

# Even with Diminished Ovarian Reserve You Can Achieve Pregnancy

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### Diminished Ovarian Reserve: What Does it Means

The number of eggs and their quality are reduced at a given age. Women with diminished ovarian reserve have less eggs and more chromosomally abnormal eggs than women in the same age group. It reflects low response to fertility medications and more difficulty achieving a pregnancy. Women with diminished ovarian reserve may reach menopause one or more years earlier. As few eggs remain, still some of the eggs are chromosomally normal and pregnancy is very possible in women with diminished reserve.

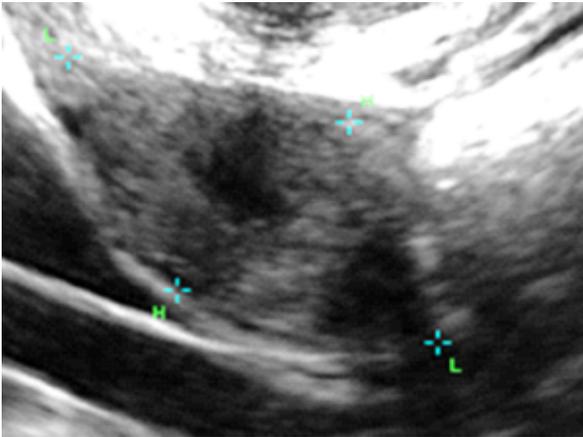
### Diminished Ovarian Reserve: How it is Diagnosed

**History:** Some historical factors may indicate low reserve including cigarette smoking, prior surgery of the ovary (removal of a cyst or an ovary), prior exposure to chemotherapy (particularly cyclophosphamide) or pelvic irradiation, early menopause in other family members (mother, sister), recurrent early first trimester pregnancy loss (indicating low egg quality) and others.

**Day 3 FSH:** It is an indirect marker for ovarian reserve. It is produced by the master gland in the brain. levels > 12mIU/mL indicates low reserve. It is less accurate than AMH or ultrasound.

**AMH:** is a protein produced by the cells surrounding the egg in

small size follicles. It is more accurate than day 3 FSH. Levels  $<1.5\text{ng/mL}$  indicates low reserve



Low antral follicle count  
(Ovarian Reserve)



Good antral follicle  
count (Ovarian  
Reserve)

**Vaginal Ultrasound:** in expert hands (a reproductive endocrinologist), it is an accurate measure for ovarian reserve. The number of small follicles  $<10\text{mm}$  especially on day 2-5 of menstrual cycle is an accurate indicator for ovarian reserve and response to fertility medication. The presence of an advanced follicle  $>13\text{mm}$  on day 2 or 3 is also an indicator for low reserve as it indicates that the ovary is under increased stimulation from FSH produced the master gland.

More details on ovarian reserve tests can be found [here](#).

## **Diminished Ovarian Reserve: What Should you Do**

If all other fertility factors (male factor, tubal factor..) are normal *you should attempt to conceive irrespective of ovarian reserve*. Ovarian reserve tests are not absolutely accurate. They do predict response to ovarian stimulation but are not very good in predicting pregnancy. Two general options exist: i. regular intercourse or ii. ovarian stimulation to produce more than one egg followed by IUI or IVF.

## **Diminished Ovarian Reserve: What Should your Reproductive Endocrinologist Do**

Your reproductive endocrinologist should ascertain ovarian reserve with multiple modalities: ultrasound and blood work. The infertility workup should be completed first: sperm analysis, hysterosalpingogram test for patency of fallopian tubes as well as preconception labs. Your infertility specialist should be able to advise you on the treatment protocol that is more likely to achieve a pregnancy. *Fertility specialist should not deny treatment to women based on diminished ovarian reserve*. Every woman with diminished reserve should be offered treatment at least once.

If the treatment plan involves ovarian stimulation, a special stimulation protocol or adjuvant treatment should be considered hopping at increasing the ovarian response (number eggs produced during the cycle). Some of the modifications commonly used are increasing the dose of gonadotropins, use of antagonist or flare antagonist, addition of clomid or letrozole, pretreatment with testosterone and use of growth hormone.

## **Diminished Ovarian Reserve: What would you expect from fertility treatment**

Well it depends on few factors: **Age and Relative Response to Fertility Medications**

If a younger women e.g <37 years produce two or three good quality embryos at the end of stimulation, they have a reasonable potential to achieve a pregnancy after IVF. The chance of getting pregnant in women older than 40 with few embryos is much lower. When one compare effects of low ovarian reserve and age on reproduction it is clears that age has more negative effect on reproduction than age. Age is associated with low egg quality while ovarian reserve mainly speak for the number of eggs in the ovary. *Younger women with low egg production fairs much better than older women with good reserve.*

Response to ovarian stimulation is not created equal. Women that produce four or more large follicles >15mm are at much better chance for pregnancy after IVF. On the other hand those that have lesser response <3 follicles are a much lower chance for success and should consider converting their cycle to IUI or just cancel the cycle if they have male or tubal factors. They then can try again after considering a modification of the stimulation protocol. In women that produce > 3 -4 eggs IVF is substantially more successful (about three times) than IUI.

Because the response to fertility medication is difficult to judge just based on ovarian reserve markers, most women should be encouraged to try ovarian stimulation once at least and most women should not be denied treatment based on the notion of low ovarian reserve.