

Centre for Reproductive Medicine

Anti-Müllerian Hormone (AMH) Testing

What is AMH?

Anti-Müllerian Hormone (AMH) is produced by small follicles (pouches which contain the eggs) growing in the ovary. It can be measured in a blood test. The level of AMH reflects how many follicles are growing, which gives an indication of how many eggs are present in the ovary. The number of eggs present in the ovary declines as we age, until the menopause, when the supply runs out. The more follicles that are growing, the higher the level of AMH in the blood. We can use this AMH measurement to predict how strongly the ovaries will respond to the hormones used in an IVF cycle.

Certain factors may affect AMH levels. In particular, if you have polycystic ovaries (PCO), more small follicles are growing in your ovaries, making it likely that you will respond vigorously to the stimulation drugs. In this situation, your levels of AMH may be elevated. We can identify this and use the information to modify your hormone doses accordingly. AMH is also increased in certain pathological tumours of the ovary such as a granulosa cell tumour but these occur rarely.

Similarly, if you have a low number of growing follicles, for example due to previous illnesses and pelvic operations, chemotherapy or because you are approaching the menopause, we can identify this through low AMH levels and adapt your dosage of gonadotrophins to try to compensate, but this may not always help.

What are the pros and cons?

Having AMH test results available allows us to optimise and individualise your personal stimulation schedule, giving you the best chance of achieving optimal stimulation and avoiding a cancelled cycle due to unexpected over or under response. This is the main advantage of AMH testing.

Research has shown that AMH measurement is the most reliable method of predicting the likely response of the ovary, (better than other tests that you might have heard of, such as FSH or inhibin). However, unfortunately, the NHS does not fund AMH measurement, so we have to ask patients to pay for it themselves. The current cost can be found on the price list. Payment is accepted by card or cheque only. This is the main disadvantage.

Why do I need this test?

It is up to you whether you wish to have the AMH test but we recommend this test in all women undergoing fertility treatment. The benefits that we perceive are that it improves the doctor's ability to prescribe the best individualised stimulation regime for your personal needs. In this way, we will optimise your treatment and give you the best chance of achieving a successful outcome, so we recommend that you have it done, especially if you are in one of the following situations:

- Previous poor response
- Older women (age>35)
- If you have ever had a high FSH or a high E2 blood test result
- Low antral follicle count on scan examination.

- Polycystic ovaries (PCO/PCOS)
- Uncertainty about response to gonadotrophin injections.

What do I have to do?

Once you have agreed to take the test, and paid for it, you will have the blood taken.

The test does not have to be taken at any particular day or time.

Normally one test is sufficient, however, we might recommend for it to be repeated if there has been a long delay (over a year) since your last test. This is because the AMH levels do change over time.

How to obtain your results

To obtain your results, you can contact the Centre's **Nurses Helpline** on **(024) 76 968856**. When calling for your results, the nurse will give you your personalised result linked to your age. What this means for you individually and any treatment plans will be discussed in further detail with you at your next appointment.

Elecsys AMH in healthy women (493 women not taking oral contraceptives):

	<i>n</i>	AMH Percentile Values (pmol/L)				
		<i>5th</i>	<i>10th</i>	<i>Median</i>	<i>90th</i>	<i>95th</i>
Healthy women						
20-24 years	115	11.9	13.4	28.3	52.1	67.8
25-29 years	242	8.4	13.1	23.8	53.8	65.4
30-34 years	110	4.8	6.8	19.7	47.8	53.9
35-39 years	57	-*	5.5	14.6	37.4	-*
40-44 years	41	-*	0.7	7.6	21.1	-*
45-50 years	28	-*	0.3	1.6	14.7	-*

* Due to low numbers of patients in the older age groups, the extreme percentiles were not calculated

If I need further advice?

Please talk to a member of the clinical staff if you have any questions about AMH testing or any other aspect of your treatment. We will be pleased to help.

The Trust has access to interpreting and translation services. If you need this information in another language, please contact the Quality Manager on (024) 76968864, and we will do our best to accommodate your needs. The Trust operates a smoke free policy.

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