

Exercise walk-through

Hormones ■ 14.3

eXercise

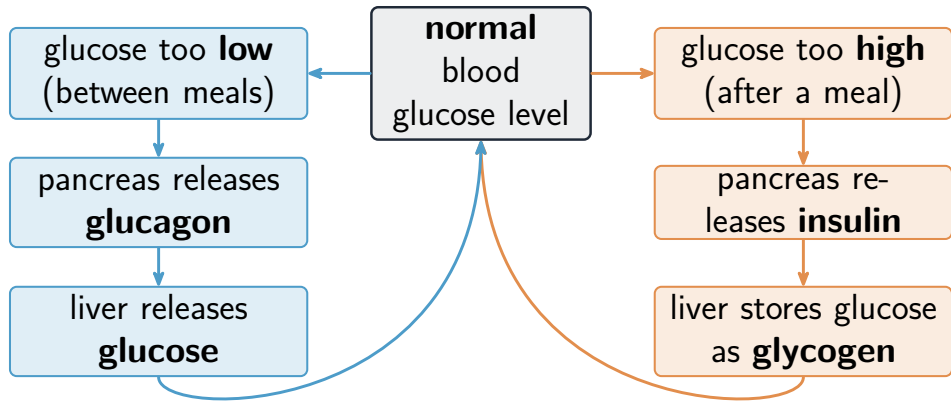
You must be able to

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

Method — Hormones

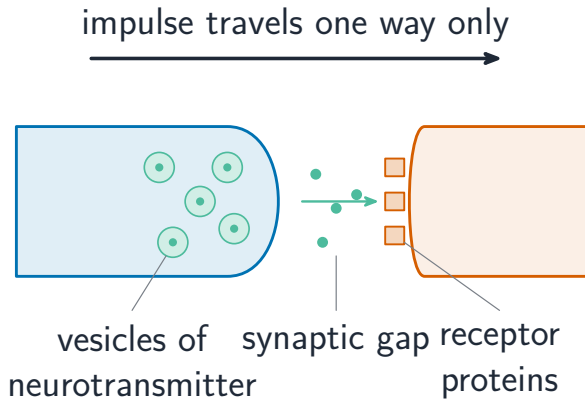
Gland	Hormone
adrenal	adrenaline
pancreas	insulin (and glucagon)
ovaries / testes	oestrogen / testosterone

Method — Hormones



Insulin/glucagon control loop

Method — Hormones



Hormonal control compared with nervous (synapse) control

Practice 2.1 ■ 2 marks

Define a hormone.

Solution 2.1

Worked steps

a chemical made by a gland **M1**, carried in the blood, that changes the activity of a target organ **A1**.

Practice 2.2 ■ 1 mark

Name the gland that releases adrenaline.

Solution 2.2

Method: Hormones

Worked steps

the adrenal gland **B1**.

Exam-style 3.1 ■ 1 mark

Compared with nervous control, hormonal control is:

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

Solution 3.1

Method: Hormones

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



Worked steps

B. Hormonal control is slower but longer-lasting.

Exam-style 3.2 ■ 2 marks

Adrenaline is released in 'fight or flight' situations.

- (a) State two effects of adrenaline on the body.
- (b) State how a hormone travels to its target organ.

Solution 3.2

Method: Hormones

Worked steps

- (a) any two of: increases heart rate; increases breathing rate; raises blood glucose; widens the pupils **B1** **B1**.
- (b) in the blood **B1**.