

HESI A2 ANATOMY AND PHYSIOLOGY A+ GUIDE

- Anatomic position
 - The body is erect, the feet are slightly apart, the head is held high, and the palms of the hands are facing forward
- Which of the following is a structure found in the upper respiratory? Pharynx
- A person who has damage to their ulnar nerve will have decreased sensation in Arm
- Which bone does not articulate with any other bone? Hyoid
- Which of the following statements best describe endocrine glands? They secrete chemicals into the blood
- Diet is important because bones are storage places for Calcium and phosphorus
- Which organ is part of both the male reproductive system and the urinary system? Urethra
- Red blood cell production is known as which of the following?
 - Hematopoiesis
 - B. Erythropoiesis
 - C. Phagocytosis
 - D. Thrombopoiesis

- When an individual is under stress, hormones are released. Which of the following is not one of the locations in which hormones are released when under stress?
 - **Parathyroid**
 - Adrenal cortex
 - Posterior pituitary
 - Hypothalamus
- The central nervous system is made up of all except which of the following?

Brain **B. Heart**

- C. Retina
- D. Spinal cord
- The thyrotrophic-releasing growth hormone-releasing, and gonadotropin-releasing hormones are released by which of the following endocrine system glands?
 - Thymus
 - Pituitary gland
 - Pineal gland

D.

Hypothalamus

- What is the most visible part of the ear? **A. Pinna**
 - Organ of Corti
 - Cochlea
 - Ear canal
- Which of the following is an organ of the respiratory system?

Brain **B. Larynx**

- C. Urethra
- D. Pancreas
- The motor cortex helps the brain by monitoring and controlling the body's movement. Where is the motor cortex located within the brain?

- Top, middle portion of the parietal lobe.
- Back of the head
- Front portion of the parietal lobe.
- Around the auditory cortex
- The heart contains four chambers. Which of these four chambers is the largest and the strongest?
 - Left ventricle
 - Left atrium
 - Right ventricle
 - Right atrium
- Which of the following organs is involved with the immune system?
 - Heart

Bronchi C.

Appendix

D. Esophagus

- Which of the following is not a principal organ of the nervous system?

Brian B. Thymus

C. Ganglia

D. Spinal cord

- Where do the endocrine system and the nervous system meet?

• At the pituitary gland and the pineal gland
 B. At the hypothalamus and pituitary gland

C. At the pineal gland

D. At the thyroid gland

- The pancreas is an endocrine system gland mainly responsible for which of the following?
 - Proper bone development

- Metabolism control
- Maintaining healthy sugar levels
- Distribution of stored fat.
- The stomach lining membrane name?

The mucous membrane of the stomach contains simple columnar epithelium tissue with many exocrine cells.

- skin aids in maintaining the calcium and phosphate levels of the body by participating in the production of which of the following

vitamin d

- all action of the nervous system depend on the transmission of nerve impulses over which of the following?

neurons

- which hormone initiates the preparation of the endometrium of the uterus for pregnancy? estrogen

- which female reproductive organ's produce oocytes, estrogen and progesterone? ovaries

- the buttocks is on which surface the body? dorsal

- the esophagus is located at which body cavity? thoracic

- which is a hollow organ? gallbladder

- which muscle is included in the quadriceps femoris group? vastus lateralis

- what occur when the sympathetic nervous system is stimulated? cardiac output

- which hormone is produce by the posterior pituitary gland? oxytocin

- which structure regulates the transport of substance in and out of a cell? **the cellular membrane**
- a person who damages to their ulnar nerve will have decrease sensation in which area? **arm**
- when assessing a female client who describes herself as a vegetarian the nurse notes that she has an unusual skin color. The nurse should ask the client if she has eaten large amount of:

carrot and squash

- which structure produces B-lymphocytes

Red bone marrow

- how many days is the average menstrual cycle

14

- where in the human body are nutrients absorbed

small intestines

- The central nervous system is made up of all except which of the following? **heart**

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top, the middle portion of the parietal lobe.

- The heart contains four chambers. Which of these four chambers is the largest and the strongest?

Left ventricle

appendix

- Which of the following is not a principal organ of the nervous system? **thymus**

- The pancreas is an endocrine system gland mainly responsible for which of the following?

maintain healthy blood sugar level

- Tough elastic tissues found in the joints that connect bones to bones are called: **ligament**

- What mineral is responsible for muscle contractions? **calcium**

- Where can the urinary bladder and internal reproductive organs be found? **pelvic cavity**

- Nerve tissue is composed of neurons and connective tissue cells that are referred to as which of the following?

neuroglia

- Which tissue serves as the framework of the body by providing support and structure for the organs?

connective tissue

- What are the glands of skin that produce a thin, watery secretion? **eccrine glands**

- You have been given a sample of tissue that has open spaces partially filled by an assemblage of needle-like structures. What is this tissue?

spongy bone

- Which mineral is responsible for regulating fluid in the body? **sodium**

- Motor or _____ neurons transmit nerve impulses away from the CNS. **efferent**

- What are chemical messengers that control growth, differentiation, and the metabolism of specific target cells called?

hormones

- Which blood vessel where exchanges take place between blood and the cells of the body? **capillary**

- The stomach muscle churns and mixes food, turning the mass into a soupy substance called what?

chyme

- All the nutrients that enter the hepatic portal vein are routed where for decontamination? liver

- In men, spermatozoa develop within the _____ of each testis Seminiferous tubules

- During pregnancy, what organ produces the hormones that maintain the endometrium and prepare the breasts for milk production?

placenta

- Gland whose secretion is oily- a mixture of oily substances and cell fragments sebaceous

- Sweat gland whose secretion is primarily water and salts plus contains protein and fatty substances

apocrine

- Smooth muscle structure in the skin arrector pili

- What type of joint is the elbow hinge

- What type of joint is the hip and shoulder ball and socket

- what are the two most abundant minerals stored in bones extracellular matrix calcium and phosphate

- The most abundant glial cells found in the CNS that anchor neurons to capillaries and help control the environment around neurons

astrocytes

- What does the adrenal medulla secrete? Epinephrine and norepinephrine

- Which skin cancer is the most dangerous?

malignant melanoma

-because it metastasizes (spreads)

-Cancer of the melanocytes

- Which skin cancer is moderately dangerous?

squamous cell carcinoma

- Which skin cancer is least dangerous?

basal cell carcinoma

- What is the only artery in the body to carry oxygen-poor blood?

pulmonary artery

- Chocolate cysts of the ovaries are attributed to _____.

endometriosis

tendons connect muscle to bone

- Where is interstitial fluid found in the body?

in the tissues around cells

Which lobe of the brain is associated with judgement, planning, impulse control, and social behavior?

- What does lipase do?

It breaks down fats into fatty acids and glycerol.

- In what area of the body would you expect to find and especially thick stratum corneum?

Heel of the foot

- What two things must be present for a muscle cell to contract?

Calcium & adenosine triphosphate (ATP)

- the esophagus is located at which body cavity?

ventral

abdominalc)

thoracic

- What is the response of CF cell in the collecting tubules in the nephrons when antidiuretic hormone (ADH) is secreted?

Water is reabsorbed from the urinary filtration?

- what is the function of ADH hormone

Regulate water balance in the body by controlling the amount of water the kidneys reabsorb

- which muscle is included in the quadriceps femoris group
 - trapezius
 - vastus lateralis
 - gastrocnemius
 - rectus abdominus
- the calcaneus is located in which part of the body the leg
- Where is the tympanic membrane located?

external auditory canal and tympanic

cavity

- Fats are broken down in the small intestine using which enzyme(s)?

Fats also known as lipids are broken down using lipase produced by the pancreas and bile produced by the liver but transferred to the small intestine through the bile duct.

- What is the only artery to carry oxygen-poor blood? Pulmonic Artery
- What do ligaments connect? Bone to Bone
- Is epithelial tissue vascular or avascular? Avascular
- **Which of the following describes the primary function of the respiratory system?**
 - to create sound and speech

- to take oxygen into the body while removing carbon dioxide
- to transport nutrients to the cells and tissue of the body
- to act as a barrier between the body's organs and outside influences
- **Which of the following is the first step of the scientific method?**
 - construct a hypothesis
 - make observations
 - analyze data
 - form a question
- The process of organisms with an advantageous trait surviving more often and producing more offspring than organisms without the advantageous trait describes which of the following basic mechanisms?
 - gene flow
 - genetic drift
 - mutation
 - natural selection
- Which of the following is the group of basophils that produces follicle-stimulating hormone (FSH) and luteinizing hormone?