



Ovarian Reserve (Predicting Fertility Potential in Women)

Ovarian reserve is a woman's fertility potential. With age, the ability to get pregnant reduces due to a decrease in the number and quality of eggs, and the presence of chromosomal abnormalities in the eggs. Generally, a woman can begin to face difficulty in conceiving by the age of 36 years or older; however, this age can vary among individuals. An individual's ovarian reserve and ability to conceive can be evaluated through several tests.

Ovarian reserve is commonly assessed by measuring the levels of different hormones in the blood.

- Follicle stimulating hormone (FSH): FSH levels in the blood are measured at the beginning of the menstrual cycle (day 1 to 5, usually on day 3). The level of this hormone show how the ovaries and the pituitary gland are working together. Generally, FSH levels are low at the beginning of menstruation and then rises to initiate the growth of a follicle and maturing of an egg.
- Estradiol hormone: Estradiol levels in the blood are also measured at the start of the menstrual cycle (day 1 to 5, usually on day 3). Similar to FSH, the level of estradiol hormones also shows how the ovaries and the pituitary gland are working.

High FSH and/estradiol levels generally indicate a lower chance of conceiving by ovulation induction or IVF.

- Antimullerian hormone (AMH): AMH is excreted by follicles and indicates the number of eggs available at the time of the blood test. The test for AMH can be performed anytime during the cycle.
- Clomiphene citrate challenge: measures FSH and estradiol before and after taking a medicine called clomiphene citrate at the beginning of the menstrual cycle. Chances of conception are low if the test shows high FSH levels at either time.

Ultrasound may also be used to determine ovarian reserve. Antral follicles are small follicles present in the ovary, measuring about 2-10 mm. The number of antral follicles is indicative of the number of eggs present in the ovary. Transvaginal ultrasound is the

best way to count these small follicles and to assess a woman's response to gonadotropin medicines. It is performed in the beginning of the menstrual cycle.

Another test that can be performed is to evaluate your body's response to gonadotropin medication, which is indicated in preparation for various fertility treatments. Gonadotropins contain follicle stimulation hormone (FSH), alone or in combination with luteinizing hormone (LH), and are injected to stimulate the ovaries to develop multiple eggs. As you grow older, higher doses of the medicine are required for the growth of the eggs, indicating a diminish in the ovarian reserve.

The results of these tests predict your response to fertility treatments and your chances of getting pregnant as compared to other women your age. Abnormal test results indicate that your fertility potential has decreased, but does not indicate whether you can conceive or not. Your chances of pregnancy depend on many factors; primarily on egg quality and your age, as even with normal test results, older aged women can have a difficult time conceiving.

Please note no single ovarian reserve test can detect your ability to conceive. The results of these tests are a guide to develop your treatment plan.