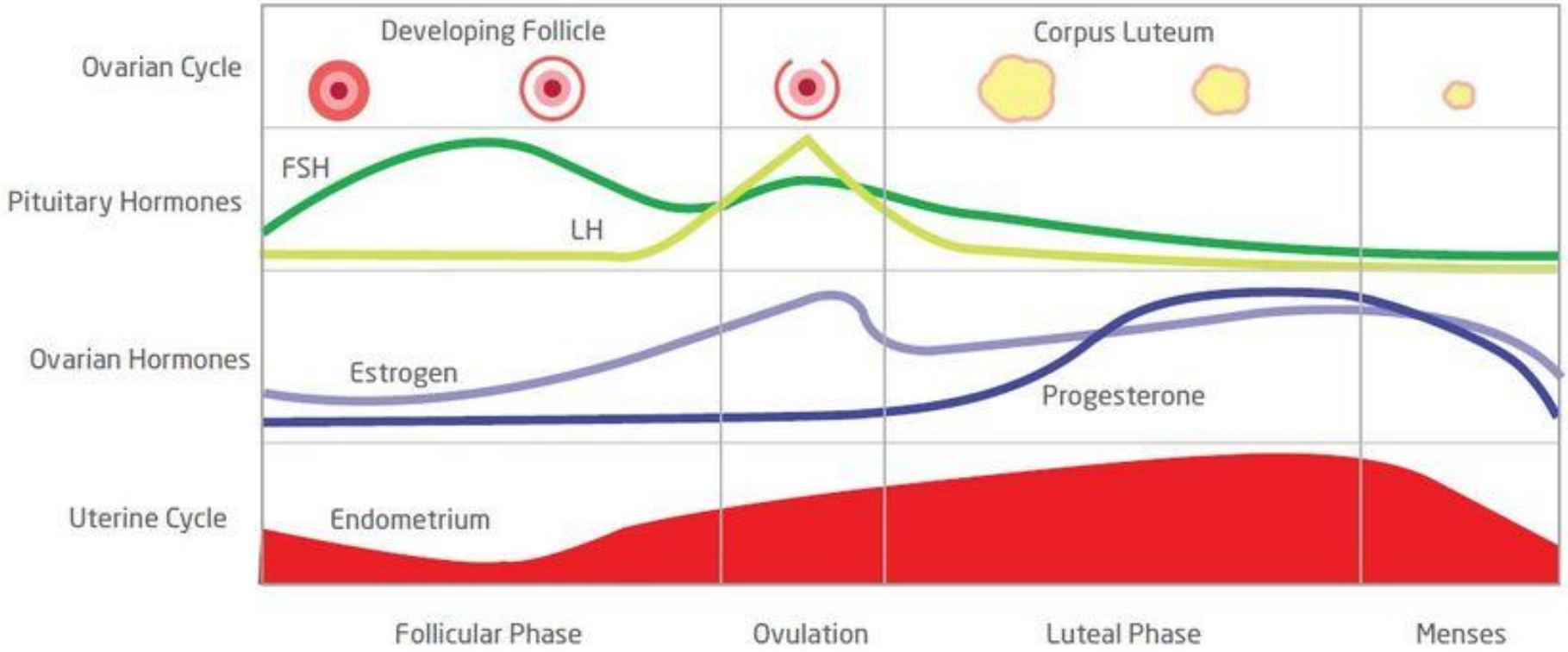
Ovarian Cycle
Developing Follicle
Corpus Luteum
Pituitary Hormones
FSH
LH
Ovarian Hormones
Estrogen
Progesterone
Uterine Cycle
Endometrium
Follicular Phase
Ovulation
Luteal Phase
Menses

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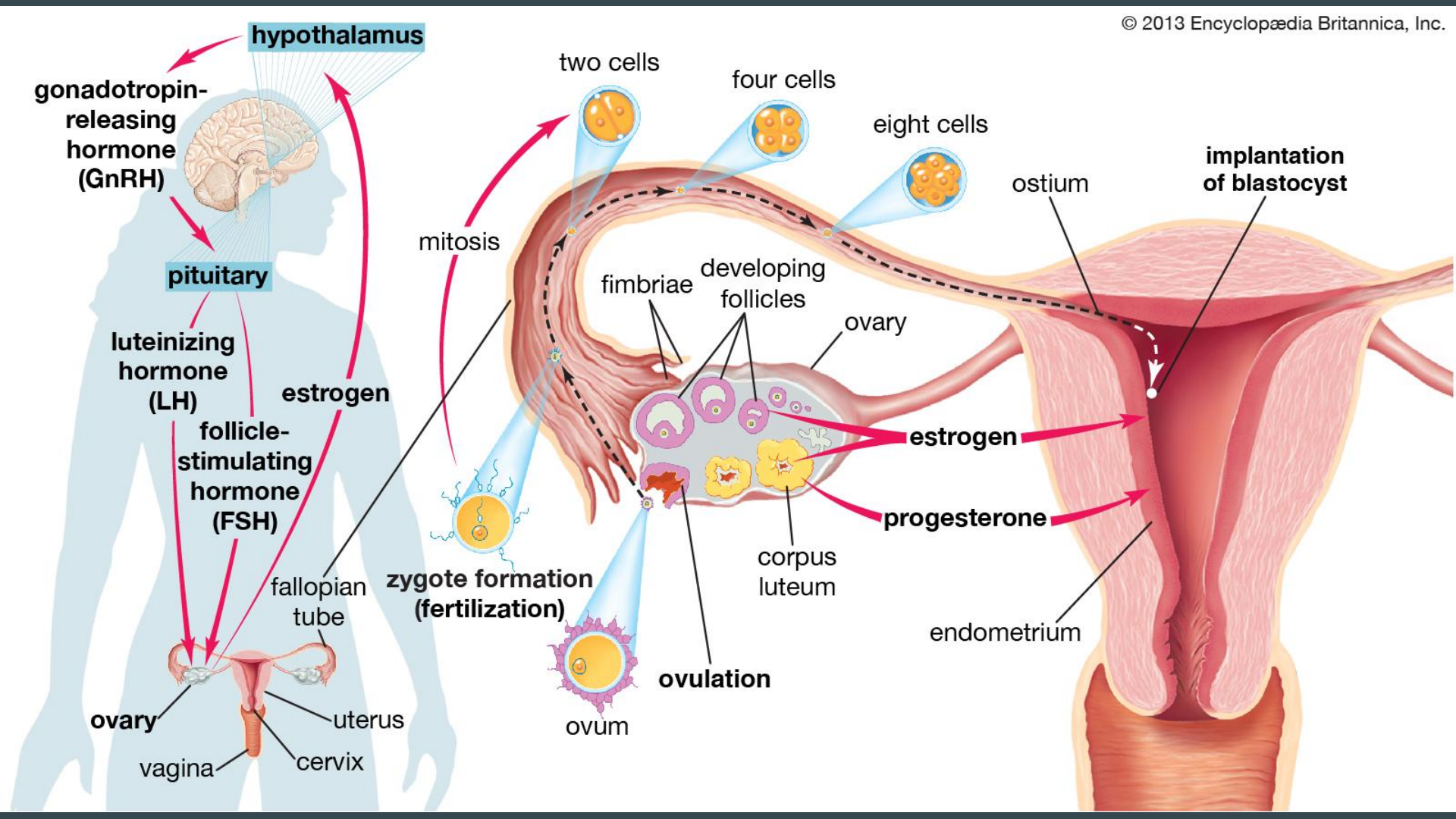

FSH VERSUS LH

FSH	LH
A peptide produced by the anterior lobe of the pituitary gland, which regulates the development of the ovarian follicle in females and stimulates the production of spermatozoa in males	A hormone produced by the anterior lobe of the pituitary gland, which stimulates maturation of the ovarian follicle and formation of the corpus luteum in females
Also called follitropin	Called lutropin or interstitial cell–stimulating hormone (ICSH) in males
Involved in the development of primary sex hormones	Has no function in the development of primary sex organs
Stimulates the growth of ovarian follicle	Stimulates ovulation
Stimulates spermatogenesis through the production of ABP by Sertoli cells	Stimulates the production of testosterone by Leydig cells
Affects the first half of the menstrual cycle	Has an effect on both first and the second half of the menstrual cycle

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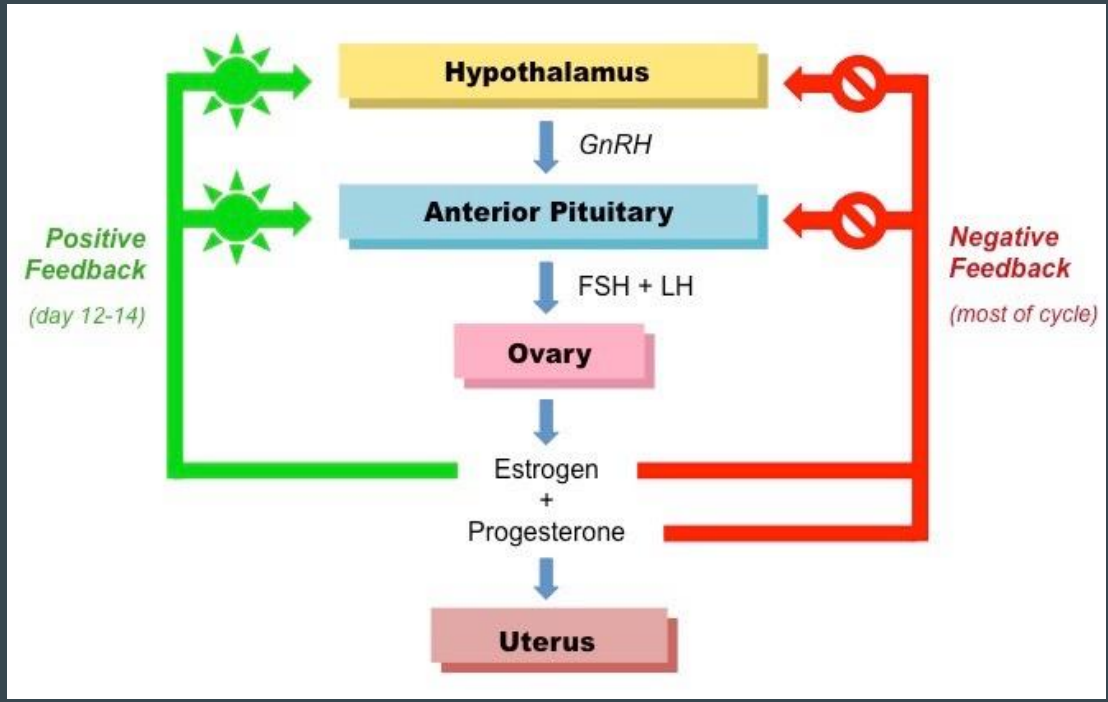
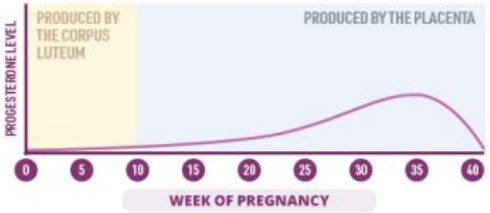


SIX KEY HORMONES IN PREGNANCY

HUMAN CHORIONIC GONADOTROPIN

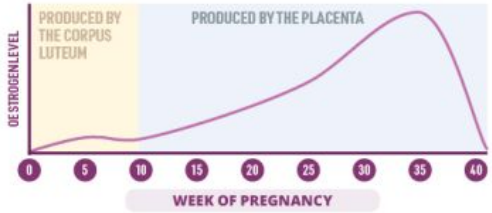
hCG is produced by the placenta after implantation. It supports the function of the corpus luteum, a temporary structure in the ovaries essential in early pregnancy. It's also the hormone detected by pregnancy tests.

PROGESTERONE



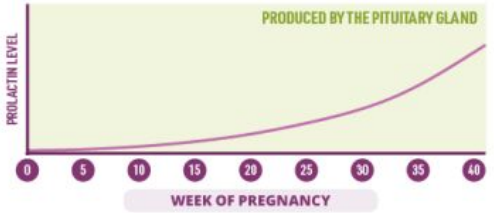
Progesterone helps establish the placenta. It stimulates growth of blood vessels that supply the womb and inhibits contraction of the uterus so it grows as the baby does. It also strengthens pelvic wall muscles for labour.

OESTROGEN



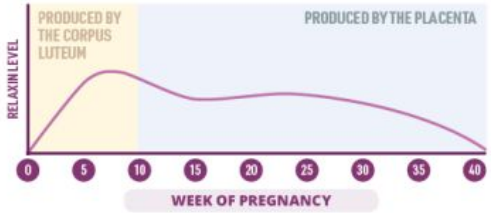
Oestrogen helps the uterus grow, maintains its lining, and helps foetal organs develop. Activates and regulates production of other hormones. With progesterone, stimulates breast growth and milk duct development.

PROLACTIN



Prolactin is the main hormone needed to produce breast milk. It contributes to enlargement of the mammary glands and prepares them for milk production. Progesterone inhibits lactation during pregnancy.

RELAXIN



Relaxin inhibits uterus contraction to prevent premature birth. It relaxes blood vessels, increasing blood flow to the placenta and kidneys. It relaxes the joints of the pelvis and softens and lengthens the cervix during birth.

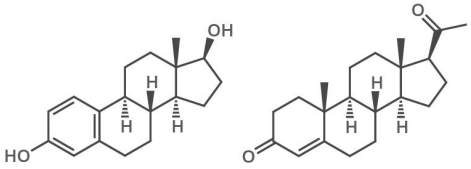
OXYTOCIN

Oxytocin levels rise at the start of labour, stimulating contractions of uterine muscle. It triggers production of prostaglandins, which increase contractions further. If labour doesn't start naturally, it can be used to induce it.

THE CHEMISTRY OF ORAL CONTRACEPTIVES

The first oral contraceptive, norethindrone, was synthesised by Carl Djerassi in 1951. This graphic looks at the range of compounds used and how they work.

THE NATURAL HORMONES



ESTRADIOL

PROGESTERONE

Oral contraceptives contain synthetic versions of two hormones produced naturally by the body: estrogens and progestogens. Both hormones have roles in the female menstrual cycle.

HOW ORAL CONTRACEPTIVES WORK

MAINTAIN CONSISTENT HORMONE LEVELS

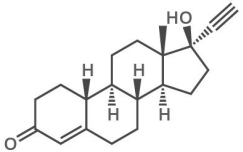
SUPPRESS RELEASE OF OTHER HORMONES

PREVENTS OVULATION

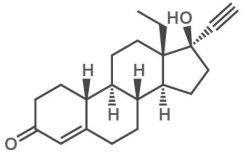
Steady levels of estrogens and/or progestogens in the body as a result of oral contraceptives trick the pituitary gland into thinking a woman is already pregnant, stopping it from releasing hormones that stimulate ovulation, and preventing pregnancy. Progestogens promote formation of a thicker layer of cervical mucus, which makes it difficult for sperm to reach the uterus, and also affect the uterine lining and make it harder for an egg to attach.

99.9% EFFECTIVE
(WHEN TAKEN CORRECTLY)

PROGESTOGENS



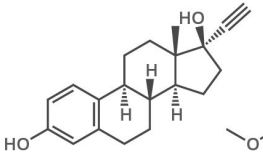
NORETHINDRONE



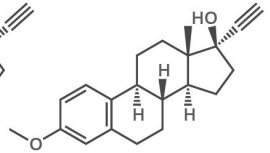
LEVONORGESTREL

Can be used in combination with estrogens, but also on their own in progestogen-only pills. These pills must be taken continuously and within 3 hours of a specific time every day. Recommended for breast-feeding women, as it doesn't affect milk production.

ESTROGENS



ETHYNYL ESTRADIOL



MESTRANOL

Combined oral contraceptive pills include an estrogen as well as a progestrogen. Most are taken over a 28 day cycle, with 21 pills taken, followed by a week of no pills. They must be taken within 12 hours of a specific time every day to maximise protection.

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