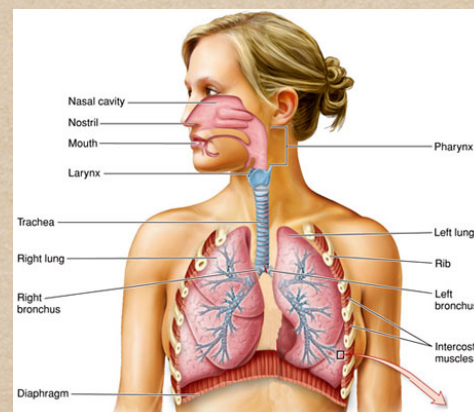
Muscle system



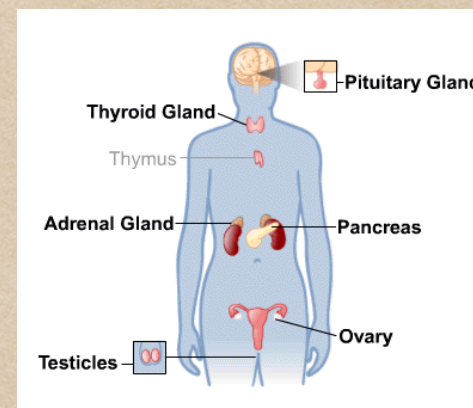
Integumentary system



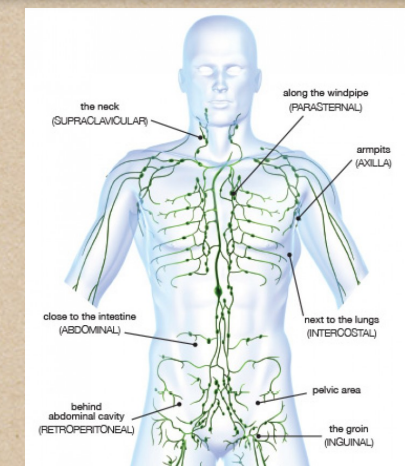
Respiratory system



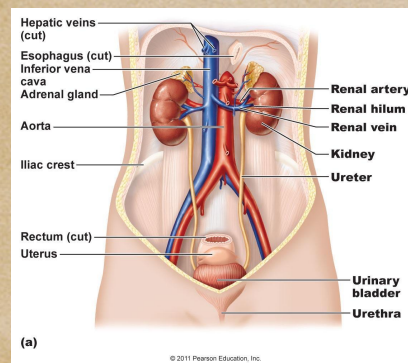
Endocrine system



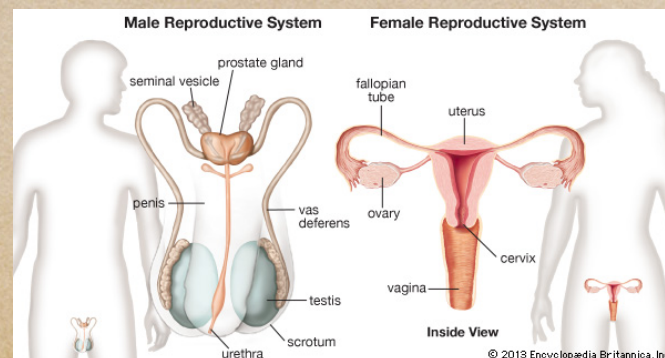
Lymphatic system



Urinary system



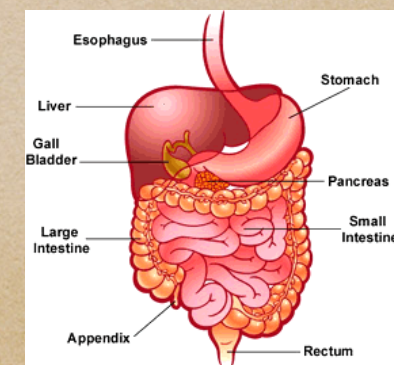
Reproductive system



Skeleton system



Digestive system

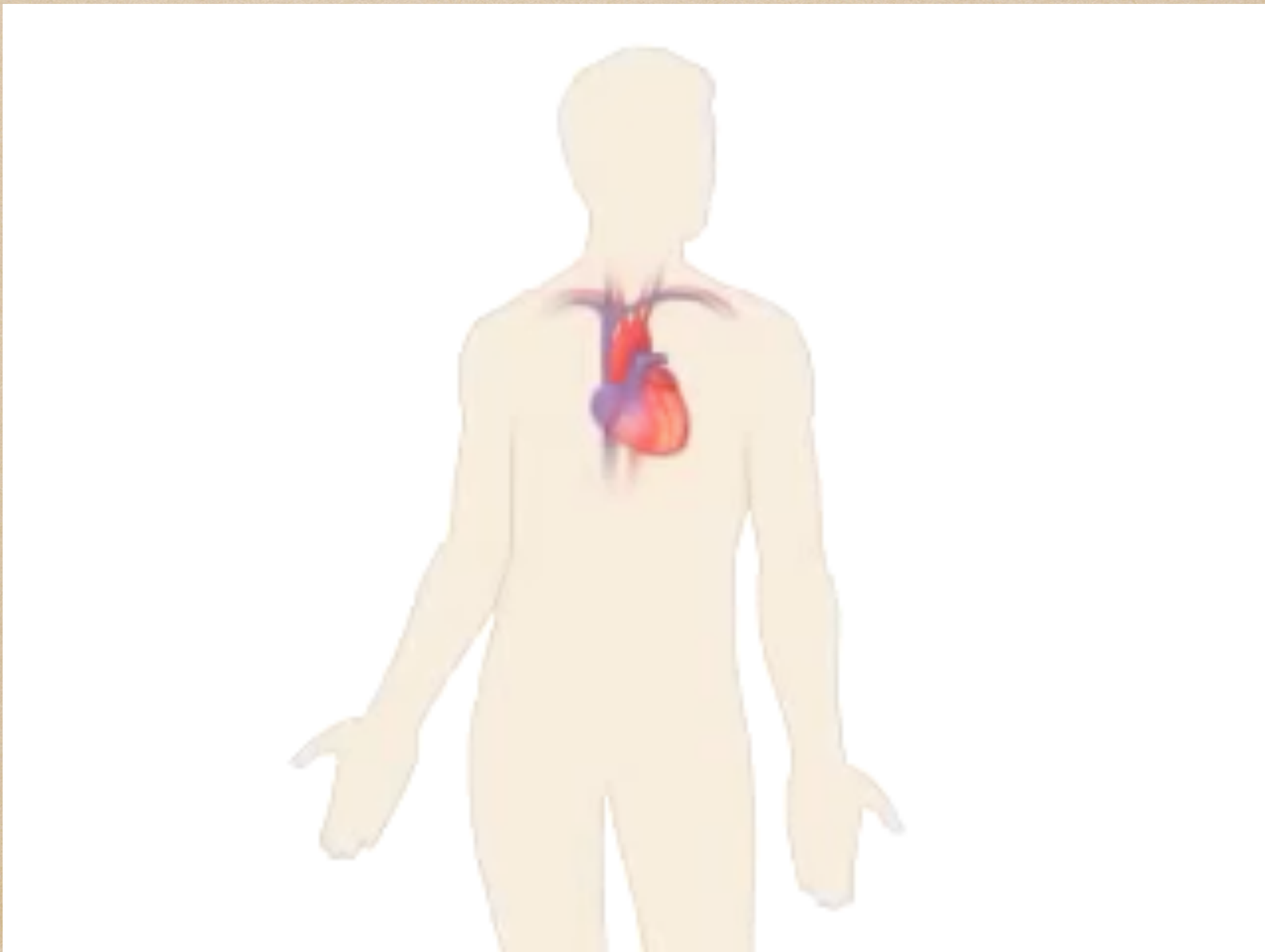


The circulatory system

- Also known as the cardiovascular system, your heart, blood vessels and blood itself are three essential components the body needs to survive. The circulatory system consists of two circuits that blood travels through; pulmonary and systemic.
- The pulmonary circuit carries blood to the lungs to be oxygenated and then back to the heart. In the lungs, carbon dioxide is removed from the blood, and oxygen taken up by the haemoglobin in the red blood cells.
- The systemic circuit carries blood around the body to deliver the oxygen and returns de-oxygenated blood to the heart. Blood also carries nutrients and waste.

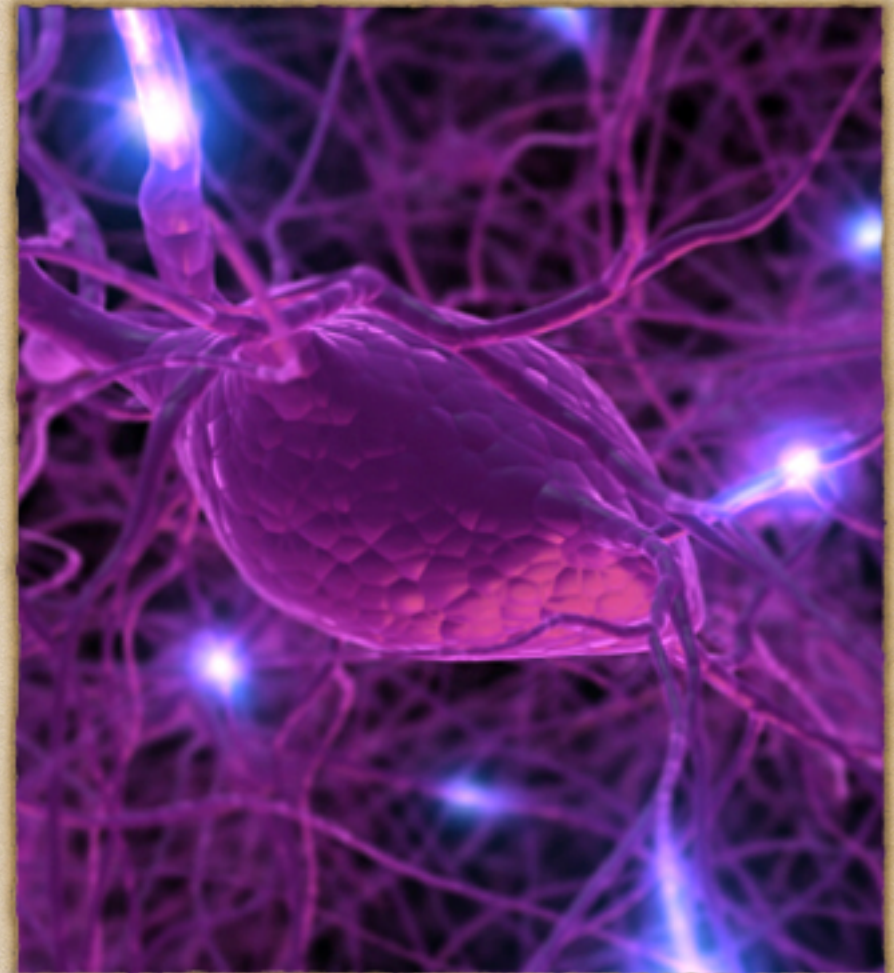


The circulatory system



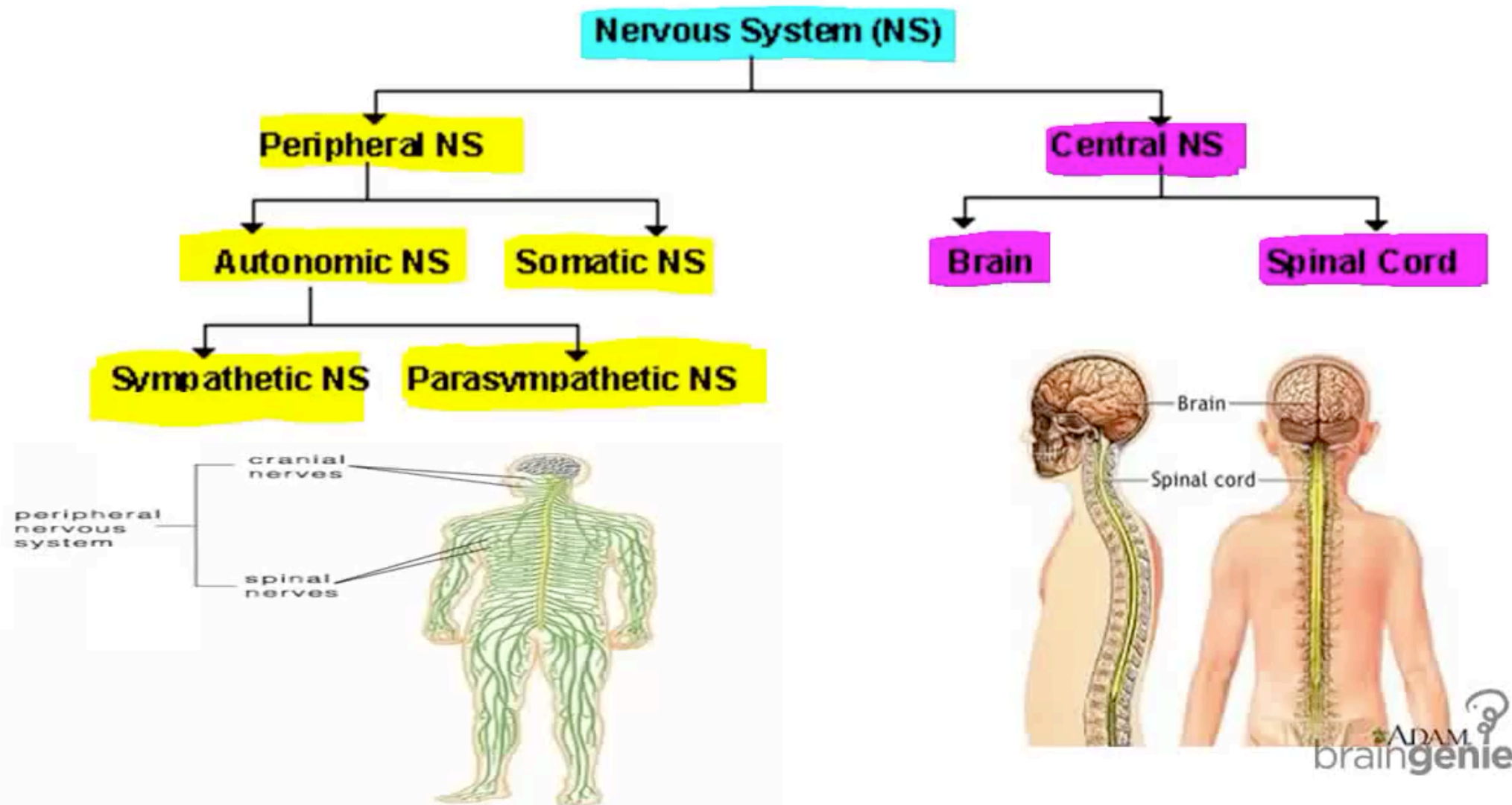
The nervous system

- The nervous system is a complex network of nerves and cells that carry messages to and from the brain and spinal cord to various parts of the body.
- The nervous system includes both the Central nervous system and Peripheral nervous system. The Central nervous system is made up of the brain and spinal cord and The Peripheral nervous system is made up of the Somatic and the Autonomic nervous systems. The central nervous system functions to send signals from one cell to others, or from one part of the body to others and to receive feedback. Malfunction of the nervous system can occur as a result of genetic defects, physical damage due to trauma or toxicity, infection or simply of ageing.



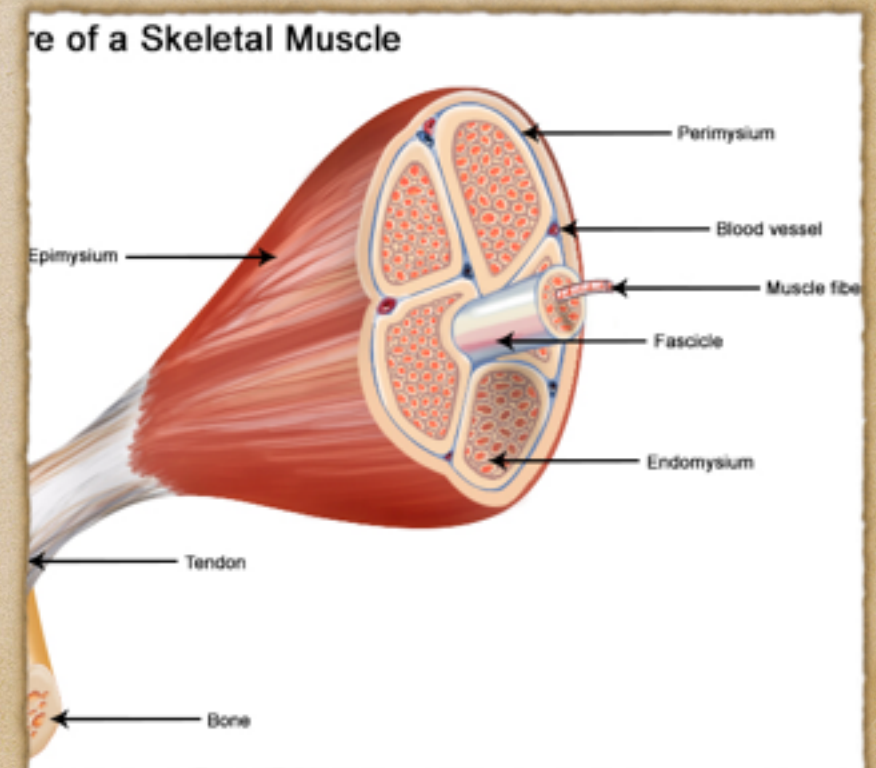
The nervous system

What is the nervous system and how is it organized?



Muscular system

- The muscular system is responsible for the movement of the human body. Attached to the bones of the skeletal system are about 700 named muscles that make up roughly half of a person's body weight. Each of these muscles is a discrete organ constructed of skeletal muscle tissue, blood vessels, tendons, and nerves. Muscle tissue is also found inside of the heart, digestive organs, and blood vessels. In these organs, muscles serve to move substances throughout the body.
- Muscle Types
- There are three types of muscle tissue: Visceral, cardiac, and skeletal.
- Visceral muscle is found inside of organs like the stomach, intestines, and blood vessels.
- Cardiac Muscle. Found only in the heart, cardiac muscle is responsible for pumping blood throughout the body.
- Skeletal muscle is the only voluntary muscle tissue in the human body—it is controlled consciously.

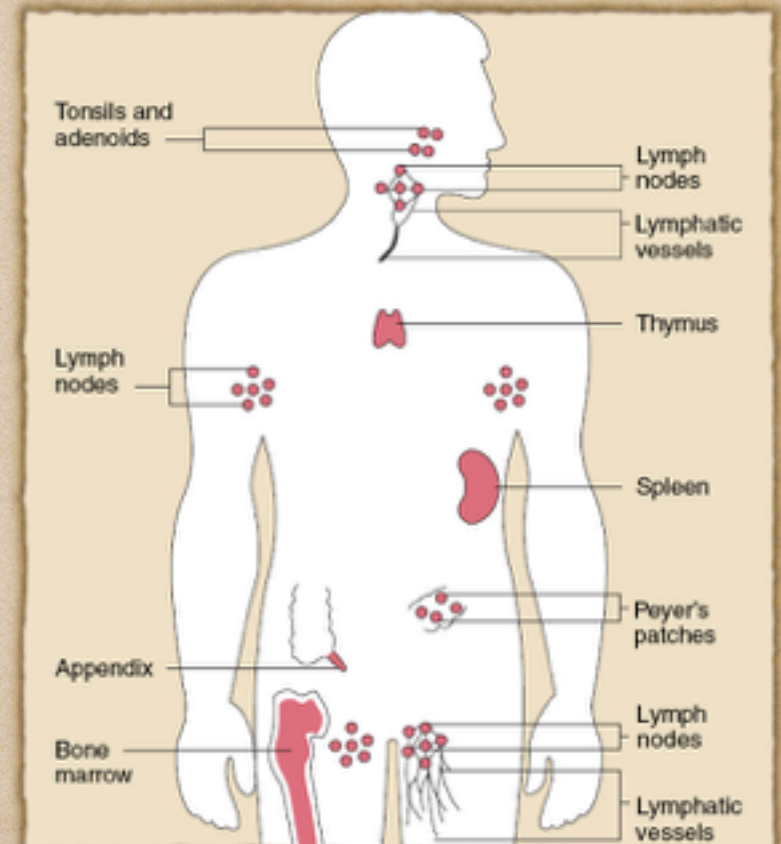


Muscular system

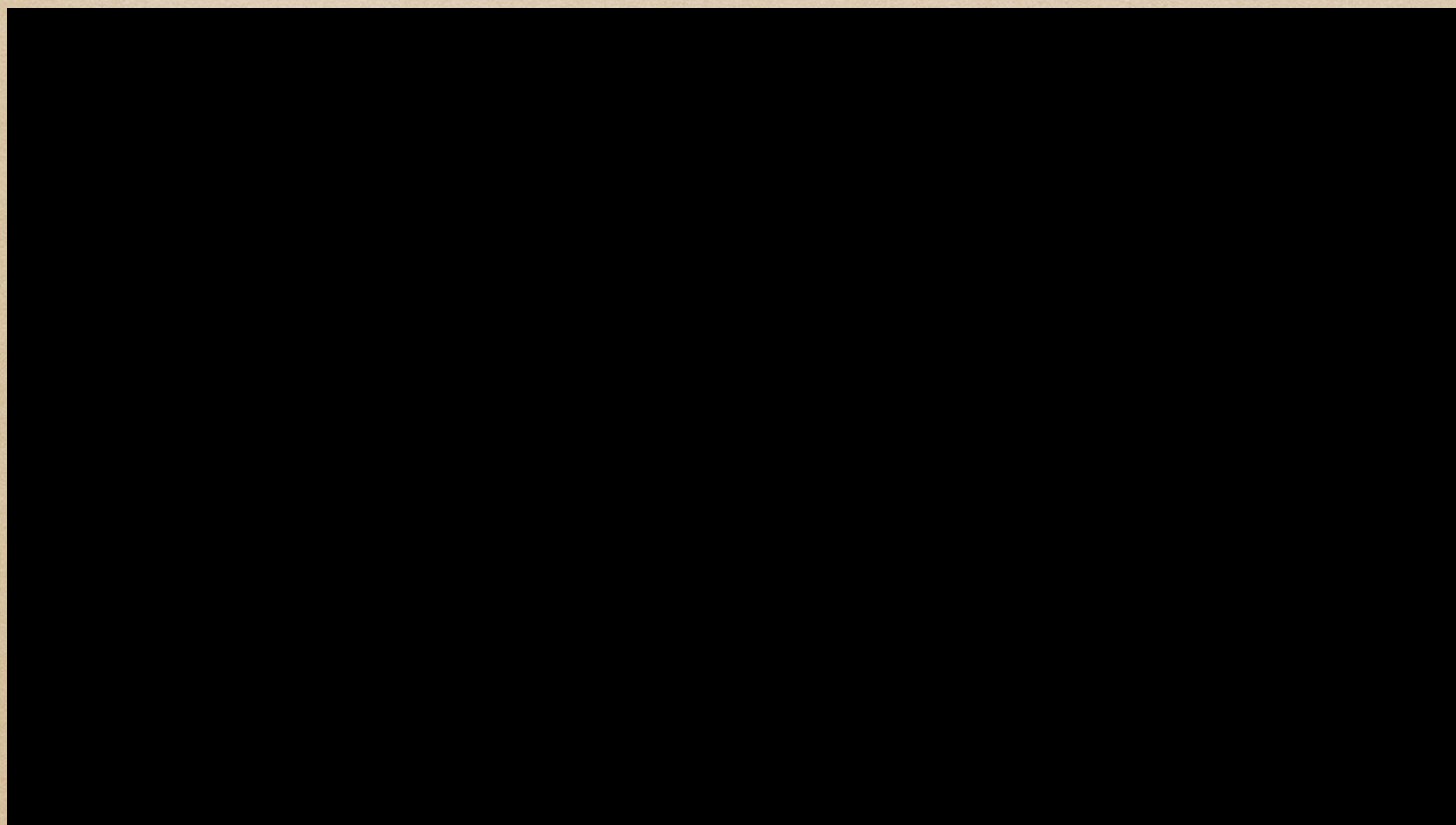


Immune System

- The immune system is our body's defense system against infections and diseases. Organs, tissues, cells, and cell products work together to respond to dangerous organisms (like viruses or bacteria) and substances that may enter the body from the environment. There are three types of response systems in the immune system: the anatomic response, the inflammatory response, and the immune response.
- The anatomic response physically prevents threatening substances from entering your body. Examples of the anatomic system include the mucous membranes and the skin. If substances do get by, the inflammatory response goes on attack.
- The inflammatory system works by excreting the invaders from your body. Sneezing, runny noses, and fever are examples of the inflammatory system at work. Sometimes, even though you don't feel well while it's happening, your body is fighting illness.
- When the inflammatory response fails, the immune response goes to work. This is the central part of the immune system and is made up of white blood cells, which fight infection by gobbling up antigens. About a quarter of white blood cells, called the lymphocytes, migrate to the lymph nodes and produce antibodies, which fight disease.

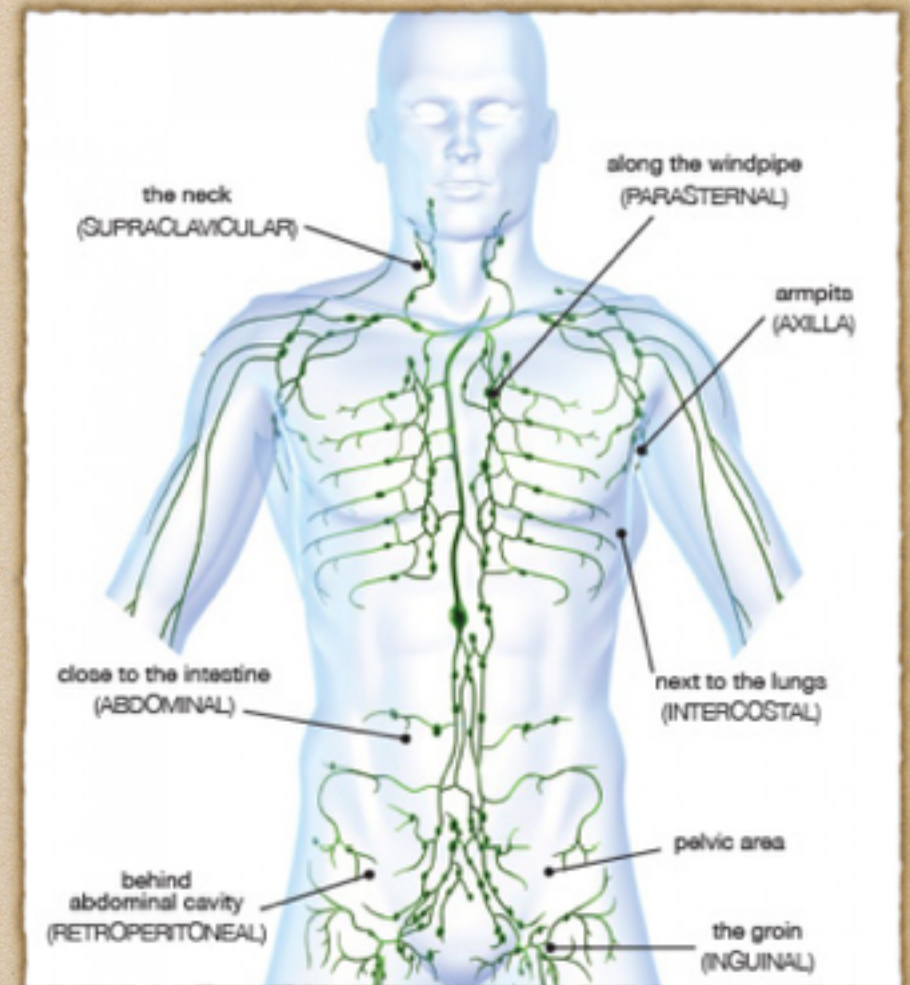


Immune System

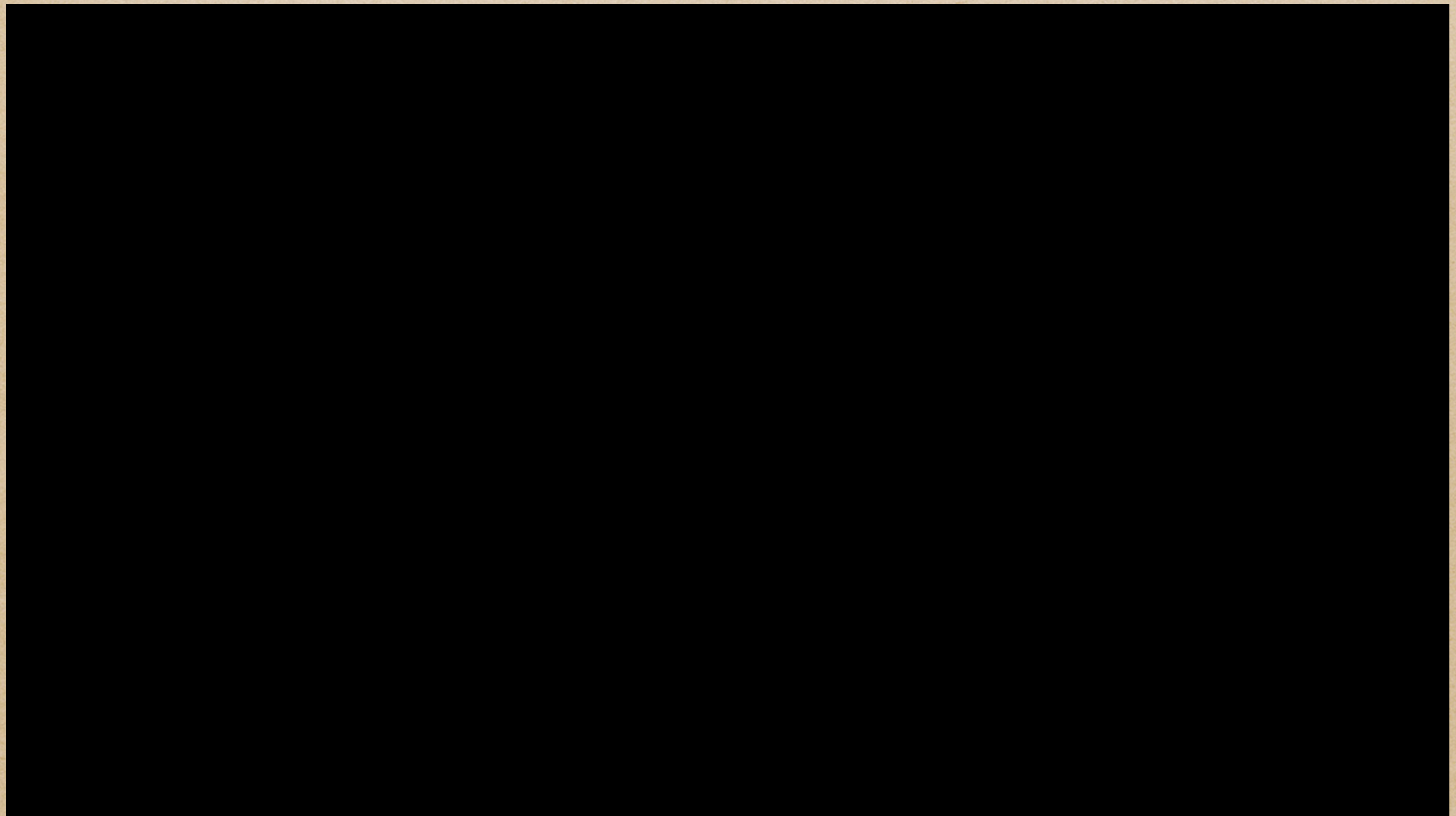


Lymphatic system

- The lymphatic system is a network of tissues and organs that help rid the body of toxins, waste and other unwanted materials. The primary function of the lymphatic system is to transport lymph, a fluid containing infection-fighting white blood cells, throughout the body.
- The lymphatic system primarily consists of lymphatic vessels, which are similar to the circulatory system's veins and capillaries. The vessels are connected to lymph nodes, where the lymph is filtered. The tonsils, adenoids, spleen and thymus are all part of the lymphatic system.
- Unlike blood, which flows throughout the body in a continue loop, lymph flows in only one direction — upward toward the neck. Lymphatic vessels connect to two subclavian veins, which are located on either sides of the neck near the collarbones, and the fluid re-enters the circulatory system, according to the Mayo Clinic.



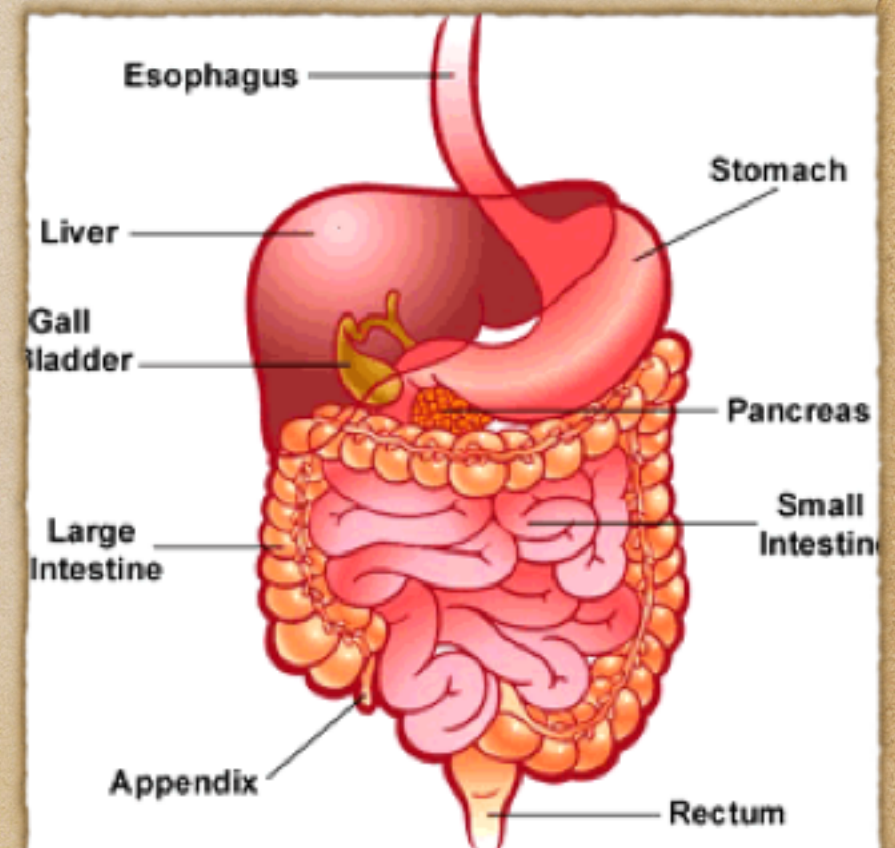
Lymphatic system



the digestive system

- The digestive system is a group of organs working together to convert food into energy and basic nutrients to feed the entire body. Food passes through a long tube inside the body known as the alimentary canal or the gastrointestinal tract (GI tract). The alimentary canal is made up of the oral cavity, pharynx, esophagus, stomach, small intestines, and large intestines. In addition to the alimentary canal, there are several important accessory organs that help your body to digest food but do not have food pass through them. Accessory organs of the digestive system include the teeth, tongue, salivary glands, liver, gallbladder, and pancreas. To achieve the goal of providing energy and nutrients to the body, six major functions take place in the digestive system:

- Ingestion
- Secretion
- Mixing and movement
- Digestion
- Absorption
- Excretion

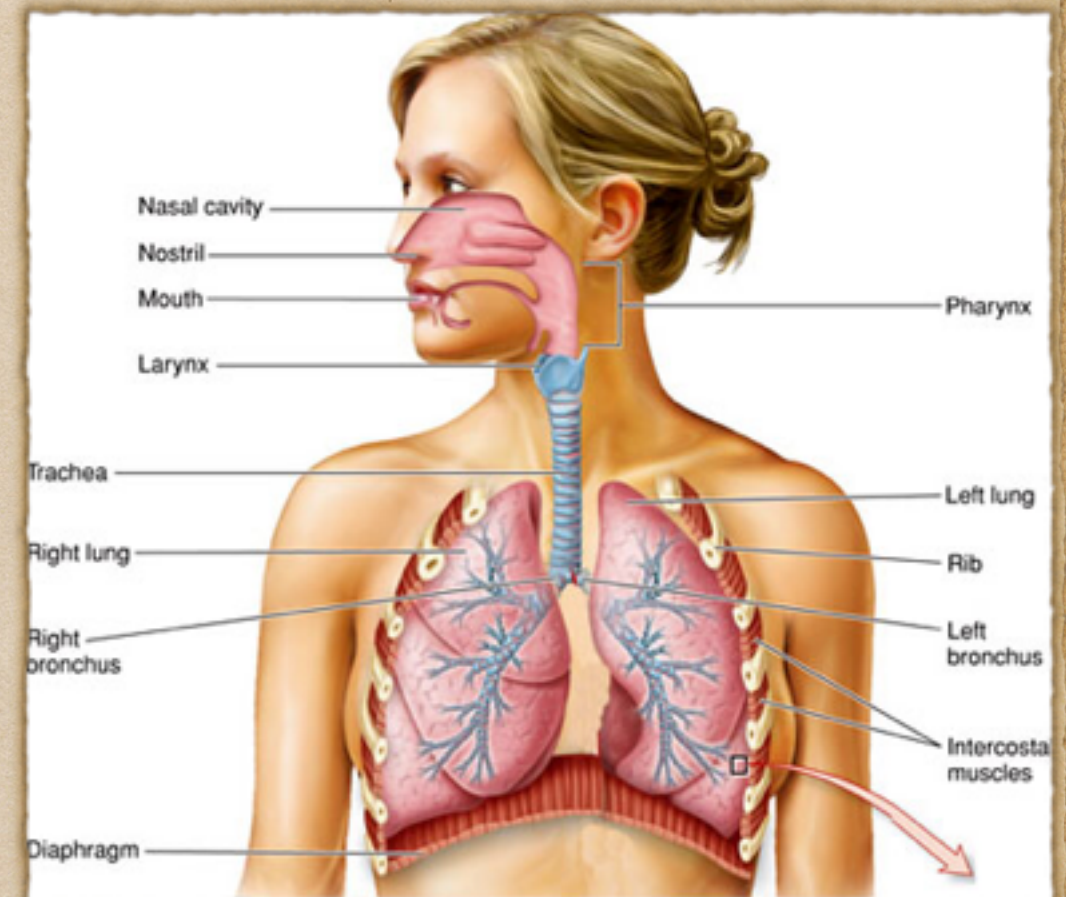


The digestive system



The respiratory system

- The cells of the human body require a constant stream of oxygen to stay alive. The respiratory system provides oxygen to the body's cells while removing carbon dioxide, a waste product that can be lethal if allowed to accumulate. There are 3 major parts of the respiratory system:
- the airway, the lungs, and the muscles of respiration.
- The airway, which includes the nose, mouth, pharynx, larynx, trachea, bronchi, and bronchioles, carries air between the lungs and the body's exterior. The lungs act as the functional units of the respiratory system by passing oxygen into the body and carbon dioxide out of the body.
- Finally, the muscles of respiration, including the diaphragm and intercostal muscles, work together to act as a pump, pushing air into and out of the lungs during breathing.

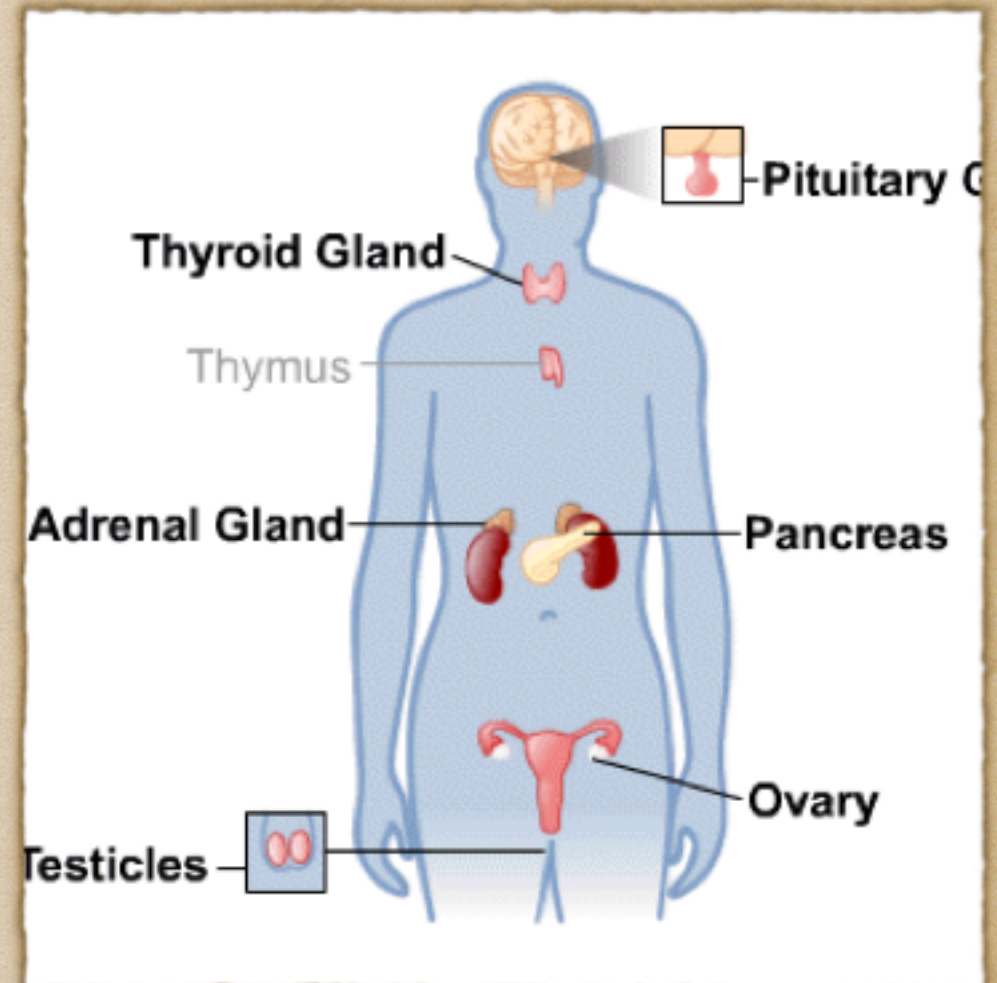


The respiratory system

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The endocrine system

- The endocrine system includes all of the glands of the body and the hormones produced by those glands. The glands are controlled directly by stimulation from the nervous system as well as by chemical receptors in the blood and hormones produced by other glands. By regulating the functions of organs in the body, these glands help to maintain the body's homeostasis. Cellular metabolism, reproduction, sexual development, sugar and mineral homeostasis, heart rate, and digestion are among the many processes regulated by the actions of hormones.

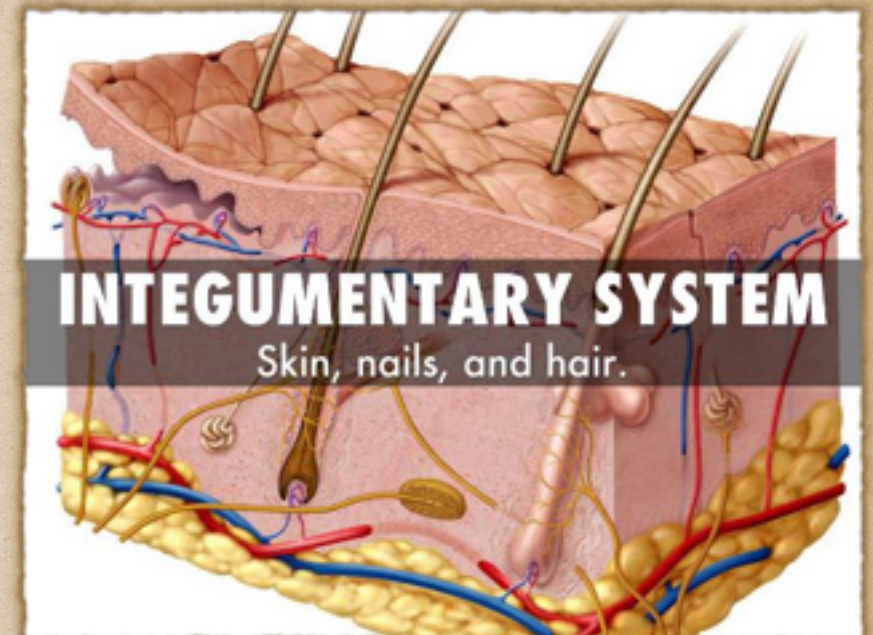


The endocrine system

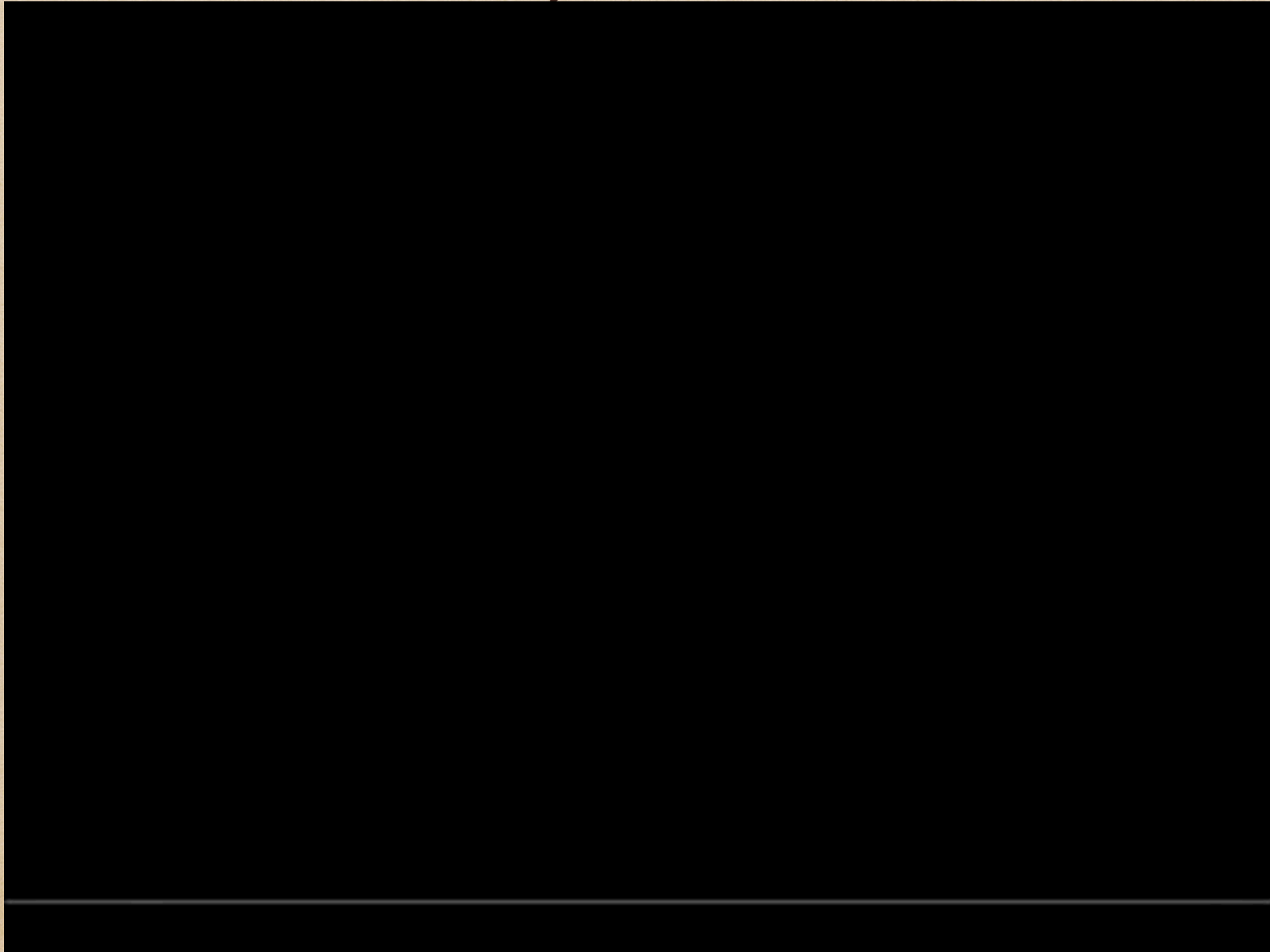


The integumentary system

- The human body's largest organ is the integumentary system, which includes the skin, hair, nails, glands and nerve receptors.
- The integumentary system works to waterproof, cushion and protect the body from infection, according to the National Institutes of Health. Most skin is waterproof because of keratin, a fibrous protein, and it also is made up of water, other proteins, lipids and different minerals and chemicals.
- Skin excretes wastes, regulates temperature and prevents dehydration by controlling the level of perspiration. It also houses sensory receptors that detect pain, sensation and pressure.
- The skin is also the body's initial defense against bacteria, viruses and other microbes. Skin and hair provide protection from harmful ultraviolet radiation, and the skin guards against sunburn by secreting melanin, according to the American Academy of Dermatology (AAD). Human skin color is determined by the interaction of melanin, carotene and hemoglobin.
- Storage of water, fat, glucose and vitamin D is also a function of the integumentary system, according to the AAD.



The integumentary system

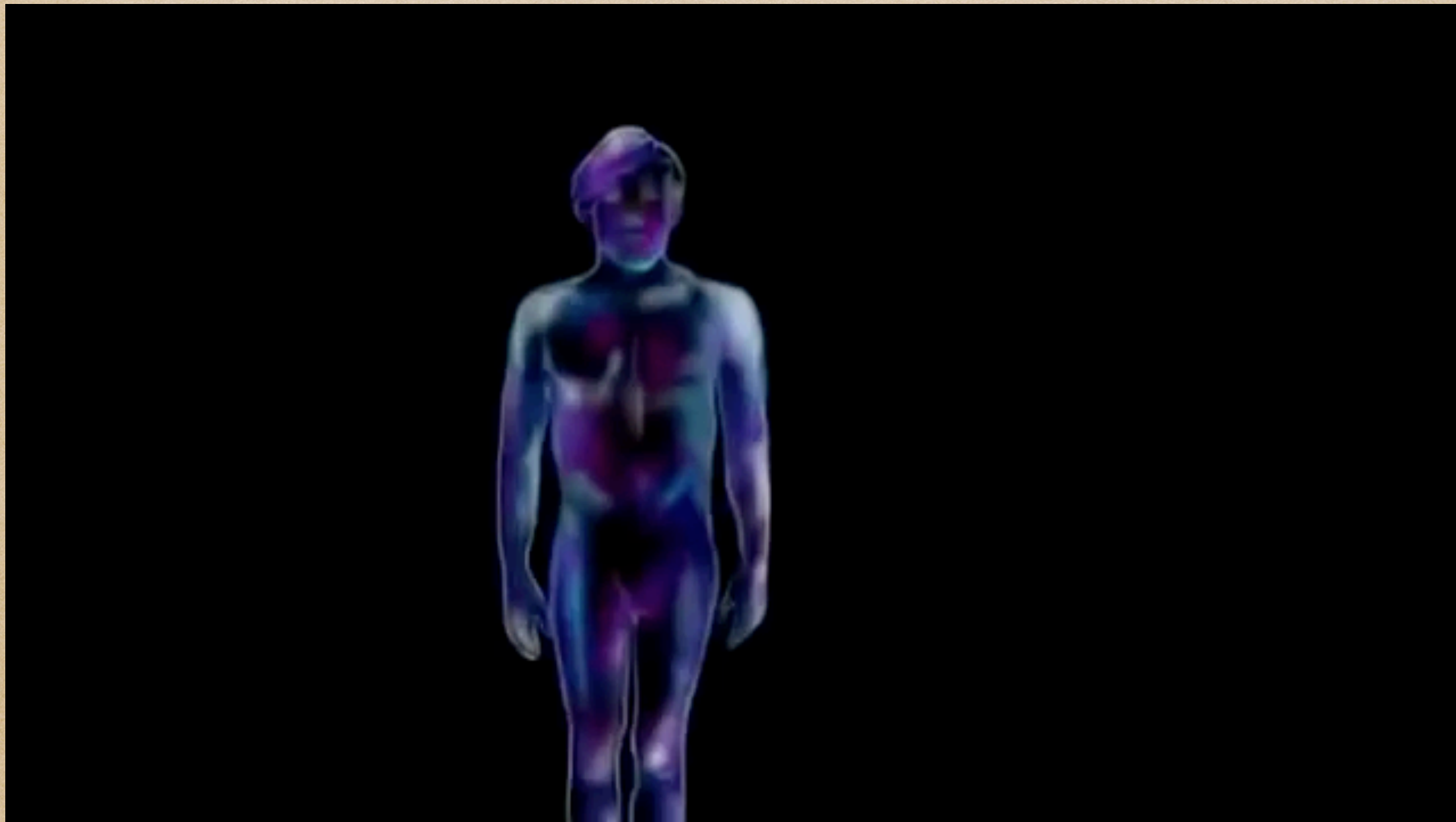


Skeletal system

- The skeletal system includes all of the bones and joints in the body. Each bone is a complex living organ that is made up of many cells, protein fibers, and minerals. The skeleton acts as a scaffold by providing support and protection for the soft tissues that make up the rest of the body.
- The skeletal system also provides attachment points for muscles to allow movements at the joints. New blood cells are produced by the red bone marrow inside of our bones. Bones act as the body's warehouse for calcium, iron, and energy in the form of fat. Finally, the skeleton grows throughout childhood and provides a framework for the rest of the body to grow along with it.
- The skeletal system's cell matrix acts as our calcium bank by storing and releasing calcium ions into the blood as needed. Proper levels of calcium ions in the blood are essential to the proper function of the nervous and muscular systems.

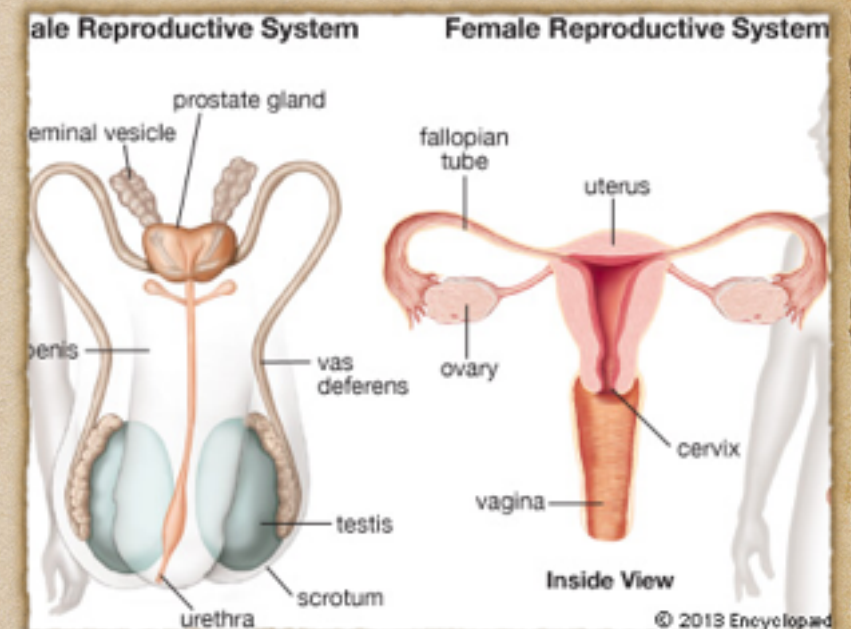


Skeletal system



Reproductive System

- The reproductive system is a collection of internal and external organs — in both males and females — that work together for the purpose of procreating, according to the Cleveland Clinic. Due to its vital role in the survival of the species, many scientists argue that the reproductive system is among the most important systems in the entire body.
- The human reproductive system usually involves internal fertilization by sexual intercourse. During this process, the male inserts his erect penis into the female's vagina and ejaculates semen, which contains sperm. A small portion of the sperm pass through the cervix into the uterus, and then into the fallopian tubes for fertilization of the ovum. Only one sperm is required to fertilize the ovum. Upon successful fertilization, the fertilized ovum, or zygote, travels out of the fallopian tube and into the uterus, where it implants in the uterine wall. This marks the beginning of gestation, better known as pregnancy, which continues for nine months as the fetus develops. When the fetus has developed to a certain point, pregnancy is concluded with childbirth or labor. During labor, the muscles of the uterus contract and the cervix dilates over the course of hours, and the baby passes out of the vagina.

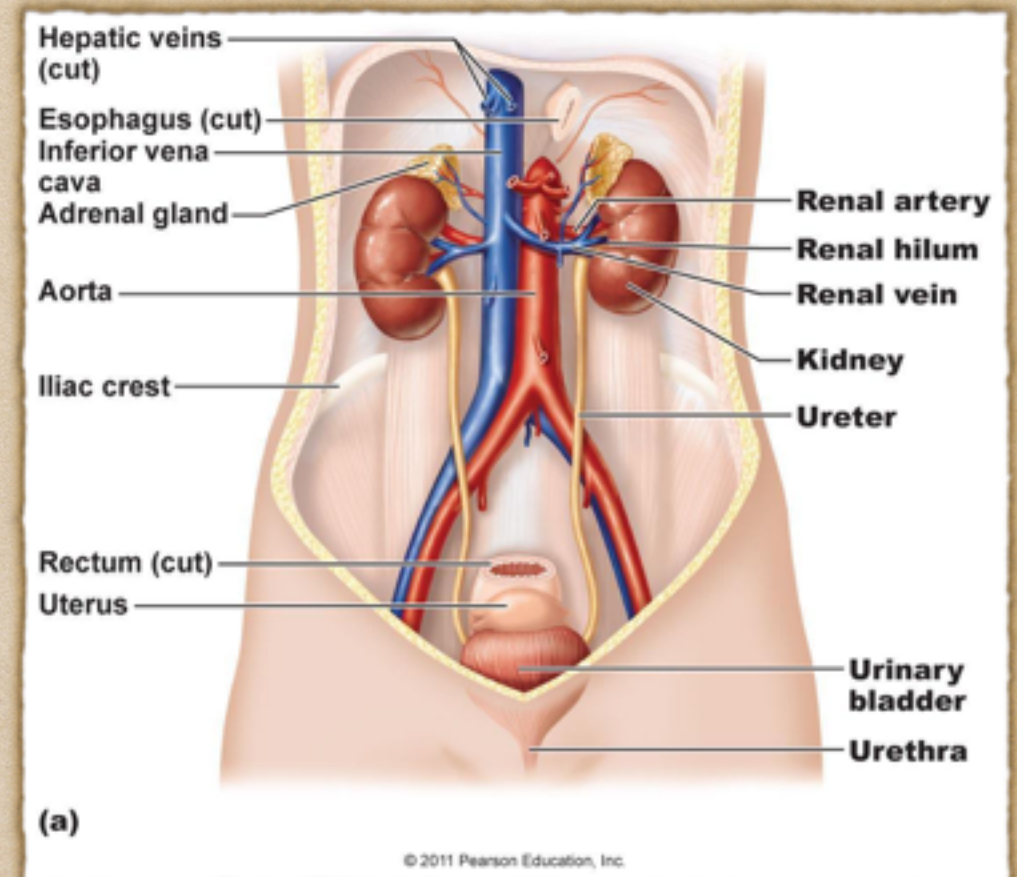


Reproductive System

**Please note:
This video contains
sexual health content**

Urinary system

- The urinary system consists of the kidneys, ureters, urinary bladder, and urethra. The kidneys filter the blood to remove wastes and produce urine. The ureters, urinary bladder, and urethra together form the urinary tract, which acts as a plumbing system to drain urine from the kidneys, store it, and then release it during urination. Besides filtering and eliminating wastes from the body, the urinary system also maintains the homeostasis of water, ions, pH, blood pressure, calcium and red blood cells.



Urinary system

