

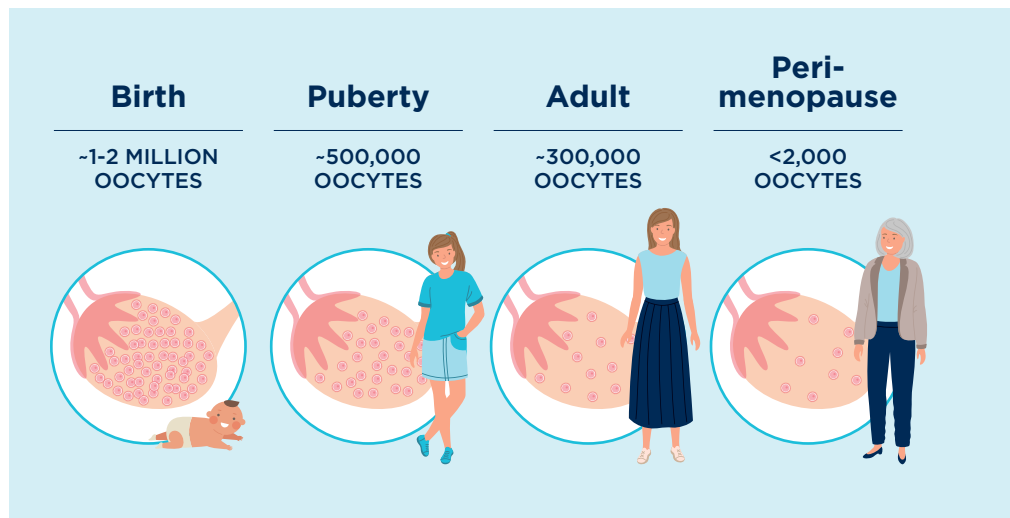


How Age Affects Fertility

Ovarian Reserve

Female children are born with all the oocytes (eggs) they will ever have but the quantity and quality of these eggs deteriorate with age. The number of oocytes at any point in time is called the ovarian reserve. After menopause less than 2,000 will be left from the millions of oocytes at birth. Whilst only one mature egg is released in a menstrual cycle, thousands more succumb every month by a process called atresia.

From the age of 35, ovarian reserve declines at a faster rate until menopause and the risk of miscarriage increases due to declining egg quality.



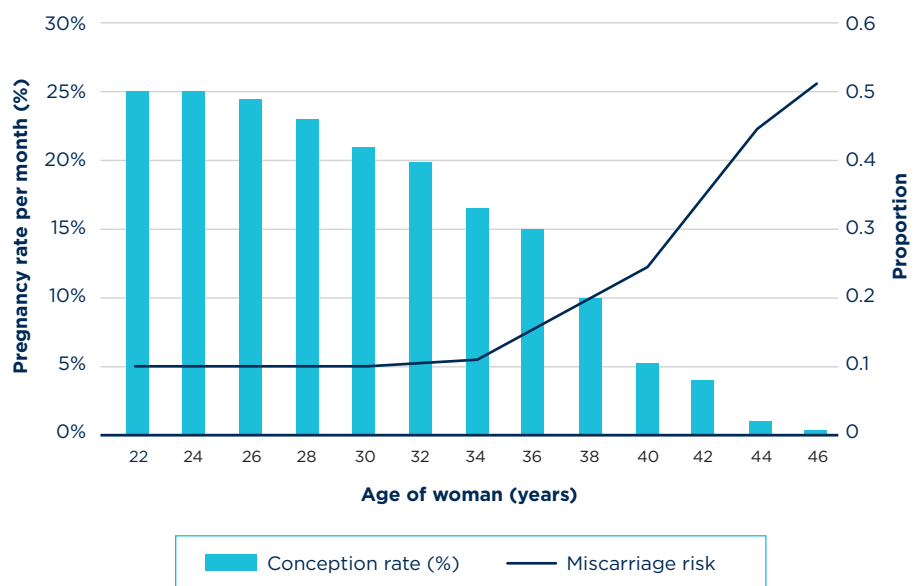
Ovarian Reserve Testing

Anti-Mullerian Hormone (AMH) is a hormone produced by the follicles in the ovaries that contain the eggs. The level of this hormone in your blood indicates the ovarian reserve i.e. how many eggs are available at that point in time. This is important as it doesn't predict future fertility.

An AMH test can be done at any point during the menstrual cycle, however estrogen-containing contraceptive pills and implants can affect AMH levels, so a three month gap is required between stopping and taking the test. (There is no need to remove Mirenas)

AMH test results can also be affected by some supplements, notably high-dose Biotin (Vitamin B7) often found in hair and nail formulations, so we recommend to stop taking them a few days prior to testing.

Estimated Monthly Pregnancy Rate and Miscarriage Risk



Genia Rozen, Kate Stern - AJGPPVol.52, No.1-2, Jan-Feb 2023

Guidelines for Fertility Investigations

Initial fertility investigations should start if the female patient is under 35 and has been trying to conceive for 12 months OR is over 35 and has been trying for 6 months. Flinders Fertility typically orders the following tests, however if there are time constraints GPs can order these:

♀ Female Investigations

→ Preconception Screen

- 3 gene RCS
- Expanded Carrier Screen (optional)*
- BMI (incl height + weight)
- Blood group and antibodies
- FBC (+ Iron studies and Thalassaemia screen as indicated)
- Rubella, Varicella, Syphilis, Hepatitis B/C, HIV serology
- TSH (aim of <2.5)
- Vitamin D

**Medicare does not cover the costs for expanded carrier screening. Out-of-pocket costs are in the region of \$600.*

→ Fertility Hormones

- Cycle day 2-6: LH, FSH, Oestradiol,
- AMH (any day in menstrual cycle, but must not have been using estrogen-containing contraceptive pill or implant for 3 months)*
- Mid-luteal Progesterone (i.e. Cycle day 21 in 28 days cycle)
- Free Androgen Index (FAI), Testosterone, and SHBG if PCOS is suspected

**Medicare does not cover the cost of the AMH blood test. An out-of-pocket fee of \$95 applies.*

→ Ultrasound

- Cycle day 2-6 Pelvic ultrasound (request for Antral Follicle Count)

Low Ovarian Reserve and Fertility

Females with low ovarian reserve for their age have reduced fertility due to a decrease in the number of eggs available. There is also a small amount of evidence to suggest an increased risk of miscarriage.

The most effective therapy available for low ovarian reserve is to consider starting a family sooner or freeze eggs or embryos for the future when ready to start a family.

A Flinders Fertility doctor will take into consideration individual circumstances and talk through what options are available.

Age and male fertility

While infertility is often thought of as a 'female' issue, in almost half of cases that we see there is a male factor and ageing often plays a part. While ageing doesn't generally affect male fertility until into the 40s, it can lead to problems in sexual function and sperm quality.

These problems include a decrease in sperm concentration and sperm motility (the ability for sperm to move effectively and reach the egg), a reduction in sperm morphology (the size and shape of the sperm) and a decline in sperm DNA quality. Each of these factors can make it difficult for sperm to fertilise an egg and impact the ability of a couple to conceive.

There is also some evidence to suggest that advanced paternal age is associated with an increased risk of neurodevelopmental disorders such as autism.

Referring to Flinders Fertility

Early intervention is paramount to give patients more control over their reproductive future.

We are unable to treat females over the average age of menopause (51). Due to the low chance of success, we do not offer IVF treatment to females over the age of 45 unless they have previously frozen eggs or embryos, or have an egg donor available; we recommend referring these patients to clinics with egg banks.

Please include the following in referrals:

- Relevant medical information
- Date of Birth
- BMI or height and weight*
- Current medications
- Any known allergies
- Results of previous investigations or copies of correspondence from previous assessments of infertility if any)
- Up to date CST result
- Partner's name and date of birth, if applicable

Please send referrals via:

Healthlink to FLINDFRT
or **enquire@flindersfertility.com.au**
or **fax 08 8155 5330**

**We cannot perform procedures on patients with a BMI over 40 or who weigh more than 120kg, so we recommend your refer to clinics that operate at Ashford Hospital or St Andrews Hospital.*

♂ Male Investigations

- Hepatitis B/C, HIV serology, Syphilis

→ Semen Analysis

SA Pathology or another hospital-grade lab

Element	Reference
Volume	≥1.5mL
Concentration	≥15million/mL
Progressive motility	≥32%
Normal morphology	≥4%

→ Please send all referrals via **HealthLink to FLINDFRT** or **enquire@flindersfertility.com.au** or **fax 08 8155 5330**

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