KEY

Hormone Review Sheet

1. Hormones are transported in the body via the blood.
2. The hypothalamus controls the secretion of hormones from the pituitary gland.
3. A hyperactive person may produce high levels of thyroxin.
4. A low level of adrenal cortex hormones may result in Addison's disease.
5. The parathyroid glands regulate the level of calcium in the blood.
6. When the islets of Langerhans do not secrete enough insulin, blood glucose is high.
7. ACTH is released from the ~~adre~~ anterior pituitary Its target is the adrenal cortex
8. A goitre signifies a malfunctioning in the thyroid gland.
9. Write anterior or posterior pituitary beside the appropriate statements (read page 475-476 for help)
   a. p. connected to the hypothalamus by nerves
   b. a. connected to the hypothalamus by blood vessels
   c. p. secretes hormones produced by the hypothalamus
   d. a. controlled by releasing hormones from the hypothalamus

10. Describe the difference in structure and mechanism for a steroid hormone and a peptide hormone.

Peptide / Protein - made of amino acids, not fat soluble so they do not enter the cell → stay on the outside receptor.

steroid - made from cholesterol, fat soluble so they enter cell + bind to receptors inside.

11. List 4 hormones that affect blood sugar and identify where they are produced.

- insulin - pancreas
- glucagon - pancreas
- (- thyroxin - thyroid → affects metabolism)
- cortisol - adrenal cortex
- adrenaline / epinephrine - adrenal medulla

12. Fill in the following chart

Hypothalamus Releases	Ant.Pit. Produces	Gland Controlled	Hormone Produced by gland
Thyroid releasing hormone	Thyroid Stimulating Hormone	Thyroid	thyroxin
ACTH releasing hormone	ACTH	Adrenal Cortex	cortisol, aldosterone

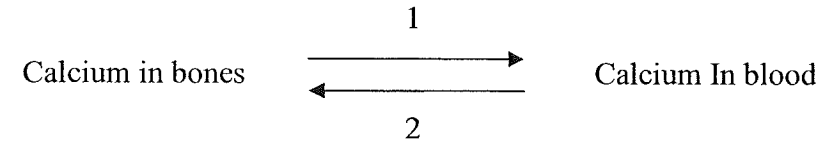
13. Adrenal Cortex. Write Yes or No on each line.

	Cortisol	Aldosterone
Controlled by ACTH	Y	Y
Glucocorticoid	Y	N
Mineralocorticoid	N	Y
Relieves Stress	Y	N
Na/K balance	N	Y
Amino acids → glucose	Y	N

14. Indicate whether the following symptoms are indicative of Addison's disease (lack of adrenal cortex hormones) or Cushing's syndrome (abundance of adrenal cortex hormone)

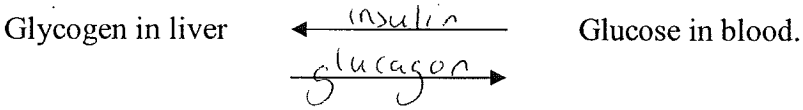
a. Cannot handle stress AD
b. Cannot maintain blood glucose AD
c. Tendency toward diabetes mellitus CS
d. Low blood pressure because Na+ is excreted AD
e. High blood pressure because Na+ is retained CS
f. Edema CS
g. Bronzing of skin AD

15. Calcium Metabolism. Write 1 or 2 beside each statement.



a. removal of parathyroid gland 2
b. calcitonin is present 2
c. PTH is present 1
d. Postmenopausal women who no longer produce estrogen 1
e. Osteoporosis 1
f. Child with tetany 2

16. Write insulin or glucagon on the appropriate arrow.



17. Oxytocin would be administered
    a. If blood sugar rises
    b. If stress recovery is needed
    c. If metabolic rate increases
    d. Before childbirth

18. Too much urine matches with (diuretics d-thio! coffee/tea/caffeine/chocolate!)
    a. Too little ADH
    b. Too much ADH
    c. Too much ACTH
    d. Too little ACTH

19. Acromegaly might be due to a tumor of the
    a. Pancreas
    b. Anterior pituitary
    c. Thyroid
    d. Adrenal cortex

20. The hypothalamus controls the anterior pituitary via
    a. Nervous stimulation
    b. The midbrain
    c. Vasopressin
    d. Releasing hormones

Endocrine System Quiz

Name: KEY

Date:

Directions: Answer the following questions completely.

1. Hormones are specific molecules made by special cells and released into the circulatory system where they travel to target cells causing a specific response.

2. ~~target~~ fat soluble hormones ~~hormone~~ are produced from cholesterol and they diffuse into target cell to have effect. Sex hormones are examples of these. (peptide hormone?)

3. non target hormones are mostly derived from the amino acid tyrosine. They are small and water soluble. Example epinephrine.

4. ~~Receptor~~ water soluble Target ~~hormone~~ hormone are derived from chains of amino acids, or peptides. ADH, Insulin and Growth hormone are examples.

5. steroid? hormones pass through the target cell and into the nucleus where they bind to a receptor protein. Here they activate certain genes.

6. The hypothalamus is a region of the lower brain that receives information from the peripheral nerves and the brain and gives off hormones appropriate to environmental conditions.

7. The pituitary gland is an appendage at the base of the hypothalamus consisting of 2 lobes.

8. The Posterior (lobe) pituitary releases oxytocin and ADH made by the hypothalamus.

9. The anterior (lobe) pituitary produces several of its own hormones. These include ACTH, endorphins and enkephalins. Others: GH, Prolactin, FSH, LH, TSH

10. The Thyroid gland consists of two lobes located on the ventral surface of the trachea.

11. This gland produces thyroxin derived from the amino acid tyrosine.
Thyroid

12. The parathyroid gland is made up of 4 small glands embedded in the thyroid gland.

13. The pancreas produces insulin in the beta islet cells, and glucagon in the alpha islet cells.

14. The adrenal gland are located above the kidneys.

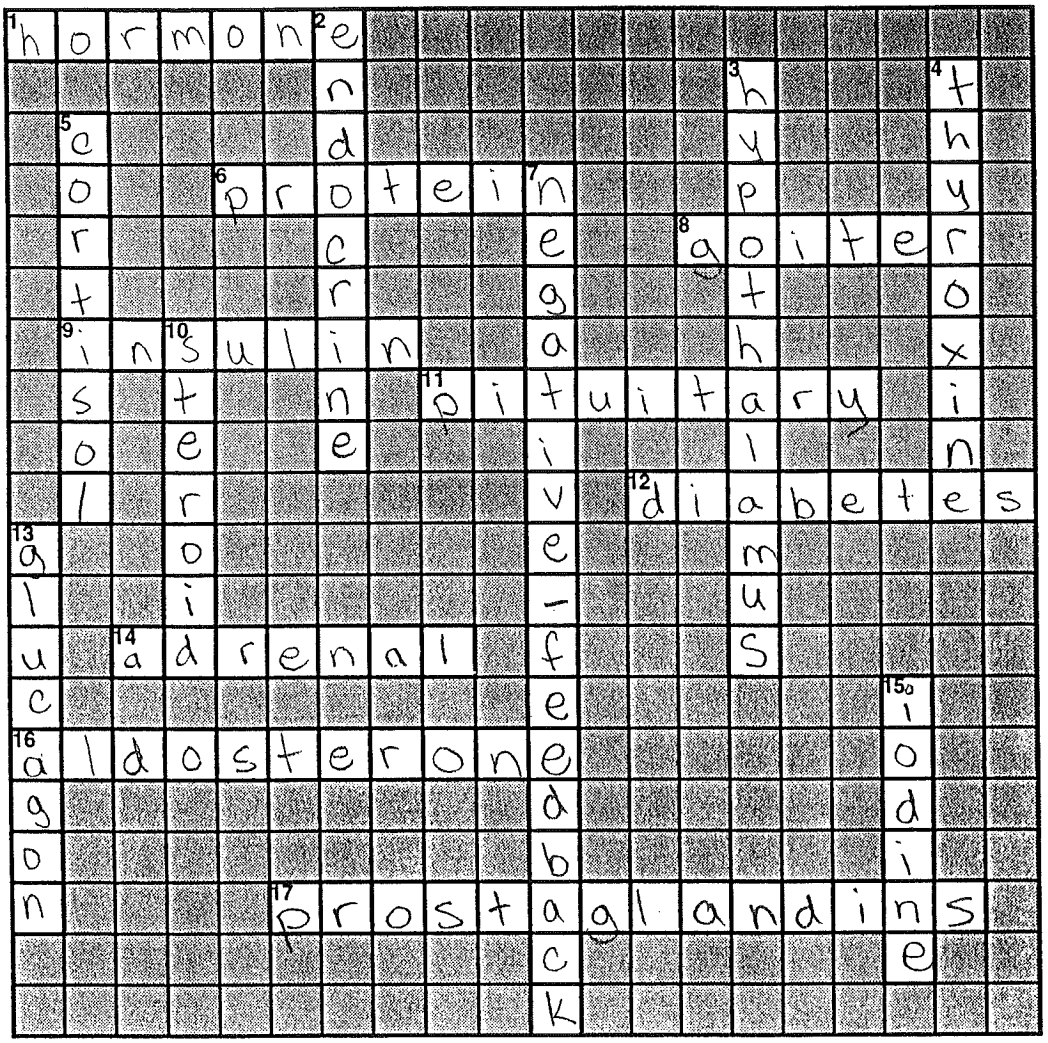
15. The nervous system directly stimulates the medulla (inside part) of the organ in question #21 to produce two hormones they are:
epinephrine (adrenaline) and
norepinephrine (noradrenaline).

16. Luteinizing hormone (LH) Stimulates the testes to produce the sex hormone testosterone

17. Aldosterone's target tissue is the kidneys.

18. If blood sugar levels are low the beta cells in the pancreas release glucagon.

19. Once blood glucose levels return to normal the production of the hormone from question #18 stops. This is an example of
negative feedback.



Across

1 Chemical messenger that affects cells in another part of the body
6 This type of hormone is composed of amino acids
8 An enlargement of the thyroid gland
9 A hormone produced by the beta cells in the pancreas
11 The master gland
12 A disease characterized by hyperglycemia
14 A gland found anterior to the kidney
16 A hormone that regulates water balance in the kidneys
17 Hormones that have a pronounced effect in a localized area

Down

2 Hormones carried by the blood
3 Area of the brain
4 A hormone that helps regulate metabolism
5 A hormone that stimulates the conversion of amino acids to glucose
7 A regulatory mechanism that controls hormone levels
10 A hormone group made from cholesterol
13 A hormone that converts glycogen to glucose
15 Substance needed by thyroid gland

14-12