

Steroid hormone

Name _____ Date _____ Per _____

The endocrine system is composed of a group of glands that secrete chemical substances, called hormones, that control many body activities. This assignment will help you review the main facts about the system. Read the information on the endocrine system, located on pages 172 through 177. As she read about the endocrine system, complete the following worksheet

1. What are hormones?

How are they transported through the body?

2. List five (5) functions of hormones.

3. Name the endocrine glands of located even each of the following areas of the body

	Description	Endocrine gland
A	Above each kidney	
B	On each side of the uterus in the female	
C	Master gland located just under the brain (sella turnica)	
D	In front of the upper part of the trachea	
E	Behind an attached to the thyroid	
F	Glandular organ behind the stomach	

4. Name the hormone that performs the following function

- A. Used in the metabolism of glucose.
- B. Growth hormone, stimulates normal body growth.
- C. Regulate amount of calcium blood.
- D. Increases metabolic rate, stimulates physical and mental growth.
- E. Stimulates growth and secretion of the thyroid gland.
- F. Activates the sympathetic nervous system.

5. Describe the relationship between insulin and glucagon. Where are they both produced, how do they act upon your body, and how do they interact with each other?

ENDOCRINE SYSTEM

Hormones are essential to our understanding of the body's metabolism or normal functioning. Endocrine glands secrete hormones directly into the bloodstream, not just to a special organ; thus these secretions reach every part of the body. Hormones influence the flow of substances through cell membranes and often work together, which means that a hormonal imbalance may interfere with normal body functions.

THYMUS

The thymus is not always classed as an endocrine gland. It becomes most developed during a child's early years. Apparently its purpose is to initiate antibody formation in the blood.

THYROID

The two lobes of the thyroid gland are located on either side of the trachea and secrete iodine-based hormones that regulate physical and mental growth, oxidation, heart rate, blood pressure, temperature, glucose absorption, and the utilization of glucose.

PARATHYROID

There are four parathyroid glands, all located next to the thyroid. Their secretions control the use of calcium in bone growth, muscle tone, and nervous activity.

PITUITARY

Located at the base of the brain, the pituitary gland secretes hormones that influence other glands. The pituitary gland regulates skeletal growth, the development of the reproductive organs, secretions from the ovaries and testes, the stimulation of the mammary glands to provide milk, blood pressure, the performance of smooth muscles, the reabsorption of water in the kidneys, and the functioning of the adrenal cortex, which becomes more active during times of stress. Pituitary disorders may result in gigantism or dwarfism.

PINEAL

The function of the pineal gland is unknown, but it is very active metabolically. It is about the size of a pea and located at the base of the brain.

ADRENAL

Located above the kidneys, the adrenal gland secretes *cortisol*, which regulates the metabolism and the balance between salt and water levels. During emergencies it also secretes *adrenaline (epinephrine)*, which increases the heart rate and stimulates the liver and nervous system.

PANCREAS

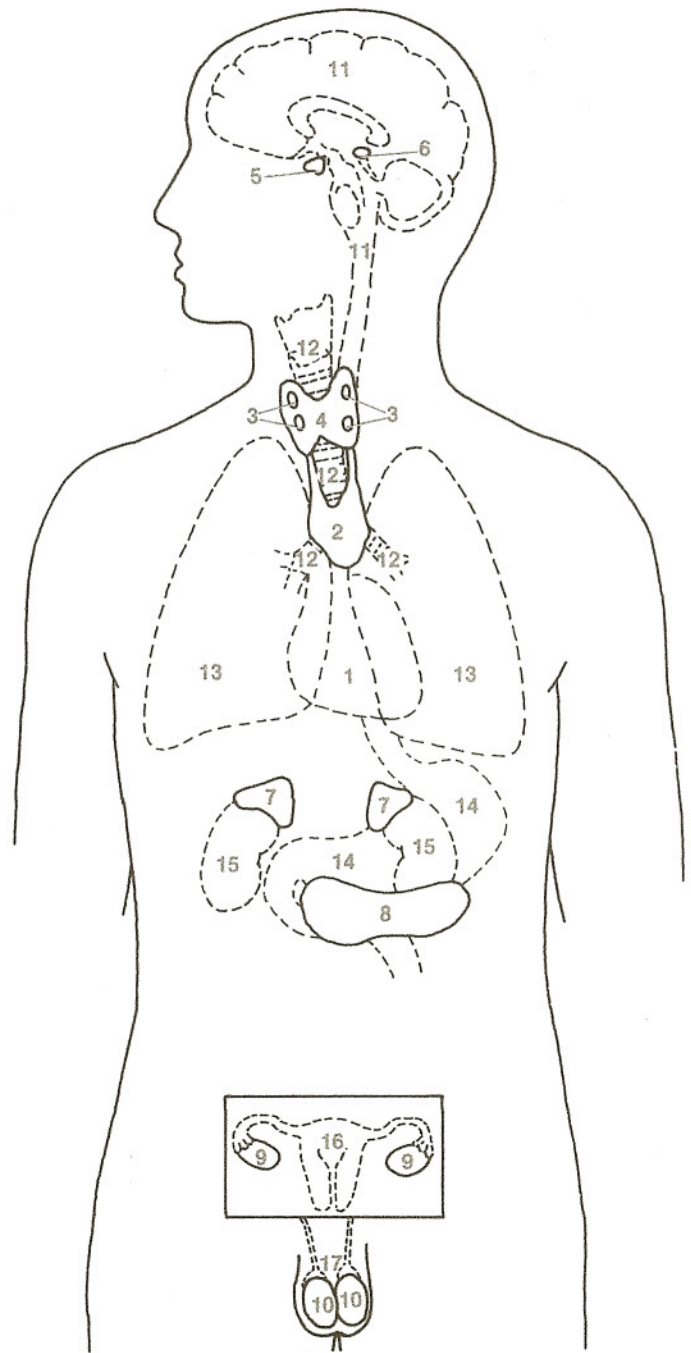
The level of sugar in the blood is controlled by the pancreas's secretion, *insulin*. Sugar diabetes results when the level of insulin in the blood is relatively low.

OVARIES

Ovaries are found only in women. They secrete the two female hormones—*estrogen*, which produces female characteristics and initiates female bodily functions; and *progesterone*, which affects the endometrial lining of the uterus.

TESTES

Only men have testes. They secrete *testosterone*, the male hormone, which controls the growth of body hair and beard, body size, and the deepening of the voice.



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| 1. HEART | _____ | Purple |
| 2. THYMUS GLAND | _____ | Orange |
| 3. PARATHYROID GLAND | _____ | Pink |
| 4. THYROID | _____ | Brown |
| 5. PITUITARY GLAND | _____ | Turquoise |
| 6. PINEAL GLAND | _____ | Light Brown |
| 7. ADRENAL GLAND | _____ | Red |
| 8. PANCREAS | _____ | Light Green |
| 9. OVARIES | _____ | Yellow |
| 10. TESTES | _____ | Dark Green |
| 11. BRAIN and SPINAL CORD | _____ | Gray |
| 12. TRACHEA and BRONCHUS | _____ | Blue |
| 13. LUNGS | _____ | Light Blue |
| 14. STOMACH | _____ | Green |
| 15. KIDNEYS | _____ | Light Purple |
| 16. UTERUS and FALLOPIAN TUBES | _____ | Yellow-Green |
| 17. SCROTUM | _____ | Flesh |