

## Module Test: HORMONES

### PART I. READING & VOCABULARY

#### Task 1. Reconstruct the text.

*The text below has been broken into sections. Ten phrases (A–J) have been removed. Read the text carefully and insert each phrase into the correct gap (1–10).*

#### How the Endocrine System Controls Our Bodies

The human body is a network of organs and tissues that must work in harmony. One of the systems responsible for maintaining this harmony is the endocrine system, a collection of glands that produce hormones – potent chemical substances that regulate virtually every process in the body. An enduring misconception is that hormones only affect mood or reproduction, but in reality they (1) \_\_\_\_\_ ranging from growth and metabolism to immune function and sleep.

Hormones are produced by specialised glands. The pituitary gland, a tiny structure at the base of the brain, is often called the “master gland” because it (2) \_\_\_\_\_ of many other glands. The thyroid gland in the neck secretes thyroxine, which regulates metabolism. The pancreas produces insulin to (3) \_\_\_\_\_. The adrenal glands, located on top of the kidneys, release hormones such as cortisol and adrenaline, while the pineal gland produces melatonin, which (4) \_\_\_\_\_.

Once a hormone is secreted, it is pumped into the bloodstream, where it (5) \_\_\_\_\_ until it reaches a target cell. The hormone then attaches to cell receptors through what is known as the lock and key mechanism: only the correct hormone can bind to a specific receptor, just as only the right key fits a particular lock. This (6) \_\_\_\_\_ that tells the cell what to do — whether to grow, divide, release another substance, or even wither and die.

The body uses feedback loops to keep hormone levels in balance. When the level of a particular hormone rises too high, the brain sends a signal to (7) \_\_\_\_\_ of that hormone. When levels drop too low, production is stimulated again. This delicate mechanism helps the body (8) \_\_\_\_\_, a state also known as homeostasis.

Disruptions to this system can have serious consequences. If the thyroid produces too little thyroxine, the result is sluggishness, fatigue, and weight gain. Excessive amounts of cortisol can lead to weakened immune function and mood disorders. A hormonal deficiency in insulin causes blood sugar to rise uncontrollably. Scientists continue to (9) \_\_\_\_\_ that target specific receptors, and this research has already (10) \_\_\_\_\_ for breakthroughs in treating conditions such as diabetes, infertility, and thyroid disorders.

#### Phrases to insert:

- A) signals to the body to prepare for sleep
- B) wafts by
- C) triggers a cellular response
- D) regulate blood sugar levels
- E) orchestrate complex processes
- F) inhibit the release
- G) paved the way
- H) develop therapies targeting receptors
- I) exerts influence over the function
- J) maintain a state of balance
- K) a gradual decline in hormone levels

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|----|
|   |   |   |   |   |   |   |   |   |    |

**Task 2. Match the word/phrase from the text to its definition.**

**Find a word in the text that matches each definition. Write it on the line.**

1. a wrong idea or belief based on a misunderstanding of something (n.): \_\_\_\_\_
2. having a strong effect, even in small amounts (adj.): \_\_\_\_\_
3. to produce and release a chemical substance from a gland or cell (v.): \_\_\_\_\_
4. an insufficiency or lack of a necessary substance (n.): \_\_\_\_\_
5. to shrink, dry up, or decline in vitality (v.): \_\_\_\_\_

**Task 3. Complete the collocations.**

**Use a word from the box to complete each collocation. Each word is used only once. Two words are extra.**

changes | influence | response | bloodstream | density | receptor | gland

1. bind to a \_\_\_\_\_
2. be pumped into the \_\_\_\_\_
3. trigger a cellular \_\_\_\_\_
4. exert \_\_\_\_\_ over cells
5. decreased bone \_\_\_\_\_

**Task 4. Word Formation**

**Complete each sentence with the correct form of the word in CAPITALS. You may need to change it to a noun, verb, adjective, or adverb.**

1. The \_\_\_\_\_ of insulin by the pancreas is essential for blood sugar control.  
**SECRETE**

2. Lack of sleep \_\_\_\_\_ influences cognitive performance, particularly memory and concentration.

**DETRIMENT**

3. Researchers noted a \_\_\_\_\_ improvement in patients who received the new therapy.

**NOTICE**

4. The two hormones are released \_\_\_\_\_, not one after the other.  
**SIMULTANEOUS**

5. Blood tests revealed that the patient was \_\_\_\_\_ in several key hormones.  
**DEFICIENCY**

**PART II. READING COMPREHENSION**

**Read the text carefully and complete Tasks 4–7 below.**

**Endocrine Disruptors: The Invisible Threat to Our Hormones**

In recent decades, scientists have uncovered a surprising connection between everyday consumer products and serious hormonal disorders. The culprits are endocrine disruptors — man-made chemicals found in plastics, pesticides, cosmetics, food packaging, and even drinking water. These synthetic substances can interfere with the hormonal system in ways that remain poorly understood, and their potential to cause harm has spawned immense interest among researchers worldwide.

Endocrine disruptors work by mimicking or blocking natural hormones. Some bind to cell receptors in place of the body's own chemical messengers, triggering a cellular response that should never have occurred. Others inhibit the release of hormones from their glands, or alter the quantity of hormones circulating in the bloodstream. Because hormones are potent substances —

active even in extremely small concentrations — even trace amounts of these chemicals can disrupt the endocrine system's function and bring about significant changes in the body.

The effects on human health are alarming. Research has linked exposure to endocrine disruptors to a wide range of conditions, including hormonal deficiency, reduced insulin sensitivity, and elevated estrogen levels in both men and women. A growing body of evidence suggests that people who are regularly exposed to these substances face a noticeable increase in the risk of infertility, birth defects, and liver damage. Studies on male reproductive health have found that certain plasticisers can significantly decrease sperm motility, while research on pregnant women has revealed that exposure during a critical window of pregnancy can impair fetal development and lead to pregnancy complications.

One particularly striking finding comes from recent research on bisphenol A (BPA), a chemical once widely used in plastic bottles and food containers. Scientists discovered that BPA can influence the production of brain chemicals, including neurotransmitters involved in the brain's reward system. This finding has significant implications: it suggests that endocrine disruptors may not only damage the reproductive and metabolic systems but also affect cognitive function and behaviour. Although BPA has been withdrawn from many products, closely related chemicals have replaced it, and whether these substitutes have undergone rigorous testing is a subject of ongoing debate.

The challenge of regulating endocrine disruptors is immense. Unlike conventional toxins, which cause damage at high doses, these chemicals can be detrimental at very low concentrations — a pattern that traditional safety testing was not designed to detect. Researchers are now calling for cutting-edge methods of assessment that reflect the real-world complexity of human exposure. In the meantime, medical professionals advise simple lifestyle changes — such as avoiding plastic food containers, choosing organic produce, and filtering drinking water — to reduce daily exposure. While a complete solution remains elusive, the research so far has laid the foundation for a much deeper understanding of how the chemicals around us interact with the delicate hormonal balance within us.

### Task 5. True / False

**Decide if the statements are True (T) or False (F).**

- |                                                                                                              |       |
|--------------------------------------------------------------------------------------------------------------|-------|
| 1. Endocrine disruptors are natural substances produced by the human body.                                   | T / F |
| 2. These chemicals can be harmful even in very small amounts.                                                | T / F |
| 3. Research has found that endocrine disruptors can reduce sperm motility in men.                            | T / F |
| 4. BPA substitutes have all undergone rigorous testing and have been proven safe.                            | T / F |
| 5. Traditional safety testing methods are perfectly suited to detecting the effects of endocrine disruptors. | T / F |

### Task 6. Multiple Choice — Sentence Transformations

**Choose the option (A, B, C, or D) that has the closest meaning to the original sentence from the text.**

1. *"Man-made chemicals found in plastics, pesticides, and cosmetics can interfere with the hormonal system in ways that remain poorly understood."*

- A) Scientists have a complete understanding of how synthetic chemicals affect hormones.
- B) Only pesticides contain chemicals that affect the hormonal system.
- C) Artificial substances present in common products can disrupt hormonal function, though the exact mechanisms are still not fully clear.
- D) The hormonal system is completely resistant to synthetic chemicals.

2. *"Some bind to cell receptors in place of the body's own chemical messengers, triggering a cellular response that should never have occurred."*

- A) Endocrine disruptors destroy cell receptors, preventing any hormonal activity.
- B) Certain disruptors attach to receptors instead of the body's natural hormones, causing cells to react in abnormal ways.
- C) The body's own hormones work more effectively when endocrine disruptors are present.

- D) Cellular responses only occur when natural hormones are absent from the bloodstream.
3. *"Exposure during a critical window of pregnancy can impair fetal development and lead to pregnancy complications."*
- A) Contact with these chemicals at a sensitive stage of pregnancy may damage the developing baby and cause problems during pregnancy.
  - B) Endocrine disruptors are only harmful to women who are not pregnant.
  - C) Fetal development is not affected by any external chemicals.
  - D) Pregnancy complications only occur if the mother is exposed to very large quantities of chemicals.
4. *"This finding has significant implications: it suggests that endocrine disruptors may not only damage the reproductive and metabolic systems but also affect cognitive function."*
- A) The discovery is of little importance because endocrine disruptors only affect reproduction.
  - B) The result is meaningless because cognitive function is unrelated to hormones.
  - C) This discovery is important because it shows that these chemicals could harm not just the reproductive and metabolic systems but also the way the brain works.
  - D) Cognitive function is the only system affected by endocrine disruptors.
5. *"The research so far has laid the foundation for a much deeper understanding of how the chemicals around us interact with the delicate hormonal balance within us."*
- A) Research has been completed and scientists now understand everything about endocrine disruptors.
  - B) The studies conducted to date have established a basis for understanding the relationship between environmental chemicals and hormonal regulation more thoroughly.
  - C) No useful research has been done on the topic so far.
  - D) Scientists have concluded that environmental chemicals have no effect on hormonal balance.

### Task 7. Choose the Best Summary

***Which of the following is the best summary of the text ? Choose ONE option.***

- A)** The text provides a detailed list of every known endocrine disruptor and ranks them by toxicity. It gives specific medical advice on how to treat hormonal disorders caused by these chemicals, including drug names and dosages for each condition. The author recommends particular laboratory tests and outlines a step-by-step treatment protocol for affected patients.
- B)** The text argues that all plastics and cosmetics should be immediately banned worldwide because they contain chemicals that have already caused irreversible damage to the entire human population. It claims that no safe consumer products currently exist on the market and that governments have deliberately ignored the scientific evidence for decades.
- C)** The text focuses exclusively on BPA as the only endocrine disruptor and concludes that since it has been removed from most products, the problem has been fully resolved. It states that current consumer products are now completely safe, that BPA substitutes have all passed rigorous testing, and that no further research is needed.
- D)** The text explains that endocrine disruptors are man-made chemicals present in everyday products that can interfere with the hormonal system. Research links them to reproductive problems, metabolic disorders, and possibly cognitive effects. The author highlights the limitations of traditional safety testing and calls for new assessment methods and preventive lifestyle changes.
- E)** The text describes how endocrine disruptors only affect pregnant women and their unborn children. It claims that men and non-pregnant women face no health risks from these chemicals, and that the sole concern is reduced sperm motility. The author concludes that avoiding exposure during pregnancy is the only precaution necessary.

### PART III. LISTENING

*You will hear a dialogue between two researchers discussing recent developments in hormone research. Listen and choose the correct answer.*

#### Task 8. Multiple Choice

1. What were GLP-1 receptor agonists originally developed for?
  - (A) Obesity and weight management
  - (B) Type 2 diabetes
  - (C) Cardiovascular disease
2. How much have GLP-1 prescriptions increased among people without diabetes?
  - (A) About two hundred percent
  - (B) About five hundred percent
  - (C) About seven hundred percent
3. What is a major concern when patients stop taking GLP-1 drugs?
  - (A) Severe allergic reactions that require hospitalisation
  - (B) Patients tend to put the weight back on within twelve months of discontinuing the medication
  - (C) Permanent liver damage
4. What condition was semaglutide recently approved for by the FDA?
  - (A) Steatohepatitis, a serious form of liver disease caused by fat buildup
  - (B) Parkinson's disease
  - (C) Thyroid cancer
5. What did the WHO do in December 2025 regarding GLP-1 medicines?
  - (A) Banned them due to safety concerns
  - (B) Restricted their use to type 2 diabetes patients only
  - (C) Published global recommendations and recognised these medications as essential
6. What did the WHO emphasize about obesity treatment?
  - (A) Medication alone is sufficient for most patients
  - (B) Surgery is the only truly effective long-term approach
  - (C) Medication needs to be combined with improved nutrition, physical activity, and professional guidance on lifestyle habits
7. What advantage did the combination treatment show in the Graves' disease trial?
  - (A) It was significantly cheaper than standard therapy
  - (B) More patients were able to stop medication within eighteen months
  - (C) It eliminated the need for regular blood tests
8. Why was 2025 called the "Year of the Gut" in endocrinology?
  - (A) Researchers found that gut bacteria significantly influence hormone secretion
  - (B) A new gut-related autoimmune disease was discovered
  - (C) All GLP-1 drugs were found to cause serious gut problems
9. What percentage of the weight lost on GLP-1 drugs is lean mass?
  - (A) About five percent
  - (B) About fifteen percent
  - (C) About twenty-five percent
10. According to Dr. Sharma, what is the real challenge in endocrinology today?
  - (A) Securing enough funding for new research laboratories
  - (B) Putting new research into practice to improve patient outcomes
  - (C) Training enough specialist endocrinologists worldwide