



An Overview Linking Oogenesis, Folliculogenesis, Uterine Changes, And The Menstrual Cycle

The Day of the Menstrual cycle	Oogenesis	Folliculogenesis	Hormonal Action	Uterine Phases
1 – 5	Primary Oocyte (46 chromosomes) revive activity after meiotic arrest and complete its first meiosis before ovulation to form secondary oocyte.	10 to 25 preantral and early antral follicles develop into large antral follicle.	Increase in Follicular Stimulating Hormone (FSH) and Luteinizing Hormone (LH)	Menstrual phase (3 to 5 day)
7		A single dominant follicle formed.	Further increases of oestrogen.	Proliferative phase (thickening of the endometrium)
7 - 12		Dominant follicle increases secretion of oestrogen. Antrum expanded. Formation of cumulus oophorous. Non-dominant follicles undergo atresia (cell death)	Increase in oestrogen. Decrease levels of LH and FSH due to increase of inhibin and oestrogen.	Proliferative phase (thickening of the endometrium)
12 - 13		The follicle stimulates digestive enzymes and prostaglandins	LH levels increase which increase oestrogen.	Proliferative phase
14	The release of the secondary oocyte from the ovary to fallopian tube	The Graafian mature follicle is released and is supported by the antrum fluid.	LH levels increase FSH levels beginning to decrease Progesterone gradually increases. Oestrogen begin to decrease	Secretory phase The aim is to create a secreting tissue in the endometrium. Increase mucus secretion in cervix



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15 to 25	Secondary oocyte waiting to be fertilised by sperm.	The remaining granulosa and theca cells create the corpus luteum. It lasts 10 to 14 days if pregnancy did not occur. No new follicles	LH levels remain adequate. Corpus luteum secretes progesterone and increases Oestrogen. Oestrogen levels later begins to decrease. Inhibin levels increase preventing FSH and LH.	Further development of secretory endometrium. It's estimated that the uterus can increase by up to 1 centimetre (about 0.4 inches) per week. Inhibit myometrium contraction by progesterone. Progesterone opposes oestrogen and prostaglandins. Endometrial glands coiled and filled with glycogen. A plug is formed from the cervical mucus because of its thickness and sticky. Preparing for implantation and pregnancies
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25 to 28	Fertilised egg or zygote if conception occurred. Secondary oocyte if nothing occurred	No new follicles. Corpus luteum breakdown if fertilization did not occur forming the corpus albicans.	Oestrogen and progesterone decrease. This further decreases FSH and LH.	Secretory phase. Implantation of the blastocyst (early ball of cells) onto the uterine wall and is sustained by progesterone from the corpus luteum until the placenta supersedes.
0 - 5	New menstrual cycle begins	Follicular phase begins	FSH, LH and oestrogen begin to increase gradually. Progesterone levels decrease	Menstrual phase (endometrium sheds) if no fertilisation