TOPIC 10 · AGE, AMH & OVARIAN RESERVE

What age, AMH, AFC and ovarian-reserve markers can - and cannot - tell us about natural conception and IVF.

Why 8 core sources?

Eight is the ideal number here. This topic must separate two questions that are often confused: how many oocytes may be available, and what the actual probability of pregnancy is. These sources combine major contemporary ACOG/ASRM guidance with a systematic review and IVF/PGT-A studies showing where AMH is useful, where its predictive power ends, and where age and embryonic chromosomal competence become more important.

The evidence in context

Age, AMH and ovarian reserve are related, but they are not interchangeable. Age affects oocyte quantity and, crucially, the probability of chromosomally competent oocytes. AMH and AFC mainly reflect the available follicular pool and are useful predictors of ovarian response to stimulation. They do not predict natural conception, the quality of an individual oocyte or live birth with the same accuracy. A low AMH may therefore mean fewer oocytes in an IVF cycle without meaning that natural conception is impossible. Likewise, a high AMH does not cancel the effect of age on oocyte quality. The correct message is individualised interpretation - not panic over a number.

1. ACOG (2025)

Anticipatory Counseling Regarding Ovarian-Factor Fertility Decline

Original source

What it studied → A contemporary ACOG statement on the natural decline in female fertility with age, focusing on both oocyte quantity and quality and the importance of anticipatory counselling.

What it found → ACOG emphasises that fertility declines with age because both the number and quality of oocytes decrease. Declining ovarian reserve is a natural part of reproductive ageing.

What it means in practice → Age remains the strongest general predictor of reproductive potential. Counselling should be realistic without turning an age threshold into an absolute prediction for an individual woman.

Limitations → A clinical statement rather than a single RCT. It describes population-level trends and cannot precisely predict the outcome of an individual attempt.

2. ASRM Practice Committee (2020)

Testing and interpreting measures of ovarian reserve: a committee opinion

Original source

What it studied → Official ASRM guidance on AMH, antral follicle count (AFC), FSH and other ovarian-reserve markers, and what they can and cannot predict.

What it found → AMH and AFC are useful predictors of ovarian response and expected oocyte yield during stimulation. They are poor independent predictors of natural fecundity and much weaker than age for reproductive success.

What it means in practice → Low AMH does not mean 'I am infertile', and high AMH does not guarantee pregnancy. AMH is mainly a marker of quantity/response, not a simple fertility score.

Limitations → Ovarian-reserve tests are more useful for treatment planning than for predicting natural conception. Interpretation depends on age, history and clinical context.

3. ACOG (2019)

The Use of Antimüllerian Hormone in Women Not Seeking Fertility Care

Original source

What it studied → An ACOG committee opinion on the use of AMH in women without diagnosed infertility and whether it should be used as a screening test of future fertility.

What it found → ACOG states that AMH generally should not be used to counsel non-infertile women about their current reproductive status or future fertility potential.

What it means in practice → A random AMH test should not become a prediction such as 'you have X years of fertility left'. This is an important counterweight to fertility testing outside appropriate clinical context.

Limitations → The guidance mainly concerns women not seeking fertility care. In infertility and ovarian-stimulation planning, AMH has a different and more established clinical role.

4. ASRM Practice Committee (2021)

Fertility evaluation of infertile women: a committee opinion

Original source

What it studied → A guideline on systematic evaluation of female infertility and the role of ovarian-reserve testing within the broader clinical assessment.

What it found → ASRM stresses that poor ovarian-reserve test results do not necessarily imply inability to conceive. Results should be interpreted alongside age, history, risk factors and prior treatment response.

What it means in practice → AMH should never be read in isolation. The useful question is not simply 'what is my AMH?' but 'what does this value mean within my overall clinical picture?'

Limitations → A guideline for infertility evaluation, not an individual prediction tool. The value of testing depends on why it was ordered and which clinical decision it is meant to inform.

5. ASRM Practice Committee (2022)

Optimizing natural fertility: a committee opinion

Original source

What it studied → An ASRM review of natural fecundability, age-related fertility decline and ovarian-reserve markers in women attempting conception.

What it found → Natural fertility declines with age, and ovarian-reserve markers also decline. Nevertheless, reserve markers are poor predictors of short-term natural fecundity in women

without infertility.

What it means in practice → Age and AMH are not the same thing. Age relates to both oocyte quantity and quality, while AMH mainly reflects the size of the remaining follicular pool.

Limitations → Population-level guidance. It cannot predict exactly when an individual woman will conceive or turn a biomarker into a personal fertility countdown.

6. Iliodromiti et al. (2014)

The predictive accuracy of anti-Müllerian hormone for live birth after assisted conception: a systematic review and meta-analysis

Original source

What it studied → A systematic review/meta-analysis examining whether AMH predicts live birth in women undergoing assisted conception.

What it found → AMH showed some association with live birth, but its predictive accuracy alone was insufficient for use as a reliable standalone test of whether a woman will have a baby.

What it means in practice → Even in IVF, where AMH is very useful for predicting ovarian response, it should not be treated as the final measure of success. Age, embryo factors and many other variables remain critical.

Limitations → An older meta-analysis with heterogeneity in assays, protocols and populations. AMH testing and IVF practice have evolved since publication.

7. Jaswa et al. (2021)

Diminished ovarian reserve is associated with reduced euploid rates via preimplantation genetic testing for aneuploidy independently from age

Original source

What it studied → An IVF/PGT-A study examining whether diminished ovarian reserve is associated with lower euploid embryo rates independently of age.

What it found → Women with diminished ovarian reserve had lower euploid rates in this study even after adjustment for age, suggesting a possible relationship beyond oocyte number alone.

What it means in practice → The relationship between ovarian reserve and embryo competence may be more complex than 'quantity only'. However, an observational finding does not overturn the broader evidence that age remains the dominant predictor of aneuploidy.

Limitations → A retrospective/observational IVF population with possible selection bias and protocol dependence. Findings cannot automatically be generalised to natural conception.

8. Irani et al. (2019)

Does maternal age at retrieval influence the implantation potential of euploid blastocysts?

Original source

What it studied → A retrospective cohort of 785 frozen euploid embryo-transfer cycles examining whether maternal age at retrieval affects implantation and live birth once a euploid blastocyst has been selected.

What it found → Older age was associated with fewer euploid embryos, but among women who had a euploid blastocyst available for transfer, implantation and live-birth rates were similar across age groups.

What it means in practice → Age strongly affects the probability of producing a euploid embryo. Once a euploid embryo is available, however, its implantation potential may be much less dependent on maternal age.

Limitations → A retrospective single-centre IVF/PGT-A study. It concerns women who already had a euploid embryo available and therefore does not describe the whole age-related decline before that point.

Library conclusion

AMH is an important clinical marker, but it is not a fertility verdict. Its strongest role is estimating ovarian reserve and expected response to stimulation. Age remains a stronger general predictor of reproductive potential because it also relates to oocyte quality and aneuploidy. The website should avoid both false reassurance from a high AMH and alarm from a low AMH. No value should be interpreted outside age, history, ultrasound findings and the wider fertility assessment.

Template for future maintenance

Maintain separate evidence categories for age-related fertility decline, AMH/AFC and ovarian response, natural fecundability, embryo euploidy/aneuploidy and live-birth prediction. Classify every new study by outcome: oocyte yield, clinical pregnancy, euploid embryo or live birth. For every new source: Full citation + link → What it studied → What it found → What it means in practice → Limitations → Date last reviewed.