

associated with the increased levels of FSH characteristic of advanced maternal age or with exogenous gonadotropin administration in the treatment of infertility attests to the importance of negative feedback regulation of FSH. With further growth of the dominant follicle, estradiol and inhibin A increase and the follicle acquires LH receptors. Increasing levels of estradiol are responsible for proliferative changes in the endometrium. The exponential rise in estradiol results in positive feedback on the pituitary, leading to the generation of an LH surge (and a smaller FSH surge), thereby triggering ovulation and luteinization of granulosa and theca cells.

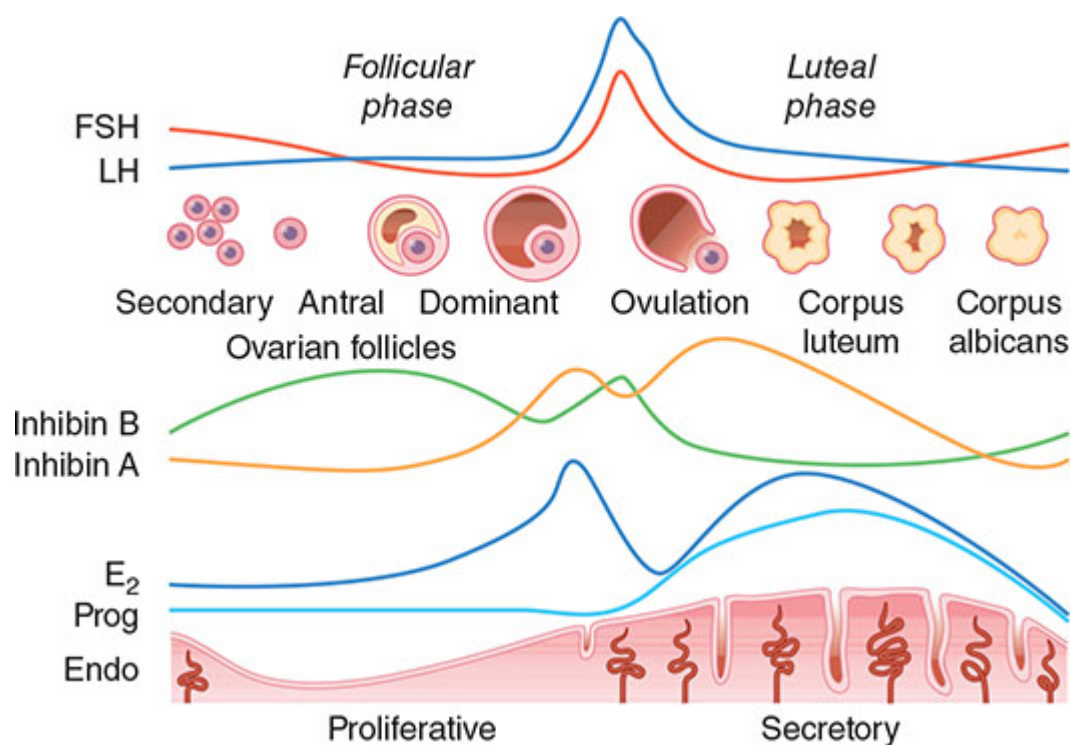


FIGURE 392-8 Relationship between gonadotropins, follicle development, gonadal secretion, and endometrial changes during the normal menstrual cycle. E₂, estradiol; Endo, endometrium; FSH, follicle-stimulating hormone; LH, luteinizing hormone; Prog, progesterone.

■ THE LUTEAL PHASE

The luteal phase begins with the formation of the corpus luteum from the ruptured follicle ([Fig. 392-8](#)). Progesterone and inhibin A are produced from the luteinized granulosa cells, which continue to aromatize theca-derived androgen precursors, producing estradiol.