

Exercise walk-through

Sex hormones in humans ■ 16.5

eXercise

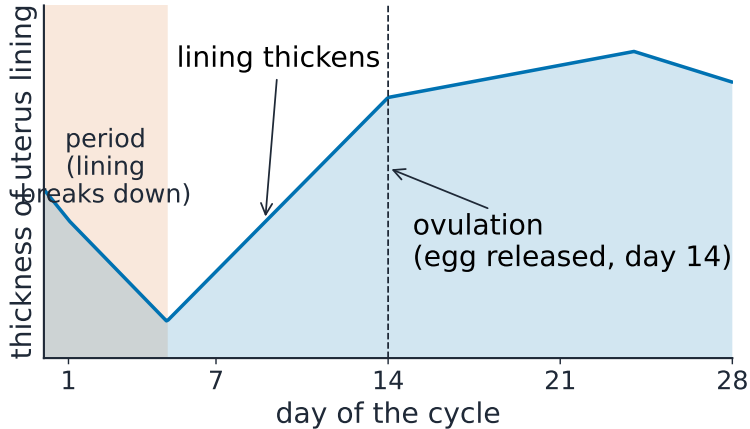
You must be able to

- state the roles of testosterone and oestrogen at puberty
- describe the events of the menstrual cycle
- name the hormones that control the cycle (FSH, LH, oestrogen, progesterone)

Method — The menstrual cycle

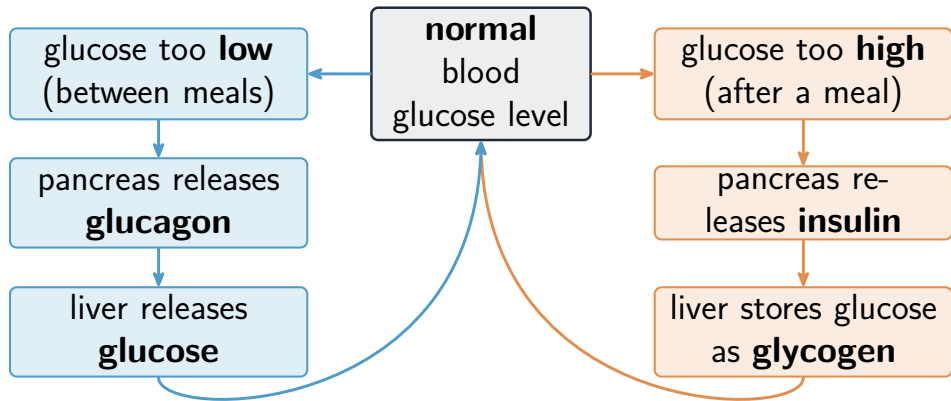
- **testosterone** (boys) and **oestrogen** (girls) cause secondary sexual characteristics.
- hormones: FSH (egg matures), LH (ovulation), oestrogen (thickens lining), progesterone (maintains lining).

Method — The menstrual cycle



A 28-day cycle: period, lining thickens, ovulation at day 14

Method — The menstrual cycle



Sex hormones are controlled by negative feedback

Practice 2.1 ■ 1 mark

Name the hormone responsible for female secondary sexual characteristics.

Solution 2.1

Method: The menstrual cycle

Worked steps

oestrogen **B1**.

Practice 2.2 ■ 1 mark

State on which day of a 28-day cycle ovulation usually occurs.

Solution 2.2

Method: The menstrual cycle

Worked steps

about day 14 **B1**.

Exam-style 3.1 ■ 1 mark

Ovulation is the:

- A** thickening of the uterus lining
- B** release of an egg from the ovary
- C** breakdown of the lining
- D** fusion of gametes

Solution 3.1

- A** thickening of the uterus lining
- B** release of an egg from the ovary
- C** breakdown of the lining
- D** fusion of gametes



Worked steps

- B.** Ovulation is the release of an egg from the ovary.

Exam-style 3.2 ■ 2 marks

The menstrual cycle prepares the uterus for pregnancy.

- (a) Describe what happens to the uterus lining if the egg is not fertilised.
- (b) Name the hormone that triggers ovulation.

Solution 3.2

Method: The menstrual cycle

Worked steps

- (a) the lining breaks down **M1** and leaves the body as a period **A1**.
- (b) LH **B1**.