

16.5 Sex hormones in humans

Name: _____ Class: _____ Date: _____

Total: 6 marks

KEY WORDS menstrual cycle 月经周期 • hormones 激素 • ovulation 排卵
 • secondary sexual characteristics 第二性征 • progesterone 孕酮

Objective

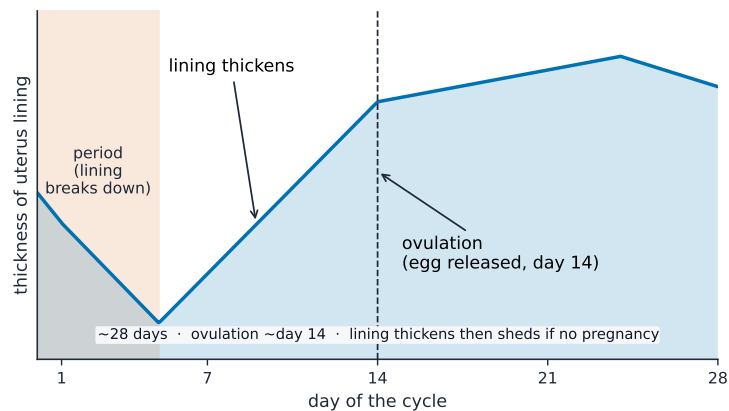
Build the skills to answer exam questions on **sex hormones in humans** 人类性激素 — **puberty** 青春期, secondary sexual characteristics, and the **menstrual cycle** 月经周期.

You must be able to:

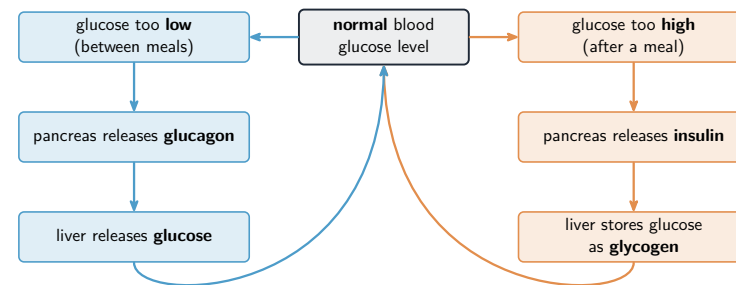
- state the roles of testosterone and oestrogen at puberty
- describe the events of the menstrual cycle
- name the hormones that control the cycle (FSH, LH, oestrogen, progesterone)

1 Worked examples

■ The menstrual cycle



Lining thickens → ovulation (day 14) → a period follows if there is no fertilisation



Sex hormones are controlled by negative feedback

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

2 Practice

2.1 Name the hormone responsible for female secondary sexual characteristics. [1]

2.2 State on which day of a 28-day cycle ovulation usually occurs. [1]

3 Exam-style questions

3.1 Ovulation is the: [1]

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

3.2 The menstrual cycle prepares the uterus for pregnancy.

(a) Describe what happens to the uterus lining if the egg is not fertilised. [2]

(b) Name the hormone that triggers ovulation. [1]

Solutions

2.1 oestrogen.

2.2 about day 14.

3.1 B. Ovulation is the release of an egg from the ovary.

3.2 (a) the lining breaks down and leaves the body as a period.

(b) LH.