

Endocrine vs. Exocrine Glands

Part 1: Fill in the Blanks

1. The _____ gland is known as the "master gland" because it controls the activity of many other endocrine glands.
 2. The _____ gland releases thyroxine, which regulates metabolism.
 3. The adrenal glands produce _____, which helps the body respond to stress.
 4. The pancreas functions as both an endocrine gland, releasing _____, and an exocrine gland, secreting digestive enzymes.
 5. Sweat and salivary glands are classified as _____ glands because they use ducts to transport their secretions.
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Part 2: True or False

Write **T** for true and **F** for false.

1. _____ Endocrine glands release their secretions through ducts.
 2. _____ Exocrine glands include sweat, salivary, and mammary glands.
 3. _____ The pancreas is exclusively an endocrine gland.
 4. _____ Insulin is a hormone responsible for lowering blood glucose levels.
 5. _____ The adrenal glands release both adrenaline and cortisol.
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Part 3: Short Answer Questions

1. Compare the function of endocrine and exocrine glands.
 2. Explain why the pancreas is considered both an endocrine and an exocrine gland.
 3. Describe how negative feedback regulates hormone levels in the body.
 4. What happens when the thyroid gland produces too much thyroxine?
 5. How do hormones travel through the body and reach their target organs?
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Part 4: Case Study Analysis

Case Study:

Sarah, a 45-year-old woman, visits her doctor complaining of weight loss, rapid heartbeat, and excessive sweating. After several tests, her doctor diagnoses her with **hyperthyroidism**, a condition in which the thyroid gland produces excessive thyroxine.

Questions:

1. Based on Sarah's symptoms, explain how thyroxine affects metabolism.
2. How might doctors regulate Sarah's hormone levels?
3. What role does negative feedback play in controlling thyroid hormone production?