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ASSIGNMENT TITLE: FEMALE REPRODUCTIVE PHYSIOLOGY

1. **CYCLIC CHANGES**

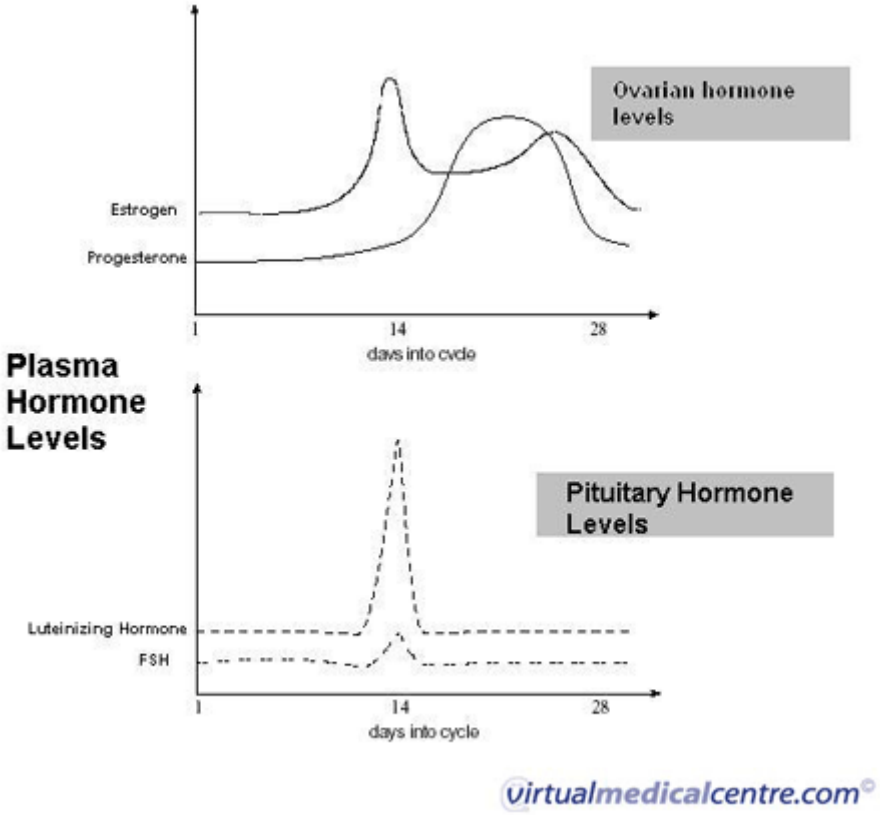
BREAST: Each month, women go through changes in the hormones that make up the normal menstrual cycle. The hormone estrogen is produced by the ovaries in the first half of the menstrual cycle. It stimulates the growth of milk ducts in the breasts. The increasing level of estrogen leads to ovulation halfway through the cycle. Next, the hormone progesterone takes over in the second half of the cycle. It stimulates the formation of the milk glands. These hormones are believed to be responsible for the cyclical changes that many women feel in their breasts just before menstruation. These include swelling, pain, and soreness.

During menstruation, many women also have changes in breast texture. Their breasts may feel very lumpy. This is because the glands in the breast are enlarging to get ready for a possible pregnancy. If pregnancy does not happen, the breasts go back to normal size. Once menstruation starts, the cycle begins again.

VAGINA: Vaginal smear taken from lateral vaginal fornix shows different pictures according to the phase of the cycle. In the follicular phase the smear consists of many superficial cells with acidophilic cytoplasm and pykonotic nucleus.

2. **MENSTRUAL CYCLE**

Menstruation describes the female period. The menstruation cycle begins when a woman gets her periods. The menstrual blood which leaves her body are products shed from the uterus (the uterine lining also called the endometrium). During the remainder of the menstrual cycle the uterine lining regrows. It does so in preparation for pregnancy, which occurs if the egg (oocyte) a woman releases about half way through her menstrual cycle is fertilised. When fertilisation occurs, the lining stays in place to nourish the fertilised egg. When fertilisation does not occur the menstrual cycle continues and the uterine lining is shed marking the start of the woman's next menstrual period. Women begin menstruation at an average age of 13 (called menarche) and on average continue menstruating till age 51 (called menopause).
Menstruation involves highly complex hormonal interactions. The key hormones involved in menstruation are oestorogen and progesterone (produced by the ovaries) and lutiensing hormnes and follicle stimulating produced by the pituitary glands, under the influence of hormones secreted by the hypothalamus. The interactions between these organs are referred to as the hypothalamic-pituitary-ovarian axis (HPO axis).



Menstruation occurs in cycles. The ovaries prepare an egg (oocyte) for release and the womb (uterus) prepares a lining to nourish the egg if it is fertilised. When the egg is not fertilised, the lining of the womb is shed and a woman gets her period (menstrual bleeding).

Menstruation typically occurs in 28 day cycles so most women get their period every 28 days. However, some women have longer cycles and may only get their period every 40 days, while other have shorter menstrual cycles and may get their periods as often as every 21 days.

The menstruation calculator determines when your next period is due based on a 28 day menstrual cycle. All you need to do is enter the date when your last menstrual bleeding began, and the calculator will tell you when to expect your next period