

MEDICAL UPDATE

AMH Testing: FAQs for Women Considering Egg Freezing or Those Trying to Conceive

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 8mm), and are thought to reflect the size of the remaining egg supply. AMH levels provide the earliest marker for diminished ovarian reserve, before any increase in baseline FSH is seen. 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.

Should women considering egg freezing undergo AMH testing?

AMH is now part of the standard testing protocol for all patients at Shady Grove Fertility, especially those considering freezing their eggs. For women who are considering egg freezing, AMH level is a crucial data point to consider. Higher AMH levels indicate a healthy ovarian reserve while women with lower than expected levels for their age should consider freezing sooner rather than later. Understanding the current status of their ovarian reserve helps women make an informed decision as to when is the best time to freeze.

It is worth noting that AMH testing is also appropriate for women who are actively trying to conceive.

When is the best time in the cycle to test AMH levels?

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 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.

1. Pigny P, Gorisse E, Chulam A, et al. Comparative assessment of five serum antimüllerian hormone assays for the diagnosis of polycystic ovary syndrome. Fertility and Sterility. 2016;105(4):1063-1069.

Do high AMH levels suggest the patient has PCOS?

Women with polycystic ovary syndrome (PCOS) have a higher number of early antral follicles resulting in higher baseline AMH levels. Women with an AMH value >4-5 ng/ml are more likely to have PCOS¹. 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 with women who have more frequent menstrual cycles.

How do AMH levels impact treatment recommendations?

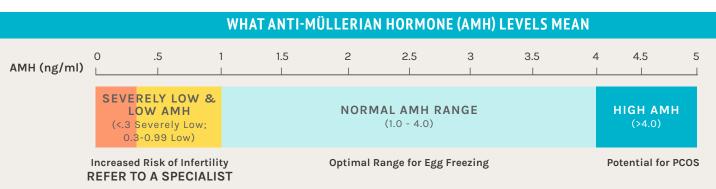
For patients undergoing fertility treatment, AMH levels are used to forecast low and hyper-ovarian response to stimulation with fertility medication. Using this insight, medication dosages are adjusted accordingly, resulting in fewer cancelled cycles due to low follicular development and a lower incidence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

Where should I send my patients for AMH testing?

AMH testing may be ordered through most major laboratories. 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.

Investigation in 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.





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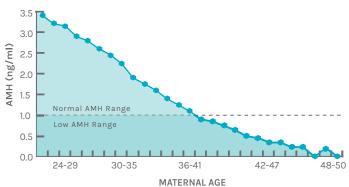
Answering Your Most Common Questions about AMH Testing

Understanding and utilizing the most reliable methods available to assess a woman's ovarian reserve is an important step when evaluating her fertility. Testing a woman's AMH level has proven to provide a more accurate look into the quantity of remaining eggs sooner and more accurately than with previous tests. 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.

AMH testing is still a relatively new assessment and as a result referring physicians often have questions such as who should have their AMH tested, at what point in the cycle should the test be completed, and where to send patients for testing.

GET YOUR AMH QUESTIONS ANSWERED ▶

Anti-Müllerian Hormone (AMH) Median Values by Age



Wiweko B, Prawesti DM, Hestiantoro A, Sumapraja K, Natadisastra M, Baziad A. Chronological age vs biological age: an age-related normogram for antral follicle count, FSH and anti-Müllerian hormone. J Assist Reprod Genet. 2013 Dec; 301(2): 1563-7. doi: 10.1007/s10815-013-0083-1.

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