



FERTILITY CENTER

*Pathway to Parenthood*

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## PREDICTING OVULATION

Abnormalities of ovulation account for 10-15% of all infertility and approximately 35% of infertility problems among women. Knowing the timing of ovulation is important because a woman only ovulates once per month, and the ovulated egg can only survive for 24 hours. In most women, ovulation occurs about 14 days prior to the onset of bleeding, which in the ideal menstrual cycle of 28 days, would be day 14. Since the length of the cycle varies depending of the length of the first half, however, ovulation does not always occur on the same day. An inexpensive method of determining the day of ovulation is to chart the basal body temperature (BBT) each morning prior to arising from bed. In the first half of the cycle, the normal basal temperature is around 97°F. Twelve to 24 hours after ovulation, the temperature rises to the standard 98.6°F. The BBT is good for documenting ovulation and offers a starting point from which one can measure the length of time from ovulation to menstruation (i.e., the luteal phase), but is less desirable for timing the fertile period (i.e., when to have intercourse), as the temperature rise begins only after ovulation has occurred. Nowadays, with access to ultrasound monitoring and over the counter ovulation predictor kits, there is no reason for people to measure the basal temperature and painstakingly plot these month after month after month.

Ovulation predictor kits, which can be purchased at most pharmacies and supermarkets, are more useful for timing intercourse, as they can predict when ovulation is going to occur, before it happens. They function by measuring the spontaneous luteinizing hormone (LH) surge in the urine (like a home pregnancy test), which is the trigger for, and precedes normal ovulation. A positive test indicates that ovulation is likely to occur in the next 6-36 hours and can be used to time intercourse and inseminations, as well as provide information regarding the length of the luteal phase. If this test shows a positive result for many days in a row, this may be indicative of LH predominance, and in the correct context (irregular periods, hirsutism or acne), may be indicative of polycystic ovary syndrome (PCOS).

The menstrual cycle has two parts, which are divided by ovulation. In the first half, which is called the proliferative or follicular phase, the ovary produces estrogen; in the second half, called the secretory or luteal phase, the ovary produces both estrogen and progesterone. The length of the cycle is determined primarily by the first half, which can vary in duration, while the second half is usually more constant in length for women at 14 days. The most reliable predictor of ovulation is the occurrence of regular menstrual bleeding accompanied by cramping during the first 36 hrs, mood changes and breast tenderness. These symptoms, called “premenstrual molimena,” are caused by the female hormone progesterone, which is only produced after ovulation. It is possible to document ovulation by ultrasound, and by measuring the progesterone level in the second half of the menstrual cycle. Other

indicators of probable ovulation include sustained elevation of the basal body temperature (this occurs within 24 hours following ovulation, not prior to it happening), or the detection of an LH surge using a urine or blood ovulation predictor kit. Irregular menstrual cycles are often a sign of absence or an abnormality of ovulation. Increased levels of the hormone prolactin, or an imbalance of estrogen/progesterone, are often associated with abnormal ovulation. Increased ovarian production of male hormones, such as testosterone, are commonly seen in PCOS, which is one of the most common causes of persistent abnormalities or absence of ovulation.

Certainly the establishment of a pregnancy is proof of positive ovulation.

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*This handout is intended as an aid to provide patients with general information. As science is rapidly evolving, some new information may not be presented here. It is not intended to replace or define evaluation and treatment by a physician.*