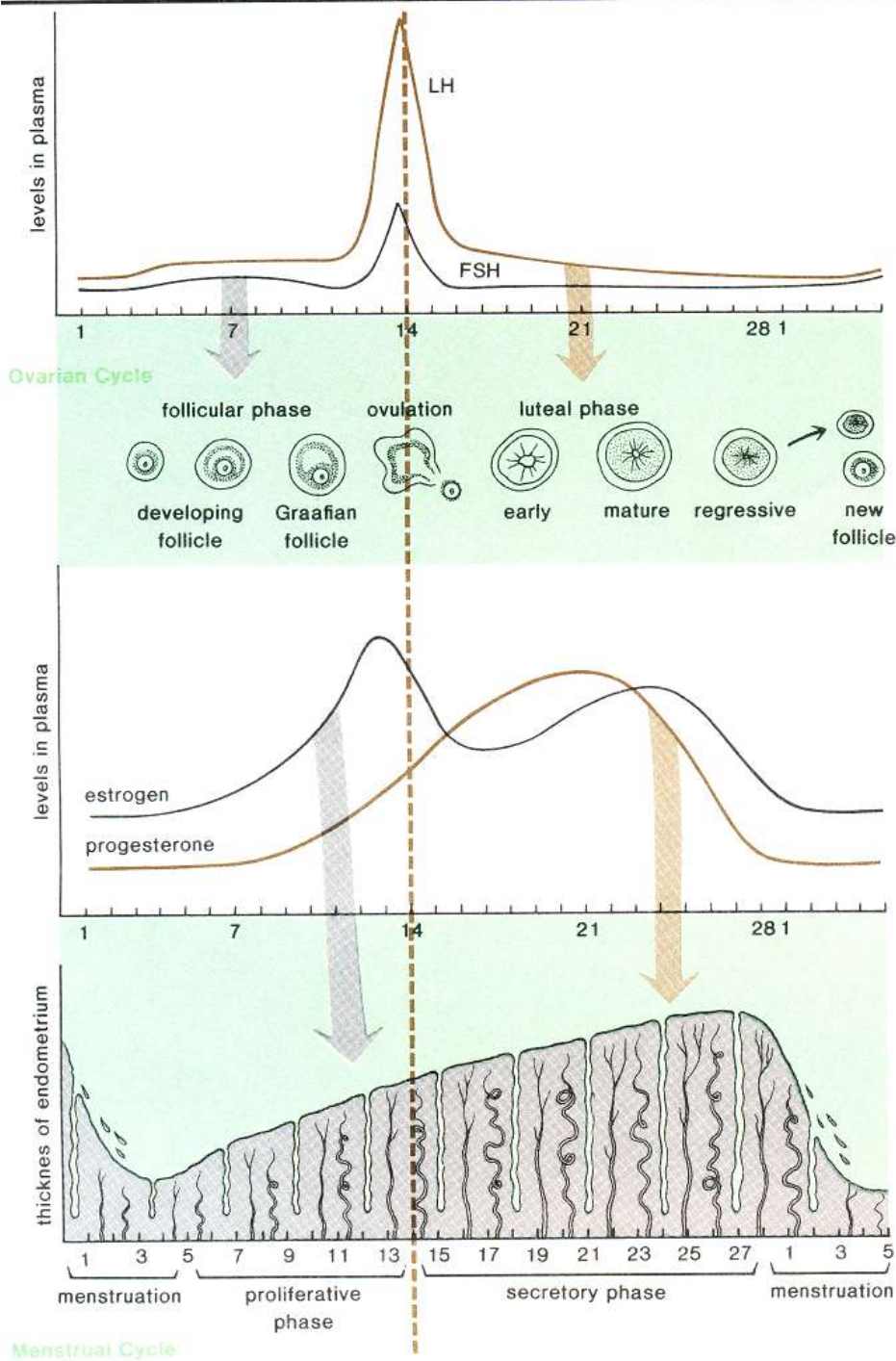


**Female cycles: Graphs and charts to study & know.**

Biology 12



**Figure 28.21.** Phases of the menstrual cycle in relation to ovarian changes and hormone secretion, and the relationship between changes in the ovaries and the endometrium of the uterus during different phases of the menstrual cycle.

**Table 28.3** Phases of the menstrual cycle

Phase of cycle		Hormonal changes		Tissue changes	
Ovarian	Endometrial	Pituitary	Ovary	Ovarian	Endometrial
Follicular (days 5–13)	Proliferative	No apparent change	Estradiol secretion rises (due to FSH stimulation of follicles)	Follicles grow; graafian follicle develops (due to FSH stimulation)	Mitotic division increases thickness of endometrium; spiral arteries develop (due to estradiol stimulation)
Ovulatory (day 14)	Proliferative	LH surge (and increased FSH) stimulated by positive feedback from estradiol	Slight fall in estradiol secretion	Graafian follicle is ruptured and ovum is extruded into fallopian tube	No change
Luteal (days 15–28)	Secretory	LH and FSH decrease (due to negative feedback of steroids)	Progesterone and estrogen secretion increase	Development of corpus luteum (due to LH stimulation)	Glandular development in endometrium (due to progesterone stimulation)
Menstrual (days 1–4)	Menstrual	FSH and LH remain low	Estradiol and progesterone fall	Corpus luteum regresses; primary follicles grow	Inner two-thirds of endometrium is shed with accompanying bleeding

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