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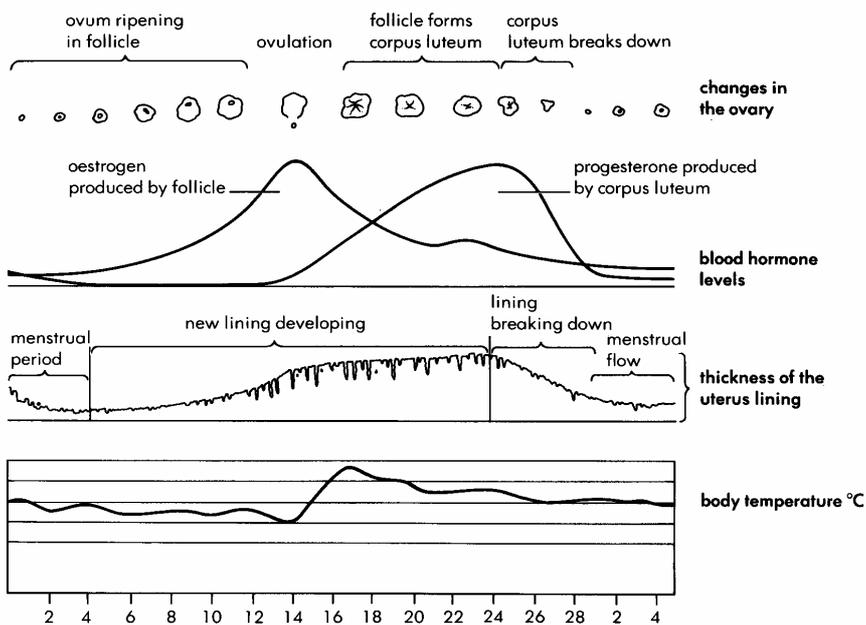
The female cycle

One of the changes which takes place in the female body as she reaches sexual maturity is the starting of the monthly period. From puberty up until menopause, a woman will discharge blood through her vagina approximately every 28 days. This discharge usually lasts for about five days.

Where does this blood come from?

To understand where this blood comes from you need to understand how the female body prepares itself for pregnancy. These preparations are controlled by the hormones oestrogen and progesterone and they are repeated every time an ovum is produced. Here is a summary of what takes place:

- The cycle starts at the beginning of the period (also called the menstrual flow). This is day one. For the next five days, the unused uterus lining, together with some blood, is discharged through the vagina.



The changes caused by hormones during the menstrual cycle

- While this is going on, a new ovum begins to ripen in the ovary. At the end of the period, the follicle cells surrounding the ripening ovum start producing oestrogen. This oestrogen tells the uterus to start preparing a new lining for the ovum to implant into, if it is fertilised.
- On the 14th day, ovulation takes place and the ovum starts its journey along the Fallopian tube. The remains of the follicle (the corpus luteum) reduces its production of oestrogen and starts to produce a second hormone, called progesterone. This progesterone tells the uterus that an ovum is on its way and therefore, it must complete its preparations.
- If by day 24 a fertilised ovum has not arrived at the uterus, the corpus luteum degenerates and therefore stops producing the two hormones. In the absence of these, the new uterus lining starts to break down and is discharged on day 29 — this becomes day 1 of the next cycle.

The timings given here are for the average female but the length of a cycle can vary considerably. Not every woman has her period, regularly, every 28 days.

Can life go on as normal during a period?

This monthly discharge of blood should not interfere with any normal activity. However, it does require more attention to personal hygiene. An absorbent pad should be worn to catch the flow of blood. This pad can be worn externally as a sanitary towel or internally in the form of a tampon. It must be changed regularly and disposed of hygienically.

What happens if the ovum is fertilised?

If the ovum is fertilised the woman is pregnant. The corpus luteum persists and continues to produce oestrogen and progesterone for a further three months. By this time, the placenta has formed and this takes over the job of producing the two hormones for the rest of the pregnancy. The presence of these hormones in the blood ensures that the uterus lining remains intact and continues to develop, and that no more ova are produced. The high levels present in the blood also stimulate breast development. Just before the birth the woman's progesterone level falls and this signals the pituitary gland to produce two more hormones: prolactin and oxytocin. Prolactin tells the breasts to start producing milk whereas oxytocin initiates labour.

Questions

1. List the events leading up to the female monthly period.
2. What happens if the ovum is fertilised and implants?