

Diminished Ovarian Reserve

The term “ovarian reserve” refers to the number and quality of your eggs, also known as oocytes. If you have diminished ovarian reserve, this means that the number and quality of your eggs is lower than expected for your age.

Diminished ovarian reserve can affect people of all ages. About 10 to 30 percent of patients presenting to doctors with infertility likely to have diminished ovarian reserve.

Age is the most well – known contributing factor to DOR, and probably the most important prognostic factor in fertility treatment of women with DOR. Age-related abnormal vascularization, oxidative stress, free radical imbalance, toxic and genetic changes, all contribute to the declining oocyte quality, which translates into abnormal fertilization, and disordered embryo implantation.

What is Poor Ovarian Response

Poor ovarian response (POR) implies a subnormal follicular response, which means less number of eggs retrieved after ovarian stimulation during IVF. European Society of Human Reproduction and Endocrinology (ESHRE) defined POR using Bologna criteria to standardize the definition, since the variability in the definition of POR was striking.

According to Bologna criteria, POR is defined as “when at least two of the following three characteristics are present”:

1. Advanced maternal age > 40 yrs. or any other risk factors for poor ovarian response.
2. Previous POR (≤ 3 oocytes with conventional stimulation of >149 IU FSH daily), and

3. An abnormal ovarian reserve test (AFC < 5–7, or AMH < 0.5–1.1 ng/ml)

The most important reason for a poor ovarian response is DOR

Causes for Diminished Ovarian Reserve

The main causes for diminished ovarian includes:

- Cigarette smoking
- Radiation therapy
- chemotherapy
- Ovarian surgery, such as excision of endometrioma or dermoid cysts.
- Autoimmune disorders
- Pelvic infection
- Mumps
- Endometriosis
- Genetic abnormalities, for example Fragile X syndrome or other chromosomal abnormalities
- Idiopathic (this means that there is no apparent cause has been identified)

Symptoms related to Diminished Ovarian reserve

Unfortunately, most women exhibit no signs or symptoms. However, those with the condition might experience any of the following symptoms:

- Difficulty getting pregnant
- Abnormal uterine bleeding including late or absent menstrual periods
- Shorter menstrual cycles than average, with the average being 28 days
- Miscarriage

How do we diagnose Diminished Ovarian Reserve?

Diminished Ovarian reserve (DOR) is diagnosed through a few blood tests that measure Follicular stimulating Hormone (FSH), Oestradiol (E2) and anti-Müllerian hormone (AMH) levels. These hormones play a pivotal role in menstruation and reproduction. The test results will provide us information regarding the quantity of oocytes available, not their quality or competence.

These hormone level tests, combined with a transvaginal ultrasound, can detect diminished ovarian reserve with a high level of certainty.

Treatment for Diminished Ovarian Reserve

It's still possible to get pregnant with a diminished ovarian reserve. No treatment can slow down ovarian aging and truly prevent diminished ovarian reserve. Following the diagnosis of DOR, treatments are designed to hasten the time to conception, or to freeze eggs or embryos for future use. Patients may require donor eggs if the ovaries failed to respond with stimulation.

The treatment you pursue will depend on your personal situation, so it's important to talk about all your options with Dr. Saha.

References:

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