MelbourneIVF
A MEMBER OF VIRTUS HEALTH

Egg freezing

for future fertility

mivf.com.au ◆ 1800 111 483

YOUR FERTILITY FAMILY

Egg freezing provides the opportunity to preserve the potential for fertility for women who are not currently ready for a pregnancy or whose fertility is at risk.

What is egg freezing

Medical egg freezing relates to women whose fertility is affected or likely to be affected by conditions such as tumours of the ovary, chemotherapy, radiotherapy and/or other medical indications.

Egg freezing can be performed electively or for medical reasons. Elective egg freezing generally relates to women who wish to have a child or children in the future, but who do not have the opportunity to do so during their most fertile years. It may be seen as a way of reducing the risk of future infertility.

Egg freezing is now also acknowledged as a potentially helpful option with good survival rates and similar outcomes to standard IVF.

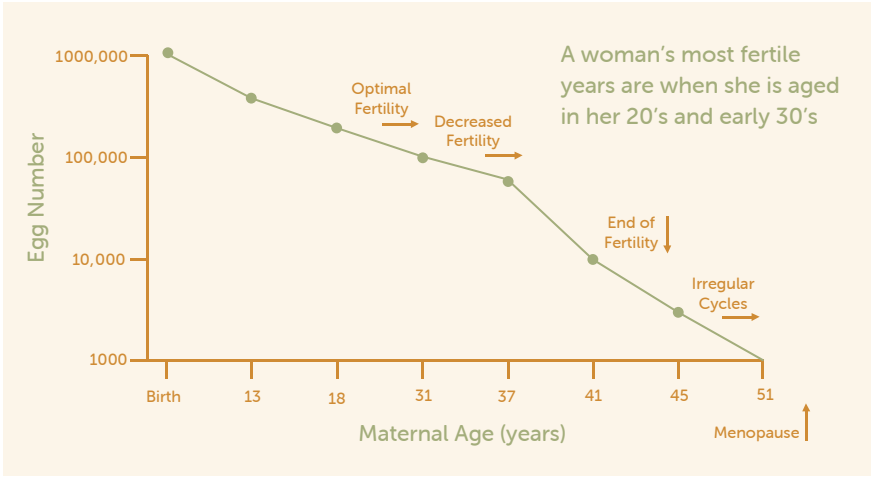
Recent work by Australian and international scientists has resulted in improved techniques for egg freezing and thawing and there have now been over 5000 babies born (worldwide) after egg freezing, with no increased risk of problems compared with standard IVF.

Ovarian function, fertility and age

During a woman's reproductive years, the ovary contains hundreds of thousands of immature eggs.

Usually, over the course of a few weeks, multiple immature eggs start to develop in a wave and then most stop growing, while one ripe ("mature") egg continues to develop and is released each cycle. As a woman gets older, the number of eggs available to go through the maturing process becomes less, until by the age of 50 or so, no healthy eggs remain.

A woman's most fertile years are when she is aged in her 20s and early 30s, when the ovaries still contain a large number of healthy eggs. For the 10–15 years prior to menopause, despite a woman having regular ovulatory cycles (monthly periods), the ovarian function deteriorates. This is especially so in women in their forties who have less chance of producing a healthy pregnancy because of the age-related decline in egg quality.



Why should I consider egg freezing?

Age-related infertility in women is one of the most common issues presented to fertility specialists each day when trying to help patients become pregnant.

At Melbourne IVF, we encourage all initiatives which can educate and improve social support so that women can optimise their chances of having a family before the natural decline of ovarian function. However, we recognise that for some women, child-bearing has been or will be unavoidably delayed.

Our scientists have been at the forefront of infertility-related research and scientific work since the development of IVF treatment options. Indeed, our Melbourne IVF oocyte (egg) scientist team has published widely in the medical literature with regard to freezing and thawing techniques. We have many successful births from our egg freezing program.

With these advancements in scientific techniques, we are able to offer egg freezing to enable more patients to explore all their reproductive options.

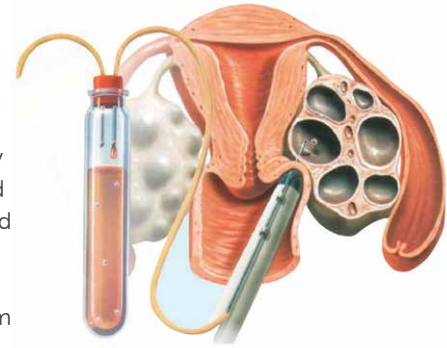
How does it work?

To obtain eggs for freezing, a woman will usually undergo hormonal stimulation over 10–12 days enabling a group of eggs to mature. The number of eggs retrieved will relate to each woman's individual circumstance. With normal ovarian reserve for women under 35, 6-15 eggs on average would be obtained.

There are a variety of stimulation techniques, and your doctor will decide, in discussion with you, which is the most appropriate for your treatment. The stimulation medications are usually self-administered by pen injection using a tiny needle under the skin, and are very easy to administer. Patients are taught how to do this in an instructive introductory session. The injections may make the woman feel a little bloated but most women function normally up until the day of the egg retrieval.

Procedure to remove eggs

The eggs are removed from the ovaries in a minor procedure performed under sedation (patients are asleep for the procedure) which takes about 15 to 20 minutes. This procedure is performed by the fertility specialist using an ultrasound guided probe. Attached to the ultrasound probe is a needle guide. The fine needle passes through the vaginal wall into the ovary and draws the fluid (and eggs) from the ovary.



Patients can go home with a companion about one hour after the procedure and are advised to rest quietly for the remainder of the day.

Egg freezing procedure

The eggs undergo a freezing procedure in the IVF laboratory, using the latest scientific technology, called vitrification (fast freezing). Eggs may be stored for many years without deterioration.

When the woman is ready to use her eggs, they are thawed, and then fertilised with sperm, developing into embryos which are then grown for several more days. A blastocyst (matured embryo) can then be transferred to the woman's uterus, with a subsequent chance of pregnancy.

Risks of egg freezing

Egg freezing is considered a safe procedure, but as with any medical treatment, there is a risk of potential complications. These relate to the hormonal stimulation and the egg collection procedure.

Administration of any hormones used for stimulation may slightly increase the risk of a thrombosis (clot). If you have a strong family or personal history of clots, then you need to inform your doctor of this.

Possible side effects of the stimulation include under- and over-stimulation of the ovaries, and rarely, failure to obtain eggs. Egg pick up may be complicated by pelvic infections or other pelvic trauma, although this is very uncommon.

Further information regarding treatment-related complications is provided in the Melbourne IVF consent form for operative procedures.

Other risks of egg freezing relate to the possible failure of the treatment: the eggs may not survive the thawing procedure, may not fertilise or develop into embryos, or may not result in pregnancy after embryo transfer.

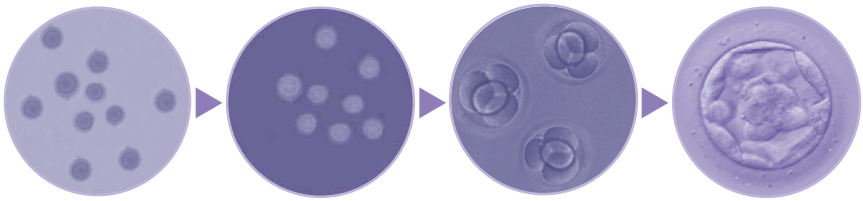
A woman contemplating egg freezing should also consider other options which may be available to her both now and in the future. These include donor insemination or the possible future use of donor eggs if her own ovarian function is likely to be lost.

It is important to understand that there is an increased risk of pregnancy complications such as high blood pressure and gestational diabetes, which occur in older women, unrelated to the age of the eggs, but related to the age of the woman carrying the pregnancy.

How many eggs should I freeze?

It is very hard to accurately predict the number of eggs to be retrieved and the number of viable embryos which will be ultimately created. The expected success of the procedure can be partly indicated from an initial assessment of the ovarian reserve via an anti-müllerian hormone (AMH) test and an ultrasound. The AMH test can provide an insight into the remaining quantity of eggs although it does not give any information about the quality of the eggs.

Other factors, especially the woman's age when her eggs are frozen, have an important effect on the chance of pregnancy: the younger the woman is aged, the better the chance. The success of the process largely relates to the age of a woman at the time the eggs are frozen. For example, egg freezing in women over the age of 37–38 would be expected to have a lower chance of pregnancy.



10 eggs frozen | 8-9 eggs survive thaw process | 2-4 embryos once fertilised | 1-4 Blastocyst

Success rates

The live birth rates using frozen eggs depend heavily on the age of the woman when the eggs were collected and frozen, irrespective of the age at attempted pregnancy.

The age at egg collection also influences the chance that a mature egg will successfully thaw, fertilise, develop to blastocyst and become a live birth.

On average, to achieve a 50% chance of having at least one live birth at a later age, a woman would need to have frozen at least 7 mature eggs at or before 35 (~1 egg collection), 15 eggs at 38 (~2 egg collections) or 25 eggs at 40 (~4 egg collections)

Currently we would expect that:

- A stimulated cycle would ideally result in the collection of 10–15 eggs (for women under 35) but this is extremely variable and depends on many factors including a woman's age, general health, ovarian reserve and current ovarian function.
- A single embryo would have a 30-40% chance of developing into a clinical pregnancy for women under 38 years, with the same chance of miscarriage as any other woman of the same age. However for every 10 eggs collected, as with fresh eggs, only one to four embryos would be expected to develop.
- Please note that all information relates to a non smoker. Smoking significantly impairs fertility and reduces egg quality.

How to access our egg freezing program

You may be referred by your local doctor, medical specialist, or a counsellor directly to a fertility specialist associated with Melbourne IVF.

The fertility specialist will take a medical history, arrange any necessary investigations including blood tests and ultrasound assessment of the ovaries, explain the process and its implications, inform you about success rates for your specific situation, and arrange a counselling referral if appropriate. If you choose to have egg freezing, the fertility specialist will then manage your care throughout the stimulation and egg collection procedure.

For further information you can contact our public liaison co-ordinator on 1800 111 483 or visit mivf.com.au.

Costs

The cost for an egg freezing cycle varies depending on the patient's individual circumstances.

If you are required to freeze eggs for specific medical reasons Medicare may provide a rebate on the costs. The out-of-pocket costs are much higher for elective egg freezing.

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