DOWNLOAD PDF HUMAN BODY SYSTEMS PARTS AND FUNCTIONS

Chapter 1 : Human Body Systems - Functions, locations, anatomy, definition, picture

The human body is everything that makes up, well, you. The basic parts of the human body are the head, neck, torso, arms and legs. Our bodies consist of a number of biological systems that carry.

March 10, The basic parts of the human body are the head, neck, torso, arms and legs. The BioDigital Human] Body systems Our bodies consist of a number of biological systems that carry out specific functions necessary for everyday living. The job of the circulatory system is to move blood, nutrients, oxygen, carbon dioxide, and hormones, around the body. It consists of the heart, blood, blood vessels,arteries and veins. The digestive system consists of a series of connected organs that together, allow the body to break down and absorb food, and remove waste. It includes the mouth, esophagus, stomach, small intestine, large intestine, rectum, and anus. The liver and pancreas also play a role in the digestive system because they produce digestive juices. The endocrine system consists of eight major glands that secrete hormones into the blood. These hormones, in turn, travel to different tissues and regulate various bodily functions, such as metabolism, growth and sexual function. It includes lymph nodes, the spleen, bone marrow, lymphocytes including B-cells and T-cells , the thymus and leukocytes, which are white blood cells. Its main job is to make is to make and move lymph, a clear fluid that contains white blood cells, which help the body fight infection. The lymphatic system also removes excess lymph fluid from bodily tissues, and returns it to the blood. The nervous system controls both voluntary action like conscious movement and involuntary actions like breathing , and sends signals to different parts of the body. The central nervous system includes the brain and spinal cord. The peripheral nervous system consists of nerves that connect every other part of the body to the central nervous system. There are three types of muscle: The reproductive system allows humans to reproduce. The male reproductive system includes the penis and the testes, which produce sperm. The female reproductive system consists of the vagina, the uterus and the ovaries, which produce eggs. During conception, a sperm cell fuses with an egg cell, which creates a fertilized egg that implants and grows in the uterus. The respiratory system allows us to take in vital oxygen and expel carbon dioxide in a process we call breathing. It consists mainly of the trachea, the diaphragm and the lungs. The urinary system helps eliminate a waste product called urea from the body, which is produced when certain foods are broken down. The whole system includes two kidneys, two ureters, the bladder, two sphincter muscles and the urethra. Urine produced by the kidneys travels down the ureters to the bladder, and exits the body through the urethra. It protects us from the outside world, and is our first defense against bacteria, viruses and other pathogens. Our skin also helps regulate body temperature and eliminate waste through perspiration. In addition to skin, the integumentary system includes hair and nails. Vital organs Humans have five vital organs that are essential for survival. These are the brain, heart, kidneys, liver and lungs. It is responsible for our thoughts, feelings, memory storage and general perception of the world. The human heart is a responsible for pumping blood throughout our body. The job of the kidneys is to remove waste and extra fluid from the blood. The kidneys take urea out of the blood and combine it with water and other substances to make urine. The liver has many functions, including detoxifying of harmful chemicals, breakdown of drugs, filtering of blood, secretion of bile and production of blood-clotting proteins. The lungs are responsible for removing oxygen from the air we breathe and transferring it to our blood where it can be sent to our cells. The lungs also remove carbon dioxide, which we exhale. Fun facts The human body contains nearly trillion cells. There are at least 10 times as many bacteria in the human body as cells. The average adult takes over 20, breaths a day. Each day, the kidneys process about quarts 50 gallons of blood to filter out about 2 quarts of waste and water Adults excrete about a quarter and a half 1. In fact, most body parts are far more complicated than that, while some seem to have no business being inside there at all. Test Your Body Smarts You use your eyes to see, your ears to hear and your muscles to do the heavy lifting.

Chapter 2 : Human body - Wikipedia

1. Detects changes in the internal and external environments of the body. 2. Controls and coordinates responses to changes in the body. 3. Integrates the functions and activities of all organ systems.

See Article History Human skeletal system, the internal skeleton that serves as a framework for the body. This framework consists of many individual bones and cartilages. There also are bands of fibrous connective tissue â€”the ligaments and the tendons â€”in intimate relationship with the parts of the skeleton. This article is concerned primarily with the gross structure and the function of the skeleton of the normal human adult. The human skeleton, like that of other vertebrates , consists of two principal subdivisions, each with origins distinct from the others and each presenting certain individual features. These are 1 the axial , comprising the vertebral column â€”the spineâ€”and much of the skull , and 2 the appendicular , to which the pelvic hip and pectoral shoulder girdles and the bones and cartilages of the limbs belong. Discussed in this article as part of the axial skeleton is a third subdivision, the visceral, comprising the lower jaw , some elements of the upper jaw, and the branchial arches, including the hyoid bone. When one considers the relation of these subdivisions of the skeleton to the soft parts of the human bodyâ€”such as the nervous system , the digestive system , the respiratory system , the cardiovascular system , and the voluntary muscles of the muscle system â€”it is clear that the functions of the skeleton are of three different types: Of these functions, support is the most primitive and the oldest; likewise, the axial part of the skeleton was the first to evolve. The vertebral column, corresponding to the notochord in lower organisms, is the main support of the trunk. The central nervous system lies largely within the axial skeleton, the brain being well protected by the cranium and the spinal cord by the vertebral column, by means of the bony neural arches the arches of bone that encircle the spinal cord and the intervening ligaments. A distinctive characteristic of humans as compared with other mammals is erect posture. The human body is to some extent like a walking tower that moves on pillars, represented by the legs. Tremendous advantages have been gained from this erect posture, the chief among which has been the freeing of the arms for a great variety of uses. Nevertheless, erect posture has created a number of mechanical problemsâ€”in particular, weight bearing. These problems have had to be met by adaptations of the skeletal system. Protection of the heart , lungs , and other organs and structures in the chest creates a problem somewhat different from that of the central nervous system. These organs, the function of which involves motion, expansion, and contraction, must have a flexible and elastic protective covering. Such a covering is provided by the bony thoracic basket, or rib cage , which forms the skeleton of the wall of the chest, or thorax. The connection of the ribs to the breastboneâ€”the sternum â€”is in all cases a secondary one, brought about by the relatively pliable rib costal cartilages. The small joints between the ribs and the vertebrae permit a gliding motion of the ribs on the vertebrae during breathing and other activities. The motion is limited by the ligamentous attachments between ribs and vertebrae. The third general function of the skeleton is that of motion. The great majority of the skeletal muscles are firmly anchored to the skeleton, usually to at least two bones and in some cases to many bones. Thus, the motions of the body and its parts, all the way from the lunge of the football player to the delicate manipulations of a handicraft artist or of the use of complicated instruments by a scientist, are made possible by separate and individual engineering arrangements between muscle and bone. In this article the parts of the skeleton are described in terms of their sharing in these functions. The disorders and injuries that can affect the human skeleton are described in the article bone disease.

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Chapter 3 : Body Parts & Functions | Sciencing

Human physiology is the study of how the human body functions. This includes the mechanical, physical, bioelectrical, and biochemical functions of humans in good health, from organs to the cells of which they are composed. The human body consists of many interacting systems of organs.

Your brain works like a complex computer, telling all the other systems in your body what to do. Your circulatory system includes your heart and blood. It delivers nutrients to your organs and keeps things clean. Your skin protects your body and keeps you from drying out. Bones give your body structure and strength. Muscles move your body. Your lungs take oxygen from the air for your body. All About Your Body: Your body needs food , water and air. Food gives your body energy. Water keeps your body moist. Air delivers oxygen to your body. Your brain sends tiny electrical impulses to your nerves. Your nerves tell your body when and how to move. Your brain has millions of nerves that connect to one another. You grow more during the first two years of life than during the rest of your life. A video song about the human body parts. Does my heart beat all day long? Your heart must beat continuously to send blood and oxygen to your body. It beats more than , times each day. Why do I feel pain? When you are hurt, the brain sends a message through your nerves in the form of pain.

Chapter 4 : Fun Human Body Facts for Kids

Human Body Systems Organ Systems and Function, Location, Anatomy, Definition and Picture: Skeletal System: The skeletal system is the system that supports us and gives us our shape.

Endocrine glands that produce many hormones. These include adrenaline and the steroids cortisol and aldosterone. They are found above the kidneys. Circulatory system â€" Cardiovascular system Heart Muscular organ that pumps blood through blood vessels to entire body. Divided into 4 chambers â€" Left atrium top , right atrium top , left ventricle bottom , right ventricle bottom. In healthy heart, blood flows one way through heart due to heart valves, which prevent backflow. Enclosed by a protective sac called pericardium. Wall of heart made up of â€" epicardium, myocardium, endocardium. Blood low in oxygen enters right atrium from superior and inferior venae cavae. From here it passes to right ventricle. From here it is sent to the lungs, where it receives oxygen and gives off CO2. Oxygenated blood returns to left atrium and passes to left ventricle. From here it leaves heart through aorta. Heart is a fist-sized organ that is placed in the middle of the chest cavity. It is slightly offset to the left. The left heart is stronger so heartbeats felt more strongly on the left. Arteries Blood vessels that carry blood away from heart. Most carry oxygenated blood. Exceptions are pulmonary and umbilical arteries. Veins Blood vessels that carry blood towards the heart. Most carry deoxygenated blood from tissues. Exceptions are pulmonary and umbilical veins. Less muscular than arteries and closer to skin. Valves in veins prevent backflow. Capillaries Smallest blood vessels in the human body. They connect arterioles and venules. Help enable exchange of O2, CO2, other nutrients and waste substances between blood and tissues. Lymph capillaries drain lymph from lymph vessels. Circulatory system â€" Lymphatic system Thin walled, valved structures that carry lymph. Lymph is a fluid that lies between body tissues. Lymph node Oval or kidney shaped organ. Present at multiple locations throughout body including armpits, neck and groin. Important for proper functioning of immune system. Act as filters for foreign particles and cancer cells. Bone marrow Flexible tissue in the interior of bones. Red blood cells produced by bone marrow in heads of long bones. Bone marrow is a key component of the lymphatic system. Thymus Specialized primary lymphoid organ of immune system. Within thymus, T cells or T lymphocytes mature. These are key to adaptive immune system. Consists of two identical lobes located in front of the heart. Spleen Similar in structure to large lymph node. Acts as a blood filter. Removes old red blood cells and holds a reserve of blood. It also synthesizes antibodies in its white pulp. Nervous system Main organ of human central nervous system and the human body. Located in head, protected by skull. Composed neurons, glial cells and blood vessels. Divided into three parts â€" forebrain, midbrain and hindbrain. Dominant feature of human brain is the wrinkling of the cerebral cortex. The cerebral cortex is so large that it overshadows all other parts of the human brain. Three parts of cerebral cortex â€" cerebrum forebrain , cerebellum hindbrain , and brainstem. There are two hemispheres in the brain â€" left and right. The mind is an emergent property of the brain. The brainstem Posterior part of the brain. Consists of â€" Midbrain, Pons, and Medulla Oblongata. Medulla Oblongata is responsible for involuntary functions like sneezing, breathing, heart rate, blood pressure etc. Pons has a role in sleep and dreams. Also deals with swallowing, bladder control, equilibrium, hearing, taste, eye movement, facial expressions and posture. Cerebellum Important in motor control, cognitive functions like language and attention. Also regulates fear and pleasure responses. Spinal cord Long, thin, tubular bundle of nervous tissue and support cells. Extends from brainstem to pelvis. Brain and spinal cord together make up central nervous system. Nerves Enclosed, cable-like bundles of axons nerve fibres. Part of the peripheral nervous system. Provides pathway for electrochemical nerve impulses to and from peripheral organs. Categorized in three groups based on direction of signals â€" afferent nerves from sensory neurons to central nervous system , efferent nerves from CNS to muscle and glands and mixed nerves contains both signals. Categorized in two groups based on where they connect to CNS â€" spinal nerves connect to spinal cord , and cranial nerves connect directly to brain. Sensory organs Eye is a sense organ. Contains rod cells for light perception and cone cells for colour perception. Made of three coats enclosing three transparent structures. Outermost layer composed of cornea and sclera. Middle layer consists of choroid, ciliary body and

iris. Innermost layer is the retina, a light sensitive layer of tissue. Within these coats are the aqueous humour clear fluid , the vitreous body clear jelly , and the flexible lens. The lens is suspended to the ciliary body by the suspensory ligament Zonule of Zinn. The cornea is the transparent front part of the eye that covers the iris and pupil. The iris controls the size and diameter of the pupil, which is a hole that lets light in. Ear Ear is an organ for hearing and balance. Consists of three parts â€" outer ear, middle ear and inner ear. Outer ear consists of auricle visible part of the ear and ear canal. It gathers and focusses sound energy on to the eardrum. Ear drum is a membrane that separates external ear from middle ear. Middle ear contains three ossicles which transfer vibrations from ear drum to inner ear. Inner ear is a bony labyrinth. It has two main functional parts â€" cochlea and vestibular system. Olfactory epithelium Specialized epithelial tissue in the nasal cavity. Involved in smell and detecting odors. Tongue Taste receptors or taste buds on different parts of the tongue. Taste buds are also found in the soft palate, upper esophagus, cheek and epiglottis. They are involved in detecting five elements of taste perception â€" salty, sour, bitter, sweet and umami. Integumentary system It is an exocrine gland that produces milk. Skin Largest organ of the integumentary system. Contains pigment melanin that gives skin its colour. Composed of three primary layers â€" epidermis, dermis and hypodermis. We hope you find this post on Functions and Anatomy of Human Body helpful. Go through some more of our similar posts to enhance your general awareness:

Chapter 5 : List of systems of the human body - Wikipedia

The human body systems Different organs can work together to perform a common function, like how the parts of your digestive system break down food. We refer to an integrated unit as an organ system.

Digestive System Anatomy Mouth Food begins its journey through the digestive system in the mouth, also known as the oral cavity. Inside the mouth are many accessory organs that aid in the digestion of foodâ€”the tongue, teeth, and salivary glands. Teeth chop food into small pieces, which are moistened by saliva before the tongue and other muscles push the food into the pharynx. The teeth are 32 small, hard organs found along the anterior and lateral edges of the mouth. Each tooth is made of a bone-like substance called dentin and covered in a layer of enamelâ€”the hardest substance in the body. Teeth are living organs and contain blood vessels and nerves under the dentin in a soft region known as the pulp. The teeth are designed for cutting and grinding food into smaller pieces. The tongue is located on the inferior portion of the mouth just posterior and medial to the teeth. It is a small organ made up of several pairs of muscles covered in a thin, bumpy, skin-like layer. The taste buds on the surface of the tongue detect taste molecules in food and connect to nerves in the tongue to send taste information to the brain. The tongue also helps to push food toward the posterior part of the mouth for swallowing. Surrounding the mouth are 3 sets of salivary glands. The salivary glands are accessory organs that produce a watery secretion known as saliva. Saliva helps to moisten food and begins the digestion of carbohydrates. The body also uses saliva to lubricate food as it passes through the mouth, pharynx, and esophagus. Pharynx The pharynx, or throat, is a funnel-shaped tube connected to the posterior end of the mouth. The pharynx is responsible for the passing of masses of chewed food from the mouth to the esophagus. The pharynx also plays an important role in the respiratory system, as air from the nasal cavity passes through the pharynx on its way to the larynx and eventually the lungs. Because the pharynx serves two different functions, it contains a flap of tissue known as the epiglottis that acts as a switch to route food to the esophagus and air to the larynx. It carries swallowed masses of chewed food along its length. At the inferior end of the esophagus is a muscular ring called the lower esophageal sphincter or cardiac sphincter. The function of this sphincter is to close of the end of the esophagus and trap food in the stomach. Stomach The stomach is a muscular sac that is located on the left side of the abdominal cavity, just inferior to the diaphragm. In an average person, the stomach is about the size of their two fists placed next to each other. This major organ acts as a storage tank for food so that the body has time to digest large meals properly. The stomach also contains hydrochloric acid and digestive enzymes that continue the digestion of food that began in the mouth. It is located just inferior to the stomach and takes up most of the space in the abdominal cavity. The entire small intestine is coiled like a hose and the inside surface is full of many ridges and folds. These folds are used to maximize the digestion of food and absorption of nutrients. Liver and Gallbladder The liver is a roughly triangular accessory organ of the digestive system located to the right of the stomach, just inferior to the diaphragm and superior to the small intestine. The liver weighs about 3 pounds and is the second largest organ in the body. The liver has many different functions in the body, but the main function of the liver in digestion is the production of bile and its secretion into the small intestine. The gallbladder is a small, pear-shaped organ located just posterior to the liver. The gallbladder is used to store and recycle excess bile from the small intestine so that it can be reused for the digestion of subsequent meals. Pancreas The pancreas is a large gland located just inferior and posterior to the stomach. The pancreas secretes digestive enzymes into the small intestine to complete the chemical digestion of foods. Large Intestine The large intestine is a long, thick tube about 2. It is located just inferior to the stomach and wraps around the superior and lateral border of the small intestine. The large intestine absorbs water and contains many symbiotic bacteria that aid in the breaking down of wastes to extract some small amounts of nutrients. Feces in the large intestine exit the body through the anal canal. Digestive System Physiology The digestive system is responsible for taking whole foods and turning them into energy and nutrients to allow the body to function, grow, and repair itself. The six primary processes of the digestive system include: Ingestion of food Secretion of fluids and digestive enzymes Mixing and movement of food and wastes through the body Digestion of food into smaller pieces Absorption

of nutrients 1 Ingestion The first function of the digestive system is ingestion, or the intake of food. The mouth is responsible for this function, as it is the orifice through which all food enters the body. The mouth and stomach are also responsible for the storage of food as it is waiting to be digested. This storage capacity allows the body to eat only a few times each day and to ingest more food than it can process at one time. These fluids include saliva, mucus, hydrochloric acid, enzymes, and bile. Saliva moistens dry food and contains salivary amylase, a digestive enzyme that begins the digestion of carbohydrates. Mucus serves as a protective barrier and lubricant inside of the GI tract. Hydrochloric acid helps to digest food chemically and protects the body by killing bacteria present in our food. Enzymes are like tiny biochemical machines that disassemble large macromolecules like proteins, carbohydrates, and lipids into their smaller components. Finally, bile is used to emulsify large masses of lipids into tiny globules for easy digestion. Swallowing is the process of using smooth and skeletal muscles in the mouth, tongue, and pharynx to push food out of the mouth, through the pharynx, and into the esophagus. Peristalsis is a muscular wave that travels the length of the GI tract, moving partially digested food a short distance down the tract. It takes many waves of peristalsis for food to travel from the esophagus, through the stomach and intestines , and reach the end of the GI tract. Segmentation occurs only in the small intestine as short segments of intestine contract like hands squeezing a toothpaste tube. Segmentation helps to increase the absorption of nutrients by mixing food and increasing its contact with the walls of the intestine. Mechanical digestion is the physical breakdown of large pieces of food into smaller pieces. This mode of digestion begins with the chewing of food by the teeth and is continued through the muscular mixing of food by the stomach and intestines. Bile produced by the liver is also used to mechanically break fats into smaller globules. While food is being mechanically digested it is also being chemically digested as larger and more complex molecules are being broken down into smaller molecules that are easier to absorb. Chemical digestion begins in the mouth with salivary amylase in saliva splitting complex carbohydrates into simple carbohydrates. The enzymes and acid in the stomach continue chemical digestion, but the bulk of chemical digestion takes place in the small intestine thanks to the action of the pancreas. The pancreas secretes an incredibly strong digestive cocktail known as pancreatic juice, which is capable of digesting lipids, carbohydrates, proteins and nucleic acids. By the time food has left the duodenum , it has been reduced to its chemical building blocksâ€”fatty acids, amino acids, monosaccharides, and nucleotides. Absorption begins in the stomach with simple molecules like water and alcohol being absorbed directly into the bloodstream. Most absorption takes place in the walls of the small intestine, which are densely folded to maximize the surface area in contact with digested food. Small blood and lymphatic vessels in the intestinal wall pick up the molecules and carry them to the rest of the body. The large intestine is also involved in the absorption of water and vitamins B and K before feces leave the body. Defecation removes indigestible substances from the body so that they do not accumulate inside the gut. The timing of defecation is controlled voluntarily by the conscious part of the brain, but must be accomplished on a regular basis to prevent a backup of indigestible materials. Digestive Disorders Many diseases and health conditions - such as ulcers, GERD, IBD and celiac disease, just to name a few - lead to dysfunction in our digestive system. Learn about them by visiting our section on digestive diseases and conditions. Also, now you can test for your genetic risk of acquiring celiac disease - learn more about DNA health testing.

Chapter 6 : Functions and Anatomy of Human Body - GK Notes in PDF - Testbook Blog

It is difficult to imagine a subject closer to you than the topic of human body systems and their functions. After all, you are inside a human body right now! While human anatomy is a complex subject, breaking it into its recognized organ systems simplifies the relationships within the body.

After all, you are inside a human body right now! While human anatomy is a complex subject, breaking it into its recognized organ systems simplifies the relationships within the body. Body System Definition Like most subjects in biology, scientists approach body anatomy from a systems perspective, identifying levels of organization from simple to complex. When considering the human body, the most simple component is the cell. A group of similar cells form tissues, and those tissues comprise organs with distinct functions that support human life. Organs that work together to carry out coordinated activities classify into organ systems. Integumentary, Muscular and Skeletal Systems These organ systems comprise the basic structure of the human body. The integumentary organ system includes the hair, nails and skin and acts as a barrier between the interior of the body and the outside world. It protects the body from damage and infiltration by microorganisms, and also keeps the fluids inside the body and helps maintain body temperature. The muscular system includes cardiac, skeletal and smooth muscles that enable the body to move, as well as offering support and heat generation. The skeletal system comprises bones, cartilage, ligaments and tendons. Its functions include supporting the body, preventing damage to soft tissues, enabling movement and making blood cells. The cardiovascular system includes the blood, heart and vascular network. This system moves nutrients and waste products through the body and assists with maintaining body temperature and pH. The nervous system includes the brain, nerves, sensory organs and spinal cord. As a unit, it gathers and utilizes information, and controls short-term modifications in other systems. The respiratory system comprises the bronchi, diaphragm, lungs, mouth, nose and throat. This system manages breathing, transporting air to facilitate gas exchange. Digestive, Reproductive, and Urinary Systems These systems and their important functions are familiar to most people. The digestive system includes the esophagus, intestines, gallbladder, liver, mouth, pancreas, salivary glands and stomach. These organs work together to process food and absorb nutrients and water. The reproductive system comprises fallopian tubes, ovaries, penis, prostate, seminal vesicles, testes, uterus, vagina and vas deferens. This system makes gametes and sex hormones that enable humans to produce offspring. The urinary system includes the bladder, kidneys, urethra and ureters. Its purpose is to remove waste products and excess water from the body. Endocrine, Immune and Lymphatic Systems The final organ systems may be less familiar since their functions are less tangible â€” although no less vital. The endocrine system contains the adrenals, ovaries, pineal, pituitary, testes and thyroid. These glands work together to send hormonal messages through the body and control long-term alterations in the body systems. The immune system includes adenoids, leukocytes, spleen, thymus and tonsils. Its function is defense against pathogens and diseases. The lymphatic system comprises lymph, lymph nodes and lymph vessels. This system defends the body against infections and diseases, and also moves lymph between the blood and tissues. Human Organs and Organ Systems About the Author Melissa Mayer is an eclectic science writer with experience in the fields of molecular biology, proteomics, genomics, microbiology, biobanking and food science. She has also served as interim associate editor for a glossy trade magazine read by pathologists, Clinical Lab Products, and wrote a non-fiction YA book Coping with Date Rape and Acquaintance Rape. She has two books forthcoming covering the neuroscience of mental health.

Chapter 7 : human skeletal system | Parts, Functions, Diagram, & Facts | calendrierdelascience.com

systems, since they produce both hormones and ova. These human body systems are merely useful ways of classifying and studying the structure and function of the body. All together they function and interact with each other and with the surroundings to produce a conscious, living human being.

Outline of human anatomy and Anatomy Human anatomy is the study of the shape and form of the human body. The human body has four limbs two arms and two legs , a head and a neck which connect to the torso. The spine at the back of the skeleton contains the flexible vertebral column which surrounds the spinal cord , which is a collection of nerve fibres connecting the brain to the rest of the body. Nerves connect the spinal cord and brain to the rest of the body. All major bones, muscles, and nerves in the body are named, with the exception of anatomical variations such as sesamoid bones and accessory muscles. Blood vessels carry blood throughout the body, which moves because of the beating of the heart. Venules and veins collect blood low in oxygen from tissues throughout the body. From here, the blood is pumped into the lungs where it receives oxygen and drains back into the left side of the heart. Here blood passes from small arteries into capillaries , then small veins and the process begins again. Blood carries oxygen , waste products, and hormones from one place in the body to another. Blood is filtered at the kidneys and liver. The body consists of a number of different cavities, separated areas which house different organ systems. The brain and central nervous system reside in an area protected from the rest of the body by the blood brain barrier. The lungs sit in the pleural cavity. The intestines , liver , and spleen sit in the abdominal cavity Height, weight, shape and other body proportions vary individually and with age and sex. Body shape is influenced by the distribution of muscle and fat tissue. Outline of physiology and Physiology Human physiology is the study of how the human body functions. This includes the mechanical, physical, bioelectrical , and biochemical functions of humans in good health, from organs to the cells of which they are composed. The human body consists of many interacting systems of organs. These interact to maintain homeostasis , keeping the body in a stable state with safe levels of substances such as sugar and oxygen in the blood. Some combined systems are referred to by joint names. For example, the nervous system and the endocrine system operate together as the neuroendocrine system. The nervous system receives information from the body, and transmits this to the brain via nerve impulses and neurotransmitters. At the same time, the endocrine system releases hormones, such as to help regulate blood pressure and volume. Together, these systems regulate the internal environment of the body, maintaining blood flow, posture, energy supply, temperature, and acid balance pH.

Chapter 8 : PARTS AND FUNCTIONS OF HUMAN EXCRETORY SYSTEM - JustScience

The human body contains trillions of cells, which fall into several types - nerve cells, muscle cells, fat cells, liver cells, and so on - each with a different function. A typical cell has a central nucleus surrounded by some jellylike material called cytoplasm.

Muscles are special type of tissues of human body that posess the ability of contraction and relaxation. They can contract actively thus producing force for different body movements. Types of Muscle Striated, under voluntary control, found attached to skeleton, produce major movements of body parts Smooth Muscle Non striated, not under voluntary control, found in soft organs of body, responsible for processes like digestion of food etc. Cardiac Muscle Striated, involuntary, present exclusively in heart, responsible for pumping activit of heart, very strong and tough Functions Movements of body parts, Stability and Posture, Heat production, Circulation, Help in Digestion Introduction to Muscular System: Muscular System Muscular system is the system of Human Body that provides motor power for all movements of body parts. Muscular system is composed of special tissue called muscular tissue. Muscles have the ability to contract actvely to provide the force for movements of body parts. Muscular system is an important system of human body because without it, life will completely stop. Muscles produce not only those movements that are under the control of our will and that we can see and feel, but also those movements that are responsible for activities like breathing, digestion of food, pumping of blood etc. Muscles are body tissues that provide the force for all body movements. They are made of special types of cells. Skeletal muscles form most of the human body weight. They are under the control of human will and all body movements occurring by our will are produced by skeletal muscles. They are called skeletal muscles because they are almost always found attached to the skeleton and produce movements in different parts of the skeleton. Smooth muscles form the soft body organs like stomach, intestine, blood vessels etc. They are not under the will of human beings and are responsible for unconscious body activities like digestion of food. They are called smooth muscles because when seen under the microscope, they do not have any striation in contrast to the other two types of muscles. Cardiac muscles are exclusively found in human heart and no where else. They are extremely strong and powerful muscles. They are not under the control of human will and are involuntary. The pumping of blood by human heart is because of the force provided by the contraction of cardiac muscles.

Chapter 9 : Digestive System | Everything You Need to Know, Including Pictures

The systems work together to maintain a functioning human body. For example, the circulatory system uses the heart to pump blood through the body to deliver oxygen and nutrients to cells.

Human excretory system is made up of specialized structures and capillary networks that are used to assist in the excretory process. It includes kidneys and their function unit that is known as a nephron. The excretory activity performed by the kidneys is regulated by specialized hormones that modulate the absorption within nephron. Human excretory system performs a function of removing the waste from human body. Defecation is removal of the waste residue from the body. Excretion is the process through which metabolic waste which is not useful for the body is removed in the form of urine, sweat, or stool. Lung excretes metabolic waste in the form of CO2 and H2O gas. Liver produces bile which in turn secretes cholesterol, bilirubin pigmen and biliverdin. This provides colour to the feces and the stool produced. SKIN Skin produces sweat and is hence known to be an excretory organ. Skin controls the body temperature as the produced sweat absorbs body heat. Skin also shields the body from the physical damage, germs, drought, light and evaporation etc. Skin can also feel the slight touch, pressure and the outside temperature. Sweat is made up of water. The process of removal of sweat in the form of water vapors from our skin is known as perspiration. Sweat consists of water, salt, urea and solutes. Emotional matters or excessive load can cause stress which in turn makes the skin sweat. Example, even the palms get sweaty while under emotional stress. Renal arteries allow the blood to enter the kidney while blood leaves from renal veins. Ureters tubes carry the waste products from kidneys to the urinary bladder for release or storage. Kidneys remove excess of water from body. Kidneys maintain proper pH of blood by removing the excess of acids and bases from blood. Kidneys maintain proper balance of concentration of salts in blood. Kidneys remove other toxic substances from blood like urea, uric acid and ammonia. It maintains volume of extracellular fluid.