

Events in the ovaries over the four phases of the 21-day cycle

Pre-oestrus:

Duration: approx. 2 days

The yellow body (corpus luteum) has shrunk enormously under the influence of the prostaglandin F2 alpha. A dominant Graafian follicle starts to grow. It is smooth and rounded ("like a watch glass") with a diameter of over 1 cm.

Oestrus:

Duration: 12-24 hours

During oestrus, the follicle reaches its maximum size very quickly, growing to a diameter of 1.5 to 2 cm. The follicle contains a fluid that surrounds and cushions the egg. The yellow body (corpus luteum) from the previous cycle may still be present. It can be on the same ovary as the follicle, or on the other ovary. In exceptional cases, two follicles can mature at the same time. Both follicles can be on the same ovary, or one follicle can mature on each ovary. After a successful insemination, the result is non-identical (dizygotic) twins. Identical (monozygotic) twins are born if the fertilised egg divides at an early stage of development.

Post-oestrus:

Duration: 1-2 days

At the start of post-oestrus, the follicle bursts. The egg is collected by the funnel-shaped end of the oviduct. After insemination, the sperms also migrate via the uterus to the oviduct, where they encounter and fertilise the egg. Within 4 to 7 days, the fertilised egg (zygote) passes through the oviduct into the uterus, where it embeds in the mucous membranes (endometrium).

If the egg is not fertilised, it dies within a few hours and is reabsorbed.

Inter-oestrus/Dioestrus:

Duration: approx. 15 days

The yellow body (corpus luteum) produces the pregnancy hormone (progesterone). This hormone is transported via the bloodstream, causing changes in behaviour and in the reproductive tract. The immature yellow body is also called the corpus haemorrhagicum. It is soft, and red in colour. A mature yellow body during mid-cycle is sometimes described as

"blooming like a flower". It is often shaped like a champagne cork. It should take up at least 50% of the ovary.

One or two follicles may develop on the ovary during the yellow body phase. These are referred to as follicle waves or intermediate follicles. These follicles die without ovulation taking place. The yellow body does not regress until the hormone prostaglandin is produced by the non-pregnant uterus. After a successful insemination, the yellow body produces the pregnancy hormone progesterone throughout gestation.