

Disclaimer

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Detecting and confirming ovulation

Ovulation is the release of ripe and fertilizable eggs from the ovary. This is obviously required for a pregnancy to be established. The growth of the eggs takes a variable amount of time, but generally between 8 and 21 days (average 14 days). The egg is encased in a fluid-filled sac called a follicle. The follicle could be likened to a chicken's egg and the yolk of the chicken's egg, is the oocyte or ovum. In a normal female the follicle is around 2½ to 3 cm in diameter at the time of release (ovulation). The growth of the follicle is under the control of a hormone secreted by the pituitary gland. The pituitary gland is the size of a pea and is located behind the bridge of the nose. It releases a hormone called follicle stimulating hormone (FSH). The pituitary, when the egg is ripe, also releases, for a short time, a large amount of a hormone called luteinizing hormone (LH). The LH causes the release of the egg from the follicle and is responsible for ovulation. The wall of the follicle remains in the ovary and this become yellow and is called the corpus luteum. It produces a hormone called progesterone which acts on the lining of the womb (uterus) to make it receptive for implantation of the fertilized egg.

Ways of checking ovulation that may be helpful to you are described below.

1. Symptoms of ovulation

Immediately prior to ovulation there is often a change in the mucous secreted by the cervix. By examining the cervical mucous (by placing you fingers in the vagina) you can detect the mucous has become increased in amount and is clear like the white of an egg. Changes after intercourse and sexual arousal may make this mucous more difficult to interpret. Similarly as the egg is developing there is sometimes some lower abdominal discomfort. The pain does not necessarily indicate ovulation but may just reflect that the egg is ripening. For further information about this the Billing's Method by Dr Evelyn Billings and Ann Westmore and published by Penguin is a useful book.

2. Serum progesterone in the luteal phase

After ovulation the progesterone is released from the corpus luteum (see above). Progesterone is not released in significant amounts prior to ovulation. Therefore a high serum progesterone confirms that ovulation has occurred some time in the previous 1 to 2 weeks. Progesterone remains elevated in pregnancy also. Sometimes serum progesterone can be measured too early if it is measured on day 21 of the menstrual cycle. This is because sometimes the ripening of the egg takes 3 weeks. In such women it would be appropriate to measure the serum progesterone on day 28 of the cycle. The way most women know that they have a long ripening process (follicular phase) is that they have a long menstrual cycle ie more than 4 weeks between periods.

Therefore checking the progesterone level tells you that ovulation has occurred but does not help in planning the timing of intercourse to optimize fertilization.

[3. Keeping a basal body temperature](#)

When progesterone is released it acts to raise the temperature of the body by roughly 0.5° C. Therefore if you keep a temperature chart according to the directions and taking your temperature first thing in the morning before any oral intake and recording it from the time of your period for a month, you will see, if you are ovulating, that there is a rise in your temperature. This is illustrated below. Unfortunately only 30% of women can predict their ovulation by using a basal body temperature chart. In 30% of women there is a dip in the temperature before ovulation occurs. The basal body temperature chart will therefore tell you after ovulation has occurred. Once the temperature rise has occurred on a basal body chart, the egg is no longer available for fertilization. Keeping a basal body temperature chart therefore tells you that ovulation has occurred but does not help in planning the timing of intercourse to optimize fertilization.

[4. Cycle monitor](#)

A cycle monitor is a laborious way of confirming ovulation but is useful in that it will tell you before ovulation has occurred. It involves having an ultrasound scan and blood tests done from roughly day 8 to 10 of your menstrual cycle and then according as to how the follicle is developing. Generally you can detect the surge of LH if you have frequent blood tests. Sometimes you can use urine tests to test for the LH surge each day.

[5. Urine tests for LH surge](#)

These are available for roughly \$4 each. From when you think you are mid-cycle you start testing of the urine every day. Obviously if you have missed ovulation you will waste a lot of tests. Also if you start too early you may use a lot of tests. Sometimes this is best used in conjunction with a cycle monitor.

[5. Endometrial sample](#)

At the time of your laparoscopy, if you are in the phase of your menstrual cycle after ovulation, a sample of the endometrium (lining of the womb) can be taken. This can be examined under a microscope for specific changes which indicate that the progesterone has been in your body. In particular the cells are full of glycogen which is an energy source for the growing embryo.