

# Egg Freezing

## Women freeze their eggs for one of two reasons

1. Elective: **freezing eggs** to use later on to avoid age related decrease in egg quality and number. This is a fertility solution for fertile women.
2. Medical indication: women diagnosed with cancer and require surgery or chemotherapy that will reduce ovarian function, egg donation and egg banking, failure of the the male to produce sperm at the time of IVF.

## Is egg freezing suitable for me?

You need *personalized information* about ovarian reserve and reproductive system before deciding on egg freezing. [Ovarian reserve](#) is an estimate of the number of eggs in the ovary and their quality. The number of eggs is estimated using vaginal ultrasound for antral follicle count, AMH levels and day 2 or 3 FSH and estradiol. AMH levels > 1.5ng/dL and antral follicle count > 12 indicate decent number of eggs in the ovaries.

Egg quality is reflected by age. The younger the age, the more chromosomally normal eggs are available in the ovary.

Women 38 or younger freezing more than 8 eggs have excellent chance to become pregnant when eggs are thawed, fertilized and transferred to the womb. Live birth rates decline with age but some live births took place from eggs frozen up to age 44.

Approximately 90% of eggs stored using vitrification survive thawing and 75% of them fertilize. Each egg thawed has the potential to produce a baby approximately 10% of the time (5 to 15% depending on age). Commonly, three to four eggs are thawed and two to three embryos are transferred. This will yield a reasonable live birth rate per cycle. The [American Society For Reproductive Medicine](#) does not consider egg

freezing an experimental technology anymore.

## **What do I need do to freeze my Eggs?**

*Ovarian stimulation:* using injection medications to recruit multiple follicles and produce multiple eggs, instead of one egg only in a natural cycle. Medicine is self injected daily for approximately 10 days and monitored using estrogen levels and ultrasound every two to three days. A trigger injection is finally given.

*Egg retrieval:* eggs are harvested under sedation 36 hours after the trigger injection. **Eggs** are obtained using a needle through the vagina without an incision.

*Egg freezing:* [Vitrification](#) method is used. Four hours after retrieval, Mature eggs are mixed with a cryo-protecting solution. Two to three eggs are placed on a special device cryotop that is sealed and plunged in liquid nitrogen or nitrogen vapor. Immature eggs can also be frozen.

The cycle can be repeated. Also some of the eggs can be fertilized using donor sperm if desired.

## **What happens after I freeze my eggs?**

Frozen eggs Can be stored for a very long time, possibly indefinitely. Eggs can also be transferred to other facilities or countries.

*When you are ready, with a partner:* try natural conception, investigate other fertility factors, consider fertility treatment or finally use the eggs.

*When you are ready, without a partner:* try IUI using donor sperm or IVF using donor sperm or fertilize the frozen eggs with donor sperm.

*Utilizing your **frozen eggs:*** The steps to utilize your eggs are

1. Preparation of the lining of the uterus using estrogen

- (no injections) or during your natural cycle,
2. Egg thawing in the embryology lab,
  3. ICSI: injection of one sperm into each egg,
  4. Embryo development and transfer is observed in the lab and
  5. Transfer of one or more embryos into the uterus

## **Is egg freezing safe?**

Babies born after thawing the eggs, fertilization and transfer into the uterus do not have higher risk of abnormalities compared to those born from after transfer of thawed embryos or naturally conceived. However, there has not been as much babies born using this technology or long term follow up as in the case of embryo freezing.

## **Conclusion**

If you did not attempt to conceive by age 30 or earlier, *consider* evaluation of ovarian reserve and egg freezing if you do not intend to get pregnant soon. Obtaining personalized information about egg reserve is the primary step in deciding if **egg freezing** is suitable for you.