

- 1 The human menstrual cycle is controlled by four hormones. Fig. 2.1 is a diagram that shows the site of production and the target organs of these hormones.

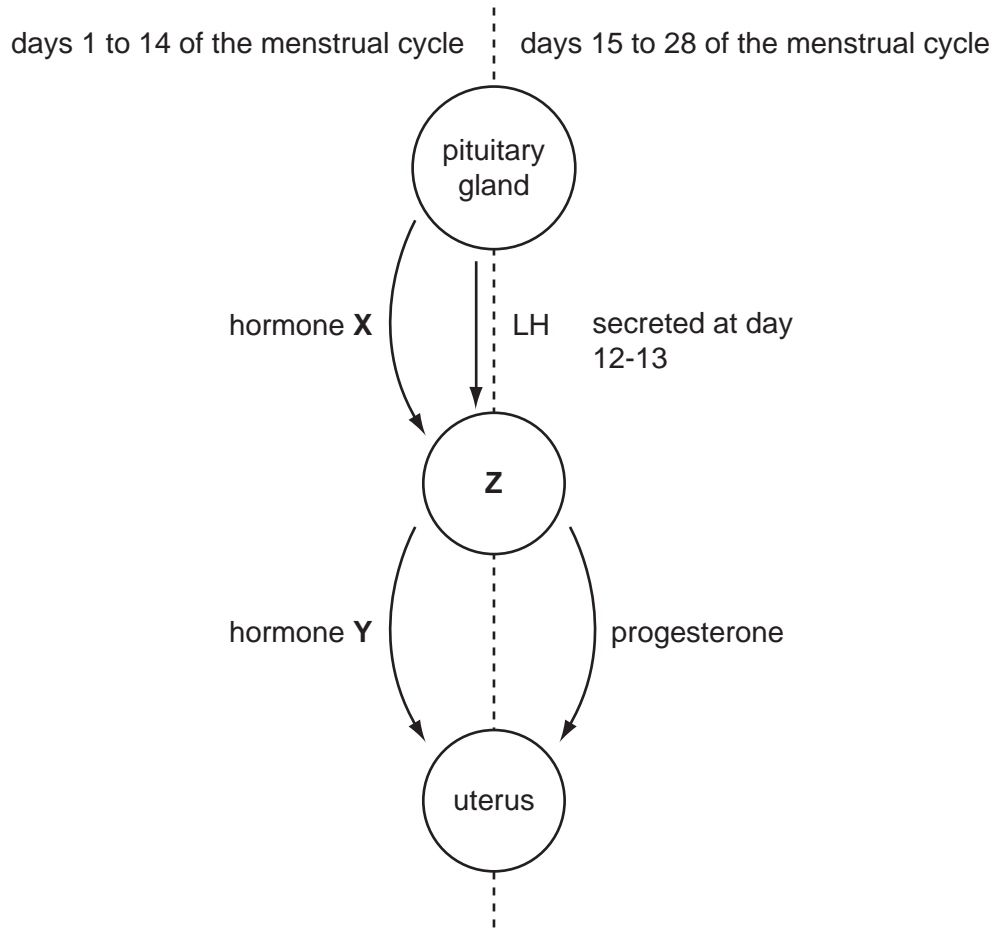


Fig. 2.1

- (a) (i) Name hormones X and Y.

X

Y [2]

- (ii) Name organ Z.

..... [1]

(b) Describe the roles of progesterone during the menstrual cycle **and** during pregnancy.

.....
.....
.....
.....
.....
.....
..... [3]

(c) Many medical experts agree that breast-feeding of babies is better than bottle-feeding using formula milk.

State **two** advantages and **one** disadvantage of breast-feeding.

advantage 1

.....

advantage 2

.....

disadvantage

..... [3]

[Total: 9]

- 2 Fig. 6.1 shows the changes in the concentrations of four hormones during one menstrual cycle.

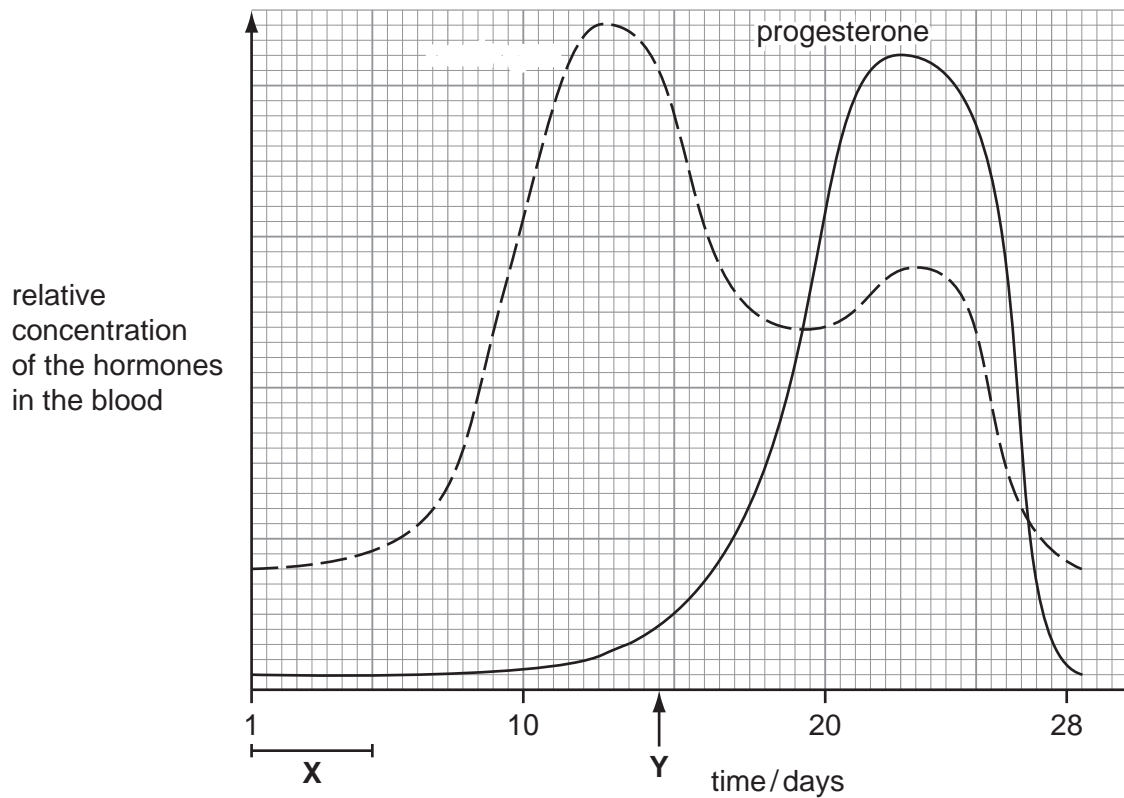
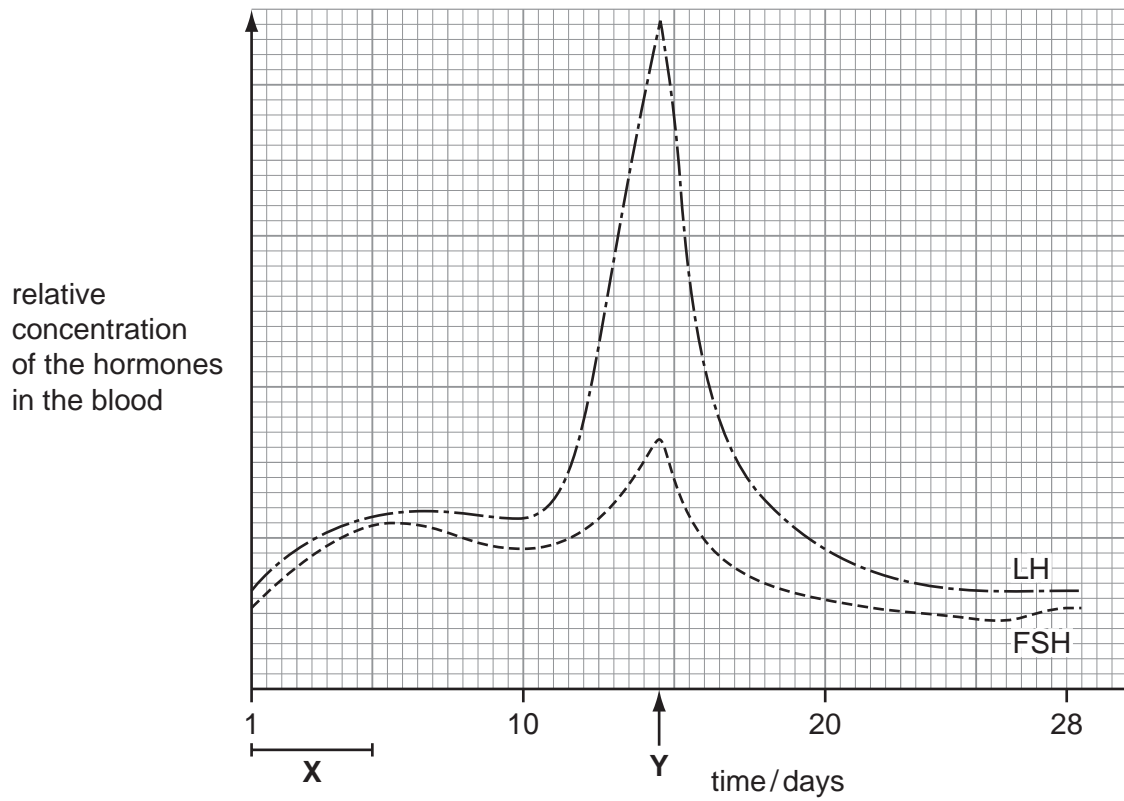


Fig. 6.1

(a) State what happens at **X** and at **Y** during the menstrual cycle.

X

Y [2]

(b) Describe the roles of oestrogen in controlling the menstrual cycle.

.....
.....
.....
.....
.....
.....
..... [4]

(c) Some women who cannot conceive may be treated with FSH.

(i) Describe how FSH is used as a fertility drug and how it may allow a woman to conceive.

.....
.....
.....
.....
..... [2]

(ii) Suggest **one** implication of using fertility drugs.

.....
.....
..... [1]

(d) Explain why it is important that FSH is **not** secreted during pregnancy.

.....

.....

.....

..... [2]

[Total: 11]

- 3 A newspaper headline incorrectly stated, "The use of condoms can result in erectile dysfunction".

Erectile dysfunction is a medical problem which results in problems with sexual intercourse.

Scientists are concerned that this incorrect statement could lead to an increase in HIV.

- (a) Describe the process of sexual intercourse in humans.

.....
.....
..... [2]

- (b) Condoms are used as one form of birth control.

- (i) What name is used to describe this method of birth control?

..... [1]

- (ii) Explain how a condom acts as a method of birth control.

.....
.....
..... [2]

- (c) Some readers of the newspaper may believe the newspaper and stop using condoms during sexual intercourse.

- (i) Explain how a decrease in the use of condoms may lead to an increase in the incidence of HIV.

.....
.....
..... [2]

- (ii) State two ways by which a person who does not have sexual intercourse might still become infected with HIV.

1.
2. [2]

(iii) Explain why the immune system is less effective in a person with HIV.

.....
.....
.....
.....
..... [3]

(d) Another sexually transmitted disease is gonorrhoea.

For this disease, state

(i) one sign or symptom,

.....

(ii) one effect on the body,

.....

(iii) the treatment.

.....
..... [3]

[Total: 15]

4 Fig. 4.1 shows a diagram of a section through the male reproductive organs.

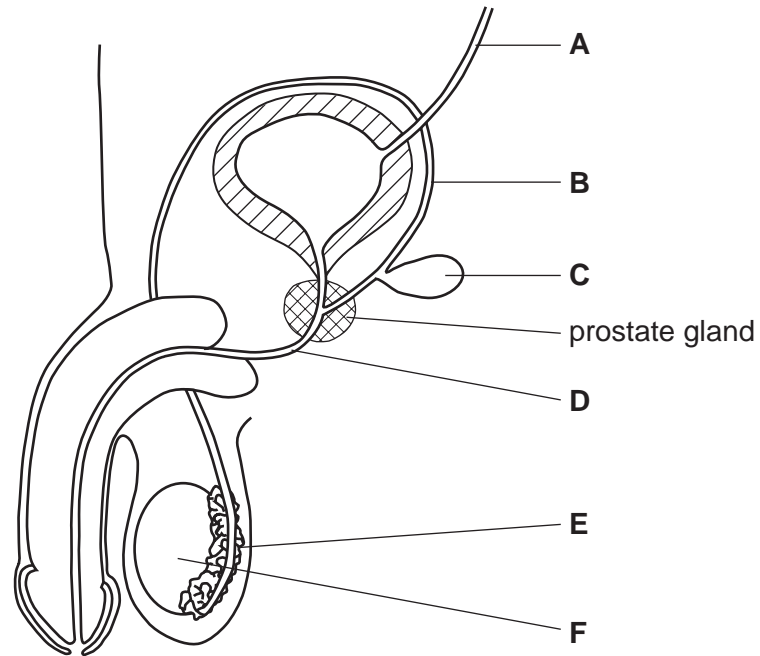


Fig. 4.1

(a) Complete the table by using the labels from Fig. 4.1 to identify each of the structures described. The first has been done for you.

description of structure	label letter
carries both urine and semen	D
where sperm are stored before ejaculation	
is cut or tied during a vasectomy	
produces fluid for sperm to swim in	
where meiosis occurs	

[4]

(b) In older men the prostate gland often enlarges, reducing the diameter of tube **D**.

(i) State the name of tube **D**.

..... [1]

(ii) Suggest and explain why a reduction in the diameter of this tube may cause a problem.

.....
.....
..... [2]

(c) Some processes in the body involve the deliberate narrowing of structures.

Outline **one** situation in the body where there is a mechanism to reduce the diameter of a structure for a particular purpose.

State the effect of this reduction in diameter.

.....
.....
.....
..... [3]

