

Introduction to Medical Terminology/Introduction to the Body Systems

- A quick easy breakdown for MA students

Prefix: beginning of a word and modifies its meaning

Suffix: End of a word and completes the medical term. A suffix can change a word from a noun to an adjective when added to either the root word or the combining form

Word roots / combining forms: foundations of the word that identifies the structure of anatomy being described and to which a suffix or prefix is added. The difference between a word root and a combining form is that a vowel is added to the word root when necessary to make the terms easier to pronounce and more logical

A prefix actually changes or modifies the word root; often they indicate a location, presence or absence, quantity, size, frequency, or position

A suffix usually indicates a procedure, condition, disorder, or disease. They can change a medical term to an adjective as well

To take a medical term apart to define it, you should (1) start with the suffix (2) identify the prefix (if there is one) (3) determine the word root(s) or combining form(s)

Hydro phob/o -ic hydrophobic

(water) (fear) (pertaining to)

Word roots are the foundation of a medical term and usually describe a part of the body, and sometimes indicates color

Integumentary system

Technically, the skin is composed of three layers: the outermost (epidermis); the “true” skin (dermis); and the anchoring layer, which is actually below the skin (hypodermis)

The integumentary system includes not only the skin, but the nails on the hands and feet, hair, sweat glands, oil glands, specialized glands of the ear that produce wax, and the associated structure for each of these

Musculoskeletal system

The human body has 206 bones and 646 muscles

Cardiovascular system

The cardiovascular system (circulatory system) is composed of the heart and its associated structures

The heart is composed of 3 layers of muscle, and divided into right and left sections. The left side of the heart is responsible for pumping the oxygen and nutrient-rich blood out through the aorta and ultimately to the cellular level. The right side receives the oxygen-poor, waste-rich blood, which is pumped back through the lungs for reoxygenation. The heart is further divided into 4 chambers: The two superior structures are called the atria, and the two inferior structures are called the ventricles. (A/V) Aiding the proper flow of blood through the heart are valves that prevent regurgitation of the blood back into the chambers of the heart

Respiratory system

Air first enters the body through the mouth or nose, moves down through the throat, the voice box, the airway, the bronchi, the bronchioles, and ends at the alveoli, the microscopic air sacs that exchange oxygen and carbon dioxide through the processes of inspiration (breathing in) and expiration (breathing out). The lungs are located superior to the abdominal organs, positioned just above the diaphragm, which is the muscle that literally divides the body's thoracic cavity from the abdominal cavity. Left and right lungs are not identical to one another, as is the case with kidneys. Both lungs are composed of lobes. The right lung has 3 lobes (superior, inferior, middle) that are wider than the two lobes (superior and inferior) in the left lung, but the right lung is shorter than the left lung to make enough room for the liver. The left lung is narrower to make room for the heart

Gastrointestinal system

The small intestine is divided into 3 sections: the duodenum, the jejunum, and the ileum. Most digestion occurs in the small intestine. The large intestine is divided into 3 parts: cecum (from which the appendix projects), the ascending colon (up), transverse colon (sideways), descending colon (down), sigmoid colon (S), then the rectum and the anus. The large intestine's responsibility is primarily to reabsorb water and package waste for disposal as feces. Within the digestive system are accessory organs that assist in the processing of nutrients: teeth, tongue, liver and gallbladder

Urinary system

The urinary system is composed of two kidneys, two ureters, one bladder, and one urethra. The body filters the blood in the nephrons of the kidneys; the nephrons are the microscopic functional cells of the kidney. Ultimately, the process of secreting urine for transport out of the body begins in the nephrons of the kidney; after the blood has been filtered and waste products removed, the urine is sent through the uterus to the bladder

Nervous system

There are two major divisions to the nervous system: the central nervous system (consisting of the brain and spinal cord), and the peripheral nervous system (the portion that allows for awareness of surroundings through various receptors and communications with the brain)

Endocrine system

The endocrine system is a unique system within the human body. Although each gland produces a secretion, it is not visible externally because the product (a hormone) is released directly into the bloodstream. Laboratory tests can measure the level of hormones in the bloodstream to determine whether they are adequate, they are quite common blood tests drawn in health care offices. The organs of the endocrine system also are very specific in the way they operate, each hormone secreted

by an endocrine organ targets a specific organ. The same hormone will not affect any other organ within the body. Often, the endocrine system and its secretion of hormones is likened unto a lock and key; only one key will fit a lock, and only one hormone affects a particular organ

Reproductive system

Primary structures associated with the female reproductive tract is the ovary (2 of them); the remaining structures are accessory organs: uterus, fallopian or uterine tubes, vagina, and external accessory organs such as the breasts. Primary structure in the male reproductive system is the testis (2 of them); the remaining organs are accessory organs: epididymis, the vas deferens, seminal vesicle, prostate gland, and the bulbourethral or Cowper's glands

Summary

- Prefix is always found at the beginning of the medical term indicating a location, presence or absence, quantity, size, frequency, or position
- Suffix is always at the end of a medical term indicating a procedure, condition, disorder or disease
- Word root most often describes part of the body and sometimes denotes color
- To take a medical term apart to define it (1) start with the suffix (2) identify prefix (3) determine word root or combining forms
- Basic unit of the human body is the cell, which organizes to become tissue, which organizes to form organs. Organs work together to be organized into organ systems
- The skin, or the integumentary system, is the most external/largest organ of the human body
- Within the musculoskeletal system are the bones of the skeletal system, as well as the muscles that move the bones
- Cardiovascular system is composed of the heart and its associated structures
- In the respiratory system, air first enters the body through the mouth or nose, moves down through the throat, the voice box, the airway, and into the lungs to the bronchi, the bronchioles, and at the end, the alveoli, the microscopic air sac that exchange oxygen and carbon dioxide through the process of inspiration and expiration
- Many structures comprise the gastrointestinal structures that assist with the digestion of nutrients taken into the body
- The urinary system is instrumental in ridding the human body of waste products that build up in the bloodstream and excreting that waste in the form of urine. The urinary system is composed of two kidneys, two ureters, one bladder, and one urethra
- There are two major divisions to the nervous system: the central nervous system (consisting of the brain and spinal cord) and the peripheral nervous system (the portion that enables awareness of surroundings through various receptors and communications with the brain)
- Special senses include organs that provide vision, hearing, balance/upright stature, smell, taste, touch, pain, temperature