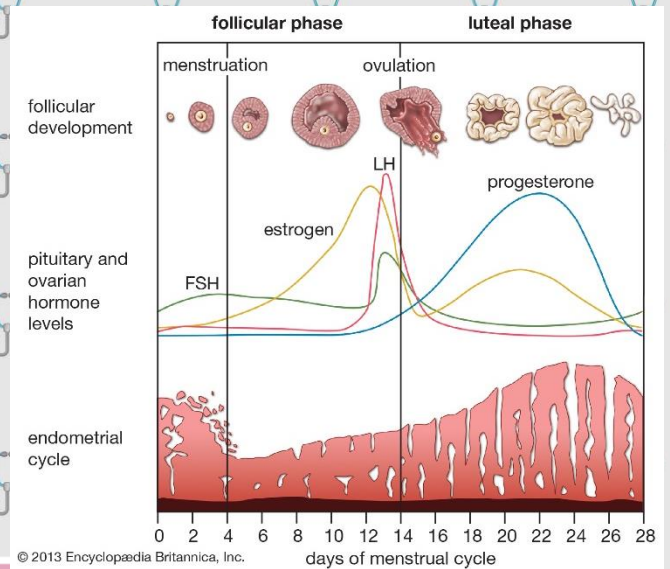


# Menstrual Cycle



## The HPG Axis

- The hypothalamus, (anterior) pituitary gland and gonads (ovaries) work together to regulate the menstrual cycle
  - The hypothalamus secretes gonadotropin releasing hormone (GnRH) to stimulate luteinising hormone (LH) and follicular stimulating hormone (FSH) release from the pituitary gland.
- FSH binds to the granulosa cells to stimulate follicle growth and permit androgen conversion to oestrogen
- LH acts on theca cells to stimulate production and secretion of androgens
- Oestrogen acts to reduce GnRH secretion, but at high levels exerts positive feedback on the HPG axis

## The Ovarian cycle

- The ovarian cycle can be broken up into the follicular phase, ovulation, and the luteal phase
- The follicular phase marks the beginning of a new cycle with follicle growth and maturation secondary to increased FSH and LH levels
- Ovulation occurs when oestrogen levels become high enough to exert positive feedback on the HPG axis
  - This causes an LH surge, and ovulation
- The luteal phase occurs after ovulation
  - The follicle becomes the corpus luteum which secretes oestrogen and progesterone
  - At the end of the cycle, in the absence of fertilization, the corpus luteum regresses after 14 days and a new cycle starts

## The Uterine cycle

- The uterine cycle can be broken down into menses, the proliferative phase, and the secretory phase
- Menses marks the beginning of a new cycle, and involves the shedding of the uterine lining
- The proliferative phase runs alongside the follicular phase, and prepares for fertilization and implantation
  - Oestrogen stimulates endometrial thickening
- The secretory phase runs alongside the luteal phase
  - Progesterone stimulates further thickening of the endometrium into a glandular secretory form
  - It also stimulates thick cervical mucous production, changes in mammary tissue and other metabolic changes

## TeamMED and Days for Girls

- Every year, TeamMED hosts an annual Days for Girls night, where volunteers come together to pack reusable sanitary packs for distribution overseas
- TeamMED works with Days for Girls International, who supply and distribute the sanitary packs
- Visit [daysforgirls.org](http://daysforgirls.org) for more information!