

The worksheet below is adapted from

- A. Fundamentals of Anatomy and Physiology (9th Ed) by Martin et al
- B. Human Anatomy and Physiology Lab Manual (9th Ed) by Marieb and Mitchell

## The Thyroid Gland

1. Major role (big picture) \_\_\_\_\_  
\_\_\_\_\_
2. Location \_\_\_\_\_
3. Hormones secreted \_\_\_\_\_
4. Mineral required by this gland to produce hormones \_\_\_\_\_
5. Generate the pathway of activation by placing the steps in the correct order. Use arrows to indicate the negative feedback loops.
  - a. Thyroid gland increased, hormone secretion
  - b. Anterior pituitary gland, increased TSH secretion
  - c. Target cells for hormone
  - d. Neural inputs
  - e. Increased plasma TSH concentration
  - f. Increased plasma hormone concentration
  - g. Hypothalamus, increased TRH secretion
6. Name one target cell for TH \_\_\_\_\_
7. Name a disease associated with this gland \_\_\_\_\_

## The Adrenal Gland

8. Major role (big picture) \_\_\_\_\_

\_\_\_\_\_

9. Location \_\_\_\_\_

10. Hormones secreted, specify if produced by cortex or medulla.

\_\_\_\_\_

\_\_\_\_\_

11. Generate the pathway of activation by placing the steps in the correct order. Use arrows to indicate the negative feedback loops.

12.

- a. Neural input induced by Stress or non stress situations
- b. Increased plasma ACTH concentration
- c. Anterior pituitary, increased ATCH secretion
- d. Target cells for cortisol hormone
- e. Hypothalamus, increased CRH secretion
- f. Adrenal gland, increased cortisol secretion
- g. Increased plasma cortisol concentration

13. Name one target cell for the pathway listed in 12. \_\_\_\_\_

14. What effect does cortisol have on the target cell named in 13.

\_\_\_\_\_

\_\_\_\_\_

15. Generate the pathway of activation by placing the steps in the correct order.

- a. Increased plasma epinephrine concentration
- b. Adrenal gland stimulation by sympathetic division of the nervous system
- c. Adrenal gland, increased secretion of epinephrine
- d. Target cells for epinephrine

16. Name one target cell for the pathway listed in 15. \_\_\_\_\_

17. What effect does epinephrine have on the target cell named in 16.

\_\_\_\_\_

\_\_\_\_\_

18. This response is termed the \_\_\_\_\_.

19. Name a diseases associated with this gland \_\_\_\_\_

### The Pancreas

20. Major role (big picture) \_\_\_\_\_

\_\_\_\_\_

21. Location \_\_\_\_\_

22. Hormones secreted, include name of specific cell that hormone is secreted from.

\_\_\_\_\_

\_\_\_\_\_

23. Generate the pathway of activation by placing the steps in the correct order. Using arrows, indicate the negative feedback loops.

- a. Increased plasma insulin concentration
- b. Increased blood glucose levels
- c. Pancreas, increased insulin secretion
- d. Restoration of plasma glucose to normal
- e. Target cells for insulin

24. Name one target cell for the pathway listed in 23 \_\_\_\_\_

25. What effect does insulin have on the target cell named in 24.

\_\_\_\_\_

\_\_\_\_\_

26. Generate the pathway of activation by placing the steps in the correct order. Using arrows, indicate the negative feedback loops.
- Decreased Blood glucose
  - Target cell of glucagon
  - Increased plasma glucose
  - Increased plasma glucagon
  - Pancreas, increased glucagon secretion

27. Name one target cell for the pathway listed in 26 \_\_\_\_\_

28. What effect does glucagon have on the target cell named in 27.

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29. Name a diseases associated with this gland \_\_\_\_\_