

14.3 Hormones

Name: _____ Class: _____ Date: _____

Total: 7 marks

KEY WORDS hormone 激素 • glucose 葡萄糖 • adrenaline 肾上腺素 • heart rate 心率 • glucagon 胰高血糖素

Objective

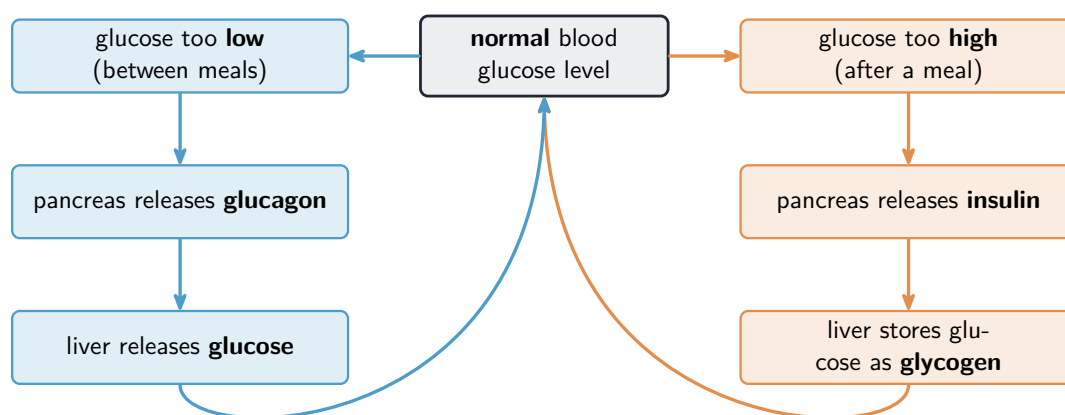
Build the skills to answer exam questions on **hormones** 激素 — what they are, the main glands and hormones, **adrenaline** 肾上腺素, and nervous vs hormonal control.

You must be able to:

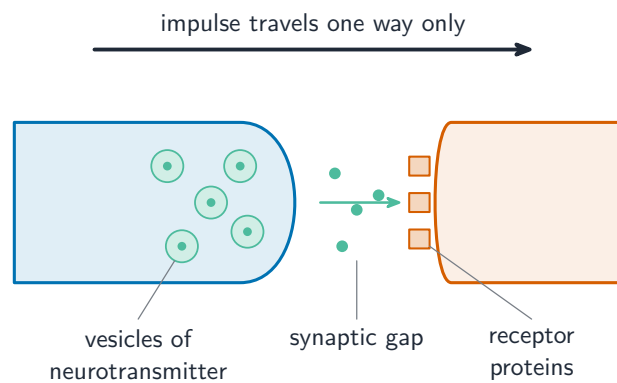
- define a hormone and name the main glands and their hormones
- describe the effects of adrenaline
- compare nervous and hormonal control

1 Worked examples

■ Hormones



Hormones are chemicals made by glands, carried in the blood, acting on target organs



Hormonal control compared with nervous (synapse) control

Gland	Hormone
adrenal	adrenaline
pancreas	insulin (and glucagon)
ovaries / testes	oestrogen / testosterone

2 Practice

2.1 Define a hormone.

[2]

2.2 Name the gland that releases adrenaline.

[1]

3 Exam-style questions

3.1 Compared with nervous control, hormonal control is: [1]

- **A** faster and shorter-lived
 - **B** slower and longer-lasting
 - **C** electrical
 - **D** instant
-

3.2 Adrenaline is released in 'fight or flight' situations.

(a) State two effects of adrenaline on the body. [2]

(b) State how a hormone travels to its target organ. [1]

Solutions

2.1 a chemical made by a gland, carried in the blood, that changes the activity of a target organ.

2.2 the adrenal gland.

3.1 B. Hormonal control is slower but longer-lasting.

3.2 (a) any two of: increases heart rate; increases breathing rate; raises blood glucose; widens the pupils.

(b) in the blood.