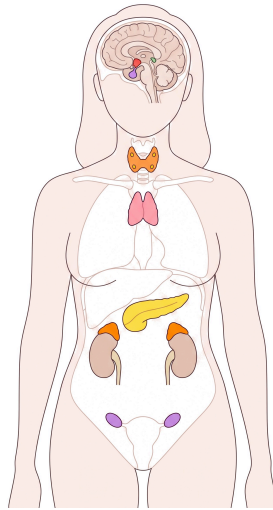


Endocrine System

Glands and hormones



7

printable sheets

17

pages

All

answer keys included

Endocrine System Teaching Pack

Glands and hormones

How to use this pack. The sheets are in a suggested teaching order: show the labeled diagram, have students label the blank one, then work through the practice sheets and finish with the quiz. Use them all over a week or pick the ones you need. The answer keys are together at the back.

What is inside

1. Teach

Endocrine System Diagram 3

2. Label

Blank Endocrine System 4

3. Match

Endocrine Glands and Their Jobs 5

4. Read

The Body's Chemical Messengers 6

5. Connect

Which Gland Makes It? 8

6. Review

Endocrine System Crossword 9

7. Check

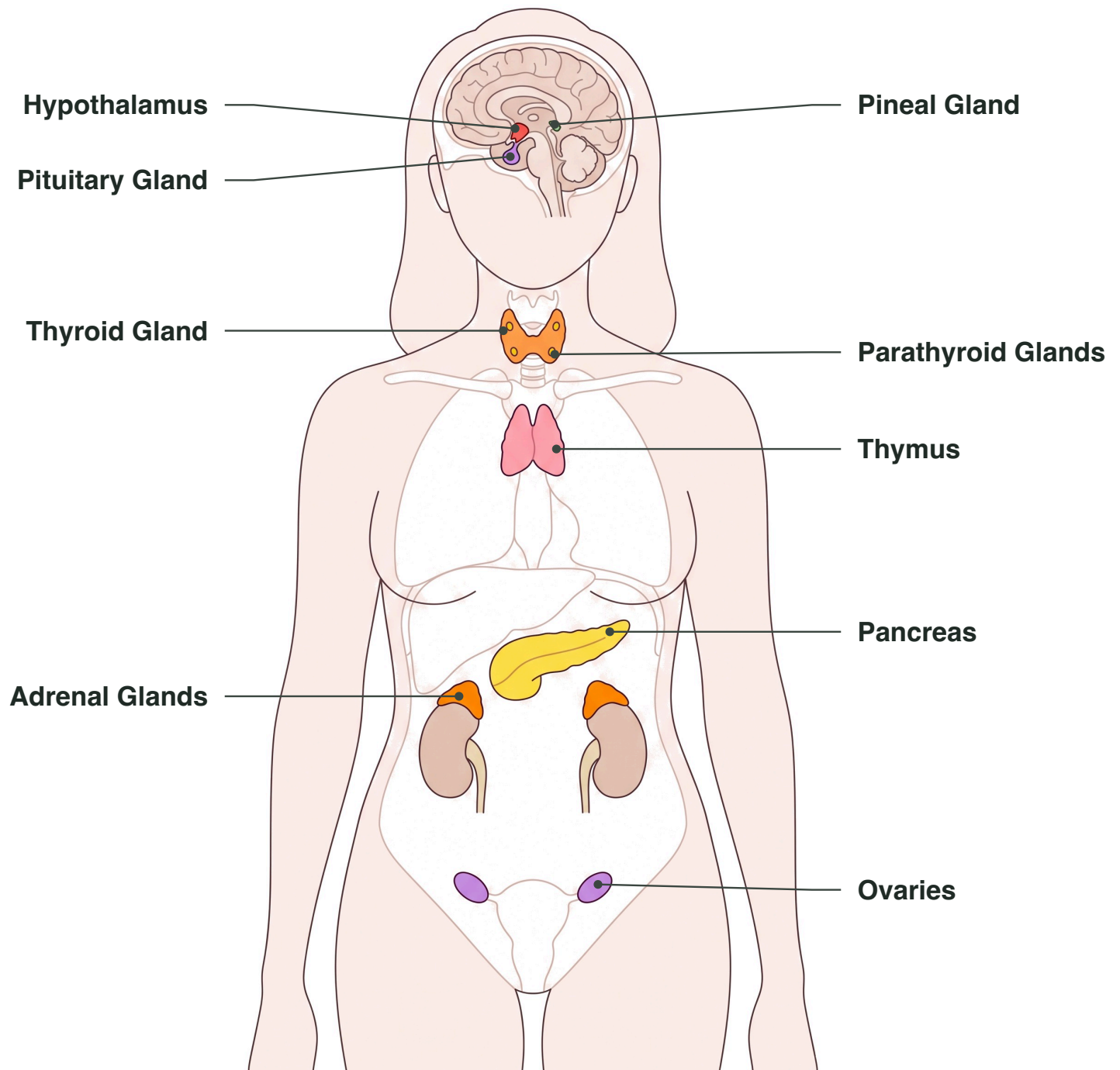
Endocrine System Quiz 10

Answer keys

Every answer key, in the same order 12

More free teaching packs. Skeletal System, Muscular System, Digestive System, Respiratory System, Heart and Circulation, Excretory System, Nervous System and Brain, Eye and Ear, Immune System and more at printablescholar.com/teaching-packs/

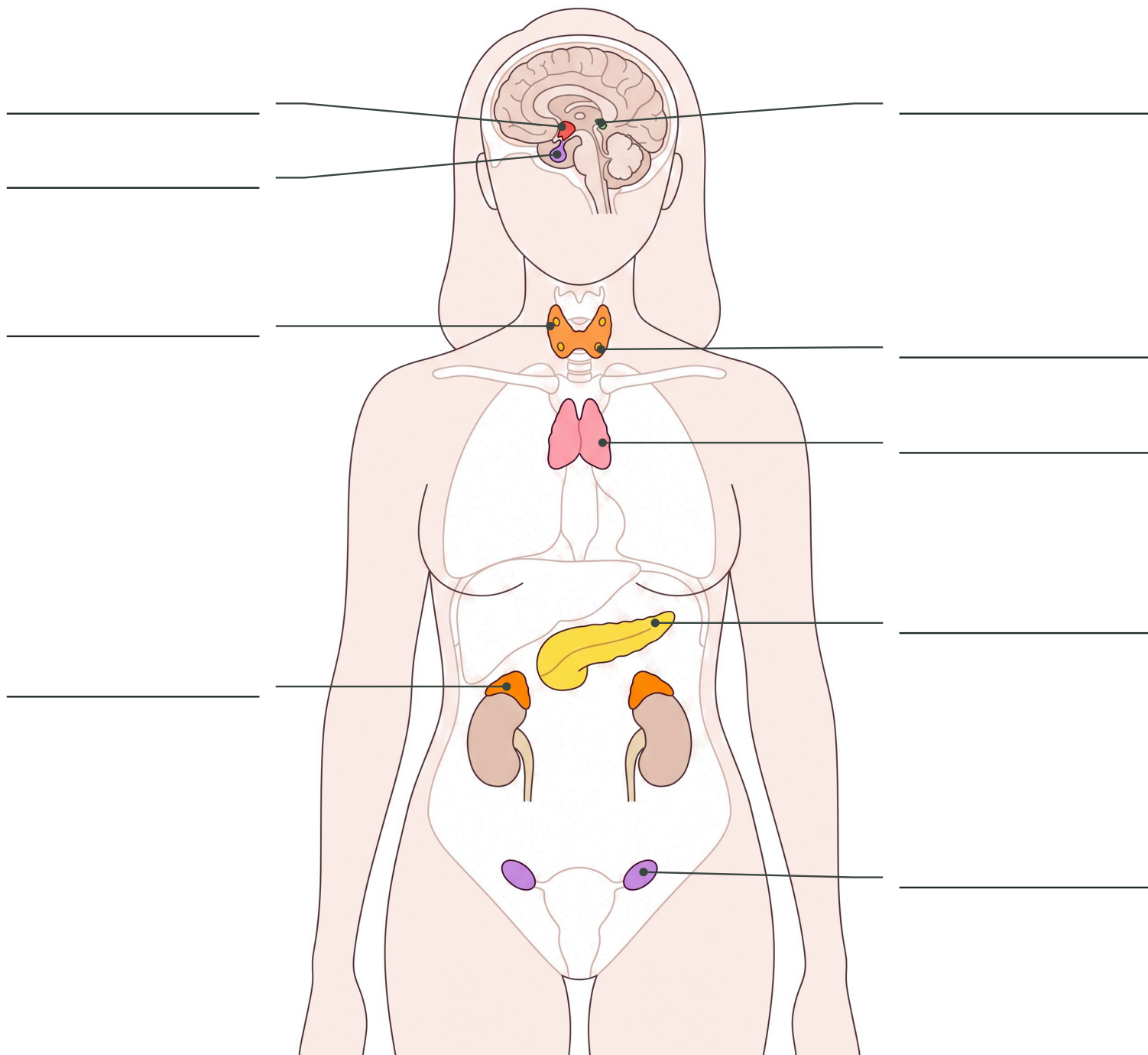
The Endocrine System



The Endocrine System

Name: _____

Write the name of each part on its line. Use the word bank.



Word bank

Adrenal Glands Hypothalamus Ovaries Pancreas
Parathyroid Glands Pineal Gland Pituitary Gland Thymus Thyroid Gland

Endocrine Glands and Their Jobs

Use the labeled endocrine system diagram to help you.

Part A. Write the part that does each job.

Word bank

Adrenal Glands

Hypothalamus

Ovaries

Pancreas

Parathyroid Glands

Pineal Gland

Pituitary Gland

Thymus

Thyroid Gland

1. A butterfly-shaped gland in the neck. Its hormones set how fast the body uses energy. _____
2. An organ behind the stomach. It makes insulin and glucagon, which control blood sugar. _____
3. A pea-sized gland at the base of the brain. Its hormones tell many other glands when to work. _____
4. Two glands that sit on top of the kidneys. They make adrenaline. _____
5. A tiny gland deep in the brain. It makes melatonin, the hormone that helps control sleep. _____
6. The part of the brain that links the nervous system to the endocrine system. It sends signals to the pituitary gland. _____
7. Four tiny glands in the neck. They control the amount of calcium in the blood. _____
8. Two small glands low in the belly, found in females. They make the hormone estrogen and release egg cells. _____
9. A gland in the upper chest. Its hormones help white blood cells called T cells mature. _____

Part B. Answer the questions.

1. Which three labeled parts are inside the head?

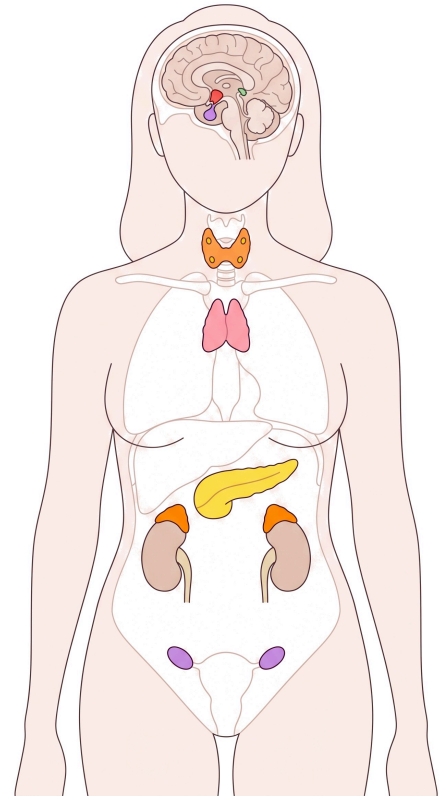
2. It is late at night and you start to feel sleepy. Which gland is at work, and which hormone does it make?

3. The hypothalamus and the pituitary gland work as a team. Explain how.

The Body's Chemical Messengers

Read the text. Then answer the questions on the next page.

- 1 Your body has two control systems. The nervous system sends fast signals along nerves. The **endocrine system** sends its messages another way. It is a group of **glands**, which are organs that make chemical messengers called **hormones**. A gland releases its hormones into the blood, and the blood carries them all over the body.
- 2 Two small parts in the head lead the system. The **hypothalamus** is a part of the brain that keeps track of conditions inside the body, such as temperature and thirst. It sends signals to the **pituitary gland**, a pea-sized gland just below it. The pituitary gland is often called the master gland, because its hormones tell many other glands when to work. It also makes growth hormone.
- 3 Other glands have their own jobs. The **thyroid gland** in the neck sets how fast the body uses energy. The **adrenal glands** sit on top of the kidneys. They make **adrenaline**, the hormone that makes your heart beat faster when you are scared or excited. The pineal gland in the brain makes melatonin, which helps control sleep.
- 4 The **pancreas** shows how hormones keep the body in balance. After a meal, sugar from the food enters the blood, and blood sugar rises. The pancreas releases **insulin**. Insulin helps cells take in the sugar, so blood sugar falls back to normal. If blood sugar drops too low, the pancreas releases a different hormone, **glucagon**. It tells the liver to release stored sugar.
- 5 Hormone signals are slower than nerve signals, but their effects last longer. Adrenaline acts within seconds. Growth hormone does its work over many years. You cannot feel most hormones at work, but they help control how you grow, sleep and use energy every day.



The glands of the endocrine system.

The Body's Chemical Messengers: Questions

Go back to the text to find each answer. The paragraphs are numbered to help you.

1. What is this text mostly about?

- ☐ How the brain sends signals along nerves
- ☐ The glands of the body and the hormones they make
- ☐ Why people need to eat less sugar
- ☐ How blood moves through the heart

2. What is a hormone?

- ☐ A fast signal that travels along a nerve
- ☐ A sugar that comes from food
- ☐ A chemical messenger made by a gland
- ☐ A small organ in the neck

3. How do hormones get from a gland to the rest of the body?

4. Why is the pituitary gland often called the master gland?

- ☐ It is the largest gland in the body.
- ☐ It makes every hormone in the body.
- ☐ Its hormones tell many other glands when to work.
- ☐ It sits on top of the kidneys.

5. Which glands make adrenaline?

- ☐ The thyroid gland
- ☐ The pineal gland
- ☐ The pancreas
- ☐ The adrenal glands

6. Number the steps 1, 2 and 3 to show what happens after a meal (paragraph 4).

- ☐ The pancreas releases insulin.
- ☐ Cells take in the sugar, and blood sugar falls back to normal.
- ☐ Sugar from the food enters the blood, and blood sugar rises.

7. What does glucagon do?

8. Name two ways hormone signals are different from nerve signals.

Which Gland Makes It?

Read what each hormone does. Write the gland that makes it. Some glands are used more than once.

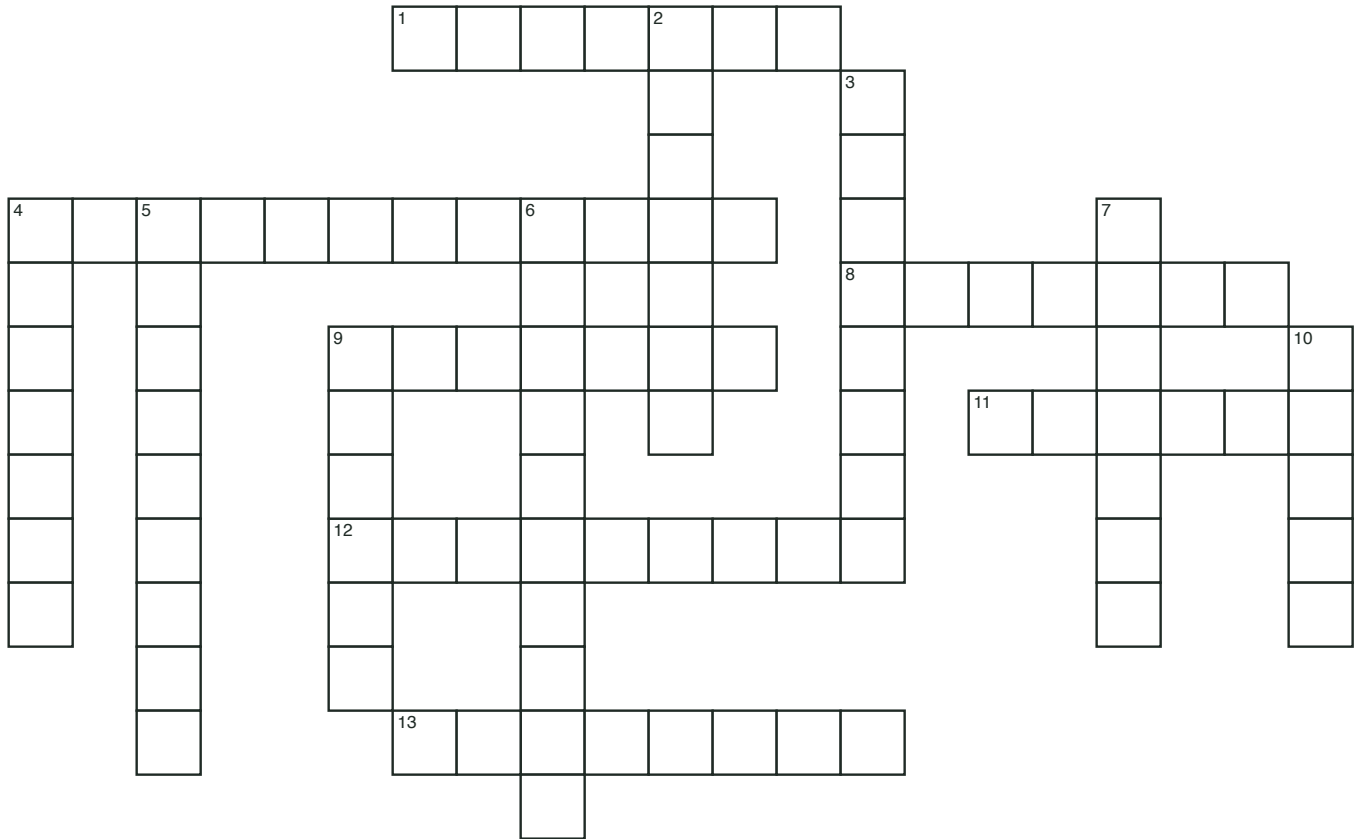
HORMONE	WHAT IT DOES	GLAND THAT MAKES IT
1. Melatonin	Helps control when you feel sleepy and when you wake up.	_____
2. Insulin	Lowers blood sugar by helping cells take in sugar.	_____
3. Adrenaline	Makes the heart beat faster and gets the body ready for sudden action.	_____
4. Growth hormone	Makes bones and muscles grow.	_____
5. Thyroxine	Sets how fast the body uses energy.	_____
6. Glucagon	Raises blood sugar by telling the liver to release stored sugar.	_____
7. Cortisol	Helps the body cope with stress, especially stress that lasts a long time.	_____
8. Estrogen	One of the hormones that guide how the body changes during the teen years.	_____
Word bank Adrenal glands Ovaries Pancreas Pineal gland Pituitary gland Thyroid gland		

Think about it

Insulin and glucagon come from the same gland, but they do opposite jobs. Why does the body need both?

Endocrine System Crossword

Read each clue. Write the answer in the puzzle, one letter in each box. Use the word bank if you get stuck.



ACROSS

1. Two glands that make estrogen and release egg cells.
4. The part of the brain that links the nervous system to the endocrine system.
8. The parathyroid glands control the amount of this mineral in the blood.
9. The butterfly-shaped gland in the neck.
11. The tiny ____ gland deep in the brain makes melatonin.
12. The hormone that helps control sleep.
13. The organ that makes insulin and glucagon.

DOWN

2. The hormone that lowers blood sugar.
3. The hormone that raises blood sugar.
4. A chemical messenger that travels in the blood.
5. The pea-sized "master gland" at the base of the brain.
6. The hormone that makes your heart beat faster when you are scared.
7. The adrenal glands sit on top of these two organs.
9. The gland in the upper chest that helps T cells mature.
10. An organ that makes and releases hormones.

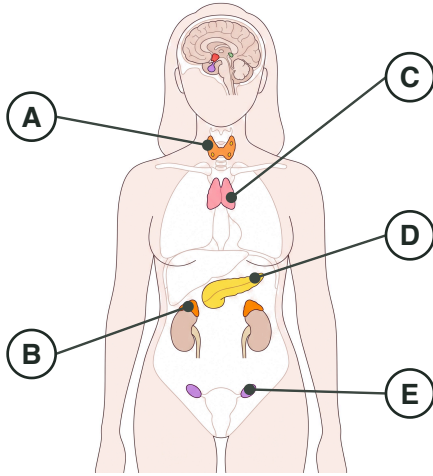
Word bank adrenaline calcium gland glucagon hormone hypothalamus insulin
 kidneys melatonin ovaries pancreas pineal pituitary thymus thyroid

Endocrine System Quiz

Score _____ / 13

Show what you know about glands and hormones.

Part A. These are glands of the endocrine system. Write the name of each part.



A _____

B _____

C _____

D _____

E _____

Adrenal Glands · Ovaries · Pancreas · Thymus · Thyroid Gland

Part B. Choose the best answer.

1. What is a hormone?

- ☐ A kind of blood cell
- ☐ A chemical messenger
- ☐ A signal in a nerve
- ☐ A sugar from food

2. How do hormones travel through the body?

- ☐ Along the nerves
- ☐ Through the lungs
- ☐ In the blood
- ☐ Inside the bones

3. Which gland sets how fast the body uses energy?

- ☐ Thyroid gland
- ☐ Pineal gland
- ☐ Thymus
- ☐ Ovaries

4. Which hormone lowers blood sugar?

- ☐ Glucagon
- ☐ Melatonin
- ☐ Adrenaline
- ☐ Insulin

5. What does melatonin help control?

- ☐ Blood sugar
- ☐ Sleep
- ☐ Calcium in the blood
- ☐ Heartbeat

6. Where are the adrenal glands?

- ☐ In the neck
- ☐ Deep in the brain
- ☐ On top of the kidneys
- ☐ In the upper chest

Part C. Write your answer.

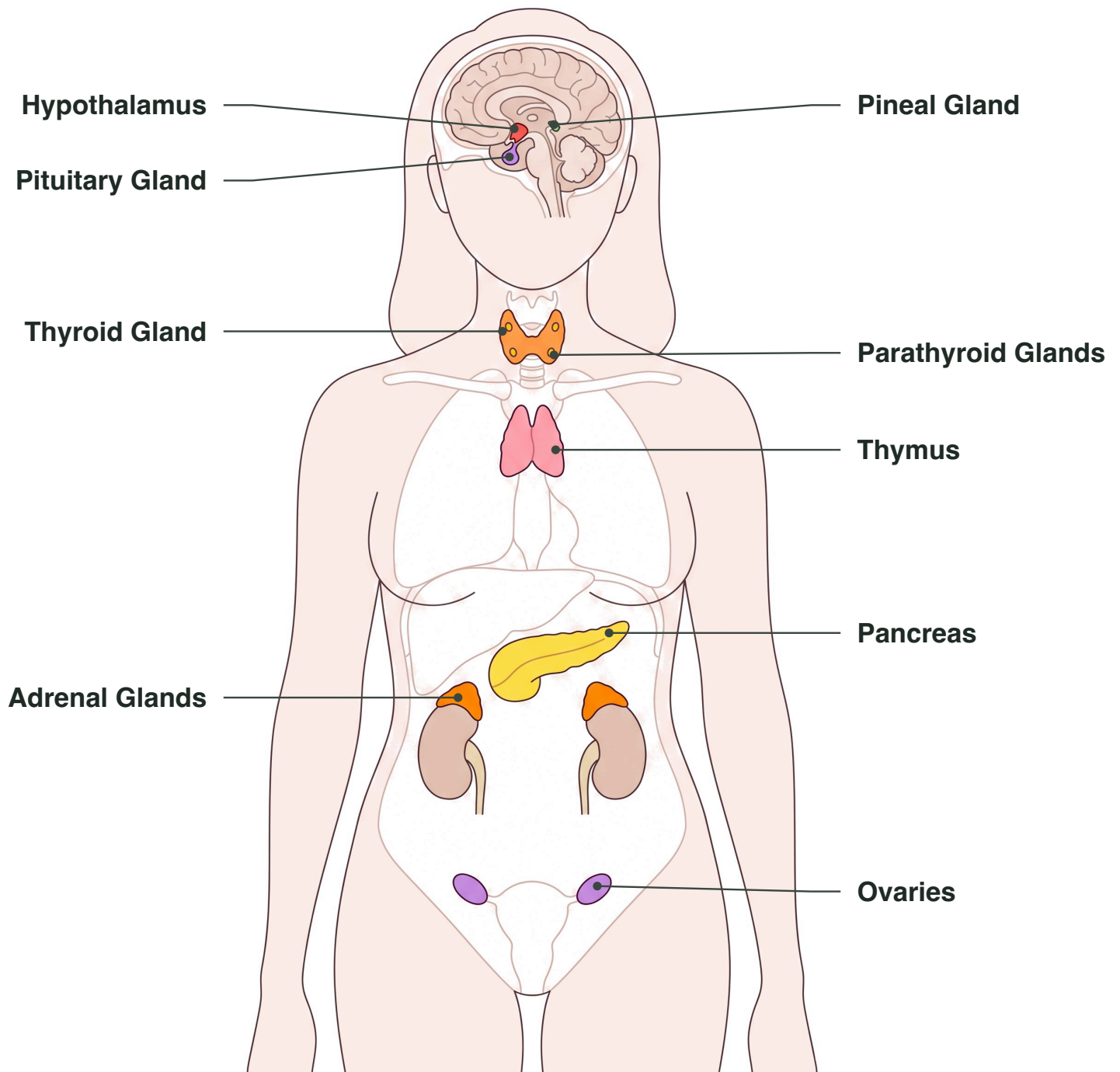
7. Why is the pituitary gland often called the master gland?

8. Your heart pounds just before a race. Which hormone is at work, and which glands make it?

Answer Keys

In the same order as the sheets.

The Endocrine System: Answer Key



Endocrine Glands and Their Jobs: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. Write the part that does each job.

Word bank

Adrenal Glands

Hypothalamus

Ovaries

Pancreas

Parathyroid Glands

Pineal Gland

Pituitary Gland

Thymus

Thyroid Gland

1.	A butterfly-shaped gland in the neck. Its hormones set how fast the body uses energy.	Thyroid Gland
2.	An organ behind the stomach. It makes insulin and glucagon, which control blood sugar.	Pancreas
3.	A pea-sized gland at the base of the brain. Its hormones tell many other glands when to work.	Pituitary Gland
4.	Two glands that sit on top of the kidneys. They make adrenaline.	Adrenal Glands
5.	A tiny gland deep in the brain. It makes melatonin, the hormone that helps control sleep.	Pineal Gland
6.	The part of the brain that links the nervous system to the endocrine system. It sends signals to the pituitary gland.	Hypothalamus
7.	Four tiny glands in the neck. They control the amount of calcium in the blood.	Parathyroid Glands
8.	Two small glands low in the belly, found in females. They make the hormone estrogen and release egg cells.	Ovaries
9.	A gland in the upper chest. Its hormones help white blood cells called T cells mature.	Thymus

Part B. Answer the questions.

- Which three labeled parts are inside the head?
The hypothalamus, the pituitary gland and the pineal gland.
- It is late at night and you start to feel sleepy. Which gland is at work, and which hormone does it make?
The pineal gland. It makes melatonin.
- The hypothalamus and the pituitary gland work as a team. Explain how.
The hypothalamus sends signals to the pituitary gland. The pituitary gland then releases hormones that tell other glands when to work.

The Body's Chemical Messengers: Answer Key

Answers are in green. Written answers will vary; these are examples.

1. What is this text mostly about?

- ☐ How the brain sends signals along nerves
- ☒ **The glands of the body and the hormones they make**
- ☐ Why people need to eat less sugar
- ☐ How blood moves through the heart

2. What is a hormone?

- ☐ A fast signal that travels along a nerve
- ☐ A sugar that comes from food
- ☒ **A chemical messenger made by a gland**
- ☐ A small organ in the neck

3. How do hormones get from a gland to the rest of the body?

The gland releases them into the blood, and the blood carries them.

4. Why is the pituitary gland often called the master gland?

- ☐ It is the largest gland in the body.
- ☐ It makes every hormone in the body.
- ☒ **Its hormones tell many other glands when to work.**
- ☐ It sits on top of the kidneys.

5. Which glands make adrenaline?

- ☐ The thyroid gland
- ☐ The pineal gland
- ☐ The pancreas
- ☒ **The adrenal glands**

6. Number the steps 1, 2 and 3 to show what happens after a meal (paragraph 4).

- 2

 The pancreas releases insulin.
- 3

 Cells take in the sugar, and blood sugar falls back to normal.
- 1

 Sugar from the food enters the blood, and blood sugar rises.

7. What does glucagon do?

It tells the liver to release stored sugar when blood sugar drops too low.

8. Name two ways hormone signals are different from nerve signals.

Any two: hormone signals are slower, their effects last longer, and they travel in the blood instead of along nerves.

Which Gland Makes It?: Answer Key

Answers are in green. The last answer will vary; one example is given.

HORMONE	WHAT IT DOES	GLAND THAT MAKES IT
1. Melatonin	Helps control when you feel sleepy and when you wake up.	Pineal gland
2. Insulin	Lowers blood sugar by helping cells take in sugar.	Pancreas
3. Adrenaline	Makes the heart beat faster and gets the body ready for sudden action.	Adrenal glands
4. Growth hormone	Makes bones and muscles grow.	Pituitary gland
5. Thyroxine	Sets how fast the body uses energy.	Thyroid gland
6. Glucagon	Raises blood sugar by telling the liver to release stored sugar.	Pancreas
7. Cortisol	Helps the body cope with stress, especially stress that lasts a long time.	Adrenal glands
8. Estrogen	One of the hormones that guide how the body changes during the teen years.	Ovaries
Word bank Adrenal glands Ovaries Pancreas Pineal gland Pituitary gland Thyroid gland		

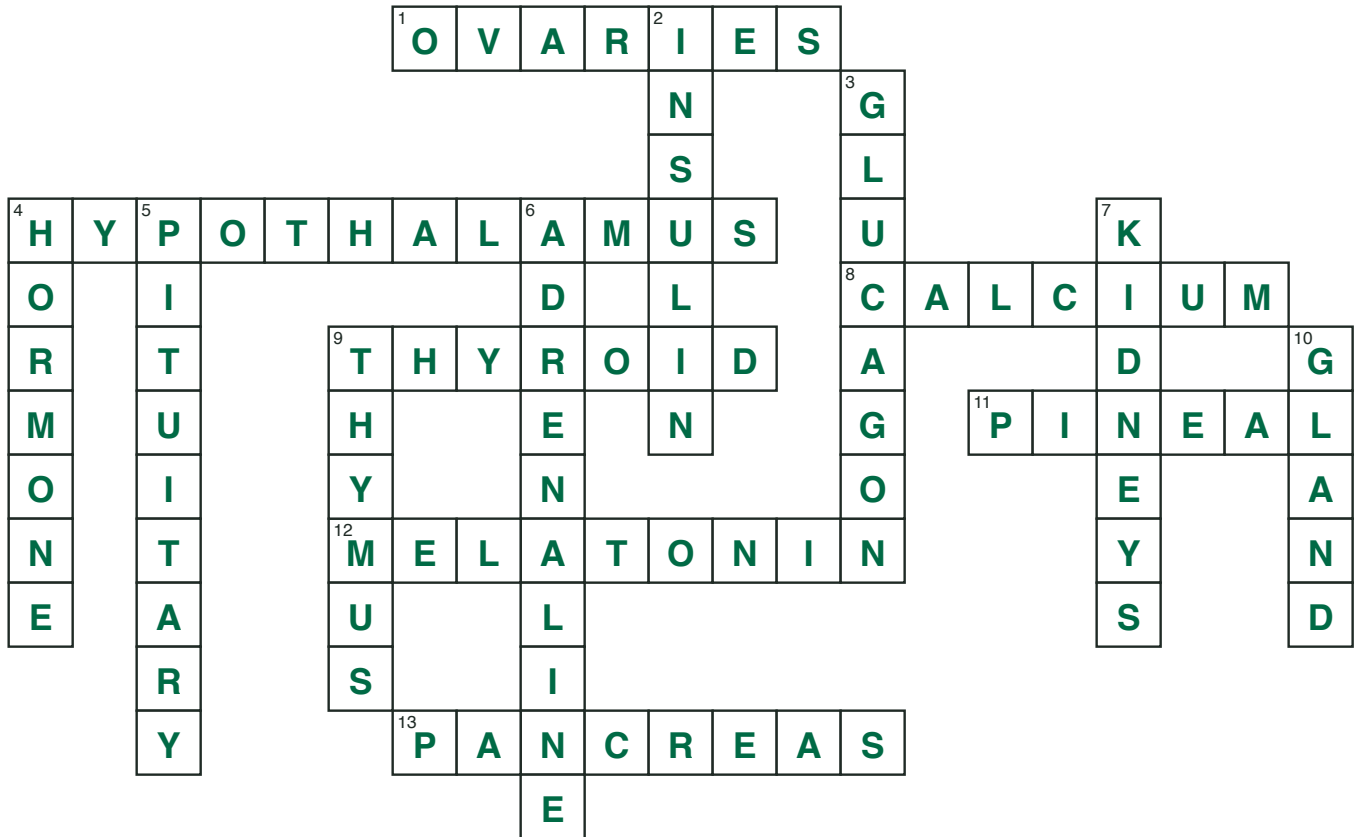
Think about it

Insulin and glucagon come from the same gland, but they do opposite jobs. Why does the body need both?

Answers will vary. Example: Blood sugar has to stay in balance. Insulin brings it down when it is too high, and glucagon brings it up when it is too low.

Endocrine System Crossword: Answer Key

Answers are in green.



ACROSS

1. Two glands that make estrogen and release egg cells.
4. The part of the brain that links the nervous system to the endocrine system.
8. The parathyroid glands control the amount of this mineral in the blood.
9. The butterfly-shaped gland in the neck.
11. The tiny ____ gland deep in the brain makes melatonin.
12. The hormone that helps control sleep.
13. The organ that makes insulin and glucagon.

DOWN

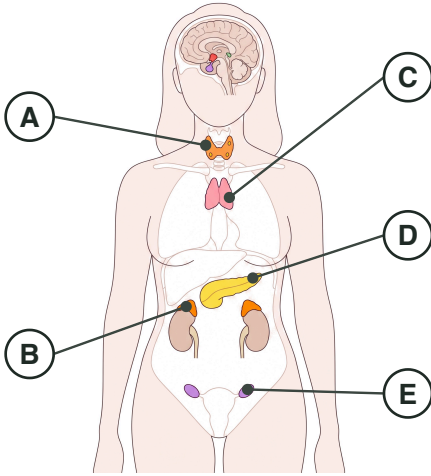
2. The hormone that lowers blood sugar.
3. The hormone that raises blood sugar.
4. A chemical messenger that travels in the blood.
5. The pea-sized "master gland" at the base of the brain.
6. The hormone that makes your heart beat faster when you are scared.
7. The adrenal glands sit on top of these two organs.
9. The gland in the upper chest that helps T cells mature.
10. An organ that makes and releases hormones.

Word bank adrenaline calcium gland glucagon hormone hypothalamus insulin
 kidneys melatonin ovaries pancreas pineal pituitary thymus thyroid

Endocrine System Quiz: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. These are glands of the endocrine system. Write the name of each part.



A **Thyroid Gland**

B **Adrenal Glands**

C **Thymus**

D **Pancreas**

E **Ovaries**

Adrenal Glands · Ovaries · Pancreas · Thymus · Thyroid Gland

Part B. Choose the best answer.

1. What is a hormone?

- ☐ A kind of blood cell
- ☒ **A chemical messenger**
- ☐ A signal in a nerve
- ☐ A sugar from food

2. How do hormones travel through the body?

- ☐ Along the nerves
- ☐ Through the lungs
- ☒ **In the blood**
- ☐ Inside the bones

3. Which gland sets how fast the body uses energy?

- ☒ **Thyroid gland**
- ☐ Pineal gland
- ☐ Thymus
- ☐ Ovaries

4. Which hormone lowers blood sugar?

- ☐ Glucagon
- ☐ Melatonin
- ☐ Adrenaline
- ☒ **Insulin**

5. What does melatonin help control?

- ☐ Blood sugar
- ☒ **Sleep**
- ☐ Calcium in the blood
- ☐ Heartbeat

6. Where are the adrenal glands?

- ☐ In the neck
- ☐ Deep in the brain
- ☒ **On top of the kidneys**
- ☐ In the upper chest

Part C. Write your answer.

7. Why is the pituitary gland often called the master gland?

Its hormones tell many other glands when to work.

8. Your heart pounds just before a race. Which hormone is at work, and which glands make it?

Adrenaline. The adrenal glands make it.