



Tests Explained

IVF Stats

- **Beta-Human Chorionic Gonadotropin Hormone (BHCG)**

This hormone is produced by the placental cells to suppress menstrual cycles in case of pregnancy, and is used for determination and monitoring of pregnancy status. Secretion starts at the time of embryo implantation. Ectopic pregnancies and nonviable pregnancies terminating in spontaneous abortions tend to have lower than normal circulating BHCG levels, while somewhat higher levels are often seen in multiple pregnancies.

- **Estradiol (Estrogen)**

Estradiol is a hormone produced in the ovaries by the follicular cells that surround a developing egg. This hormone triggers the uterine endometrial lining to grow. This test is used to monitor ovulation induction in ART. Very high levels may lead to ovarian hyper stimulation, and may be a life threatening condition. It is used also in conjunction with Day 3 FSH to assess the ovarian reserve. High estradiol level may mask what otherwise would be a higher FSH. It is also used for the diagnosis of amenorrhea.

- **Follicle Stimulating Hormone (FSH)**

Follicle Stimulating Hormone is a hormone produced by the pituitary gland. It induces the development of early follicles into mature follicles/eggs. A normal FSH level on Day 3 indicates a woman has a good reserve of eggs (ovarian reserve) and is a good candidate for ovarian stimulation in IVF. As a woman grows older and the number of eggs she has remaining becomes lower, the pituitary secretes more FSH for egg production. High Day 3 FSH indicates a low or declining ovarian reserve. This hormone is in abundance in menopausal women's urine. In the old days ovulation induction was done using menopausal women's urine purified forms. Recombinant FSH forms are used for ART recently.

- **Luteinizing Hormone**

Luteinizing Hormone is secreted by the pituitary gland and surges to induce ovulation. Serum LH level is used to assess time of ovulation in women. Women that manifest a mid-cycle rise generally ovulate approximately 24 hours later. Sub-fertile couples, and

women being treated for infertility, can be informed that ovulation is imminent, to try to conceive naturally or by artificial intrauterine insemination (IUI)

- **Progesterone**

Progesterone is a steroid hormone secreted by the ovary during the second half of the menstrual cycle (luteal phase). It plays an important role in the preparation and maintenance of pregnancy. A raise in the progesterone level during ovulation induction is a warning that natural ovulation is imminent. Serum hormone levels are used to monitor progesterone replacement therapy in patients at risk of abortion during the early weeks of pregnancy. Daily progesterone levels are considered an accurate means for documenting a defective luteal phase.