FERTILITY UPDATE

SHADY GROVE FERTILITY

AMH Is a Better Indicator for Ovarian Reserve

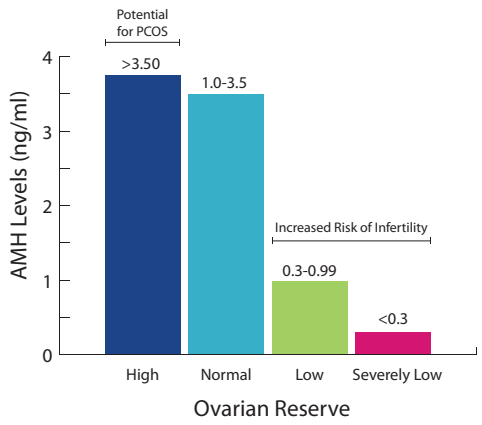
AMH levels provide the earliest marker of diminished ovarian reserve, and reduced AMH levels can indicate a problem before any increase in baseline FSH is seen.

Anti-Müllerian hormone (AMH) is a protein that is produced by the granulosa cells in ovarian follicles. AMH blood levels are produced by the very small pre-antral follicles (less than 6mm), and are thought to reflect the size of the remaining egg supply. As a woman gets older, the size of the ovarian follicle pool decreases and subsequently the AMH also decreases until it is undetectable at the time of menopause. The levels of AMH are fairly constant throughout a woman's menstrual cycle.

When to Test AMH

A big advantage of AMH is that it can be measured anytime during the menstrual cycle. However, some factors that can influence levels of AMH include maternal obesity, smoking, race and use of hormonal contraceptives. It is preferable to test off OCP — pill free Day 7. If a patient on oral contraceptives is found to have a low AMH, retesting is advised after stopping the hormones for a month.

Evaluating anti-Müllerian hormone (AMH), Ovarian Reserve and Infertility



AMH Levels May Be Correlated to PCOS Severity

Women with polycystic ovarian syndrome (PCOS) have a higher number of early antral follicles resulting in higher baseline AMH levels. Women with an AMH value >3.5 mg/ml often will have PCOS. AMH levels may be correlated to PCOS severity and have been found to be higher in women with insulin-resistant PCOS. Women who are amenorrheic are found to have significantly elevated AMH levels compared to women having more frequent menstrual cycles.

For patients undergoing fertility treatment, AMH levels are used to forecast low and hyper-ovarian response to stimulation with fertility medication. Using this insight, medication dosages are adjusted accordingly, resulting in fewer cancelled cycles due to low follicular development and a lower incidence of ovarian hyperstimulation.

AMH Testing Standardized at All Major Laboratories

AMH testing may be ordered through most major laboratories. Recently, the assays measuring serum AMH values have become standardized, which now allows comparison of AMH results between different laboratories. If insurance coverage is not available, the cost for AMH ranges from $70 to $139, depending on the lab.

AMH ICD-9 Test Codes

ICD-9: **V26.21** | LabCorp: **16842X** | Quest Diagnostics: **500183**

Investigation into AMH Continues

Currently, there are several studies on AMH that are advancing our knowledge of its effects on fertility. Some specific areas of research include: investigating AMH and its effects on ovarian responsiveness; using AMH in predicting treatment success, and correlating AMH levels in predicting menopause. As our use and understanding of AMH evolves, we continue to modify our testing and protocols to maximize pregnancy success.

References:

1. *Kallio, SI, Puurunel, J., Rokonen AI et al. Anti-Müllerian hormone levels decrease in women using combined contraception independently of administration route. Fertility and Sterility, Vol.99, No. 5, April 2013, 1305-1310.*
2. *Broer et al. Fertility and Sterility 2009; 91-705-714.*
3. *Broer et al. Current Opinions in Obstetrics and Gynecology 2010; 22: 193-201.*
4. *Fleming et al. Human Reproduction 2006; 21: 1436-1441.*
5. *La Marca et al. Fertility and Sterility 2004; 82: 970-972.*

FERTILITY UPDATE

August 2013

SHADY GROVE FERTILITY

Ovarian Reserve Testing Protocol

- Anti-Müllerian Hormone (AMH) NEW!
- Follicle Stimulating Hormone (FSH)
- Estradiol (E2)
- Antral Follicle Count (AFC)

SHADY GROVE FERTILITY
ShadyGroveFertility.com

The New Standard in Fertility Testing: Anti-Müllerian Hormone (AMH)

The assessment of the ovarian reserve is an important part of the basic infertility evaluation. The addition of anti-Müllerian hormone testing is providing insight into the quantity of remaining eggs sooner and more accurately than with previous tests. Since there is no single test that is definitive in assessing this reserve, testing should be used in conjunction with serum follicle stimulating hormone (FSH), estradiol (E2), and an antral follicle count (AFC). The chart to the right shows the AMH level trend based on age. Patients with an AMH level that falls below the average for their age are more likely to experience infertility, while levels ranging above can indicate PCOS.

READ MORE INSIDE ▸