

Homework Assignment

Unit Two C17

The Endocrine System

Steroid Hormone Action (1 min)

1. How do steroid hormones behave in water?
2. How do they travel in the blood? Mechanism?
3. What happens when the hormone reaches their target cells?
4. Where is the location of the hormone's receptor proteins?
5. What will the hormone receptor complex bind?
6. After binding, what two significant events occur? Location for each?

Second Messengers (1 min)

1. What happens after epinephrine binds to a cell surface receptor?
2. What type of molecule is released on the inside surface of the cell?
3. What occurs when the molecule binds to adenyl cyclase?
4. After cyclic AMP is formed, then what is the significance of adenylyl kinase? Function?
5. What is another type of second messenger described in this video?

Endocrine System (9:30 min)

1. What system secretes hormones?
2. What type of structures secrete hormones?
3. What three endocrine glands are located in the brain?
4. What endocrine gland is located in the neck?
5. What endocrine gland is located in the upper chest?
6. What endocrine gland is located on the superior region of the kidneys?
7. What endocrine gland is located behind and along the margin of the small intestine?
8. What hormones are secreted by the gonads?
9. What is the difference between endocrine and exocrine glands?
10. May one gland be both endocrine and exocrine? Explain
11. May a single cell secrete hormones? Example
12. What are the two precursors for hormones? Why important? Significance?
13. What are the two hormones released from the posterior pituitary? Function of each?
14. What are the six hormones released from the anterior pituitary? Function of each?
15. What hormone is released from the pineal gland? Significance?
16. What hormones are produced by the thyroid gland? Function of each?
17. What hormone stimulates the thyroid gland to release thyroid hormone? Regulated how?
18. What other endocrine glands are located on the surface of the thyroid gland? Function?
19. What happens to the thymus gland as we age?
20. What is the endocrine function of the thymus gland?
21. What hormones are produced by the adrenal medulla? Functions?
22. What hormones are produced by the adrenal cortex? Functions?
23. What is the endocrine function of the pancreas? Two hormones and their function?
24. What are the two hormones cited in video from the ovaries? Function of each?
25. Are all the sex-related hormones found in all people? Explain.
26. What is the difference between the "two signaling" systems in the body?

What causes diabetes? (6 min)

1. What are three physical signs indicating diabetes mellitus? Literal translation for this condition?
2. What is the main source for your body? What is the condition called if sugar is too high?
3. What are the two "tasks" for the pancreas?
4. What two hormones are produced in the Islets of Langerhans?
5. What happens when you eat a heavy meal? What increases? What is released? Result
6. What happens if blood glucose is low? What is released by what organ? Target tissue? Result
7. What disease occurs if the pancreas does not produce enough insulin?
8. What may happen if too much glucose builds up in the blood?
9. What is diabetes mellitus type 1? Caused by?
10. What is diabetes mellitus type 2? Caused by?
11. What is gestational diabetes?
12. How many people over the age of 65 have diabetes?
13. What is the most common form of diabetes?