

The Questions and Answers Surrounding Egg Freezing

Vicken P. Sepilian, MD, MMS, FACOG, REI

How long can eggs be frozen and does their viability decrease with age?

As far as we know, eggs can be frozen indefinitely. There is no direct evidence to this effect, but we can extrapolate evidence we have that pertains to frozen embryos and sperm that shows that once they're frozen at the correct temperature, their survivability and shelf life doesn't seem to matter. We've had successful pregnancies from eggs frozen as short as a few months to a few years. As more people do this and it becomes more common, we'll have more data. We seem to think the length of time the eggs are frozen really doesn't matter.

Why would a woman freeze her eggs?

Typically, women who freeze their eggs are women who want to defer or prolong their fertile potential for whatever reason and they are single. There could be medical reasons like a woman of reproductive years who has been diagnosed with cancer that will require chemotherapy. Some of the rheumatological conditions that require chemotherapy that could potentially be toxic to the ovaries and may deplete the number of eggs that woman has - hence reduce their future potential to have children. Radiation is another thing that could impair a woman's fertile potential down the line. So, these are some examples of certain medical conditions why women may consider freezing their eggs to have children down the line.

Some women choose to have children later on down the line for whatever reason - maybe they haven't met the right partner yet or they haven't even considered settling down - like personal choices, professional aspirations, or education. That woman would like to freeze her eggs so that she would have that option to have a biological child. The woman who is the best candidate is one who is before the age of 35 preferably; the oldest woman we've done it for is 37 years old. The younger the woman is, the better it'll be.

Say a 25 year old woman freezes her eggs, how many will be successfully de-thawed in ten years?

We want to get as many eggs as possible. The more eggs we have the better; the more potential we'll have for success. We've done close to 50-60 cycles - some in a research situation so we do have some data, and most of the time we don't get them as young as 25 years old. The average age of the women who came to us during the study period was 32 years old. Of those, the survival rate was 81% - we had thawed 395 eggs and 320 survived. If we were to extrapolate these numbers for a 25 year old woman, it would hold right there. For every five eggs that were frozen four would survive.

Success rates?

Ultimately success is not necessarily a pregnancy, but taking a healthy baby home. As far as the clinical pregnancy rate per thaw - we've achieved about 80%. Of the 20 thawed cycles, 16 of them achieved the clinical pregnancy. This may not apply to everyone, but in our study with these women who had previously proven to be fertile, we achieved a very good pregnancy rate. Of those 20 patients, 12 ended up taking babies home, so the take home pregnancy rate was 60%. Again this is a small group and these were previously proven to be healthy, fertile women.

Can eggs be transported?

They can be transported, just like embryos can be transported. However, the technique by which an egg is frozen, thawed, or vitrified, and warmed, are very specific to the center. Variations in the methodology can make or break the survival potential. While they can be transported - the center to which they're being transported would have to know exactly how to handle or warm the vitrified oocytes to ensure they have a very high survival rate.

As this type of technology advances, do you think we'll see the average age of a first time mother rise?

The potential is there. Obviously this is just a supplemental option. Let's say a woman who is 30 comes back after freezing her eggs and now she's 40 and wants to get pregnant. I'd counsel this patient to try on her own for a few months. If she wants to achieve pregnancy then we'd offer some of the traditional methods we have to help her get pregnant - whether it's insemination or in vitro fertilization. If that doesn't work, then the frozen eggs are the option on which we'd fall back. If that woman didn't have her frozen eggs available, it's not the end of the world because there is still the option of egg donation. Essentially, this gives us another option before that woman pursues egg donation. While it does have the potential to delay motherhood - those women who typically come in, in those age groups, still have the potential to get pregnant through egg donation. Having frozen eggs probably won't alter that age.

Are there any downfalls to using frozen eggs versus fresh eggs?

We would like fresh eggs over frozen eggs. We don't fully know what the implications are of the freezing process. It's still an experimental technology and as far as we can tell everything seems to be okay. The embryos formed from frozen eggs in the event that they do result in a pregnancy, seem to be okay - as far as we know there is no report of any increased abnormalities in the offspring that are born. Nevertheless, it's a technology that is at its infancy and we don't have the full data we need to say, yes it's okay and we can use it as well as we can with fresh eggs. I would use fresh over frozen - if there's an option.

What age is the cutoff?

There typically isn't a set number that we would say that it's too late, however we would want to evaluate that patient and make the determination after the evaluation. As a ballpark, we try to say if we're considering this they should have it before they reach the age of 37. We do some ovarian reserve testing and based on that patient's history, and previous reproductive history we can make some decisions. It's very important for patients to fully understand what they're getting themselves into - the success rates and experience of the center are important. They should investigate the center and ask the center how many babies have been born through their technology. That way they can make some informed decisions. Probably half the patients who come to speak with us decide that it's just not the right thing for them. It's not just a thing where you can come in and we say ok, we'll just take your eggs out today and put them away and just come back when you want them. There's a process to it - it requires a small procedure and again there's the potential for it to not work just like everything else in this field. Nothing is 100%.



Dr. Vicken P. Sepilian is a fellowship trained Reproductive Endocrinologist and Infertility specialist. After completing his residency in obstetrics and gynecology at Drexel University College of Medicine in Philadelphia he attended the University of Texas Medical Branch for his fellowship in Reproductive Endocrinology and Infertility.

Dr. Sepilian has been recognized for his outstanding clinical and surgical patient care, for which he has received numerous awards. While at the University of Texas, Dr. Sepilian helped establish the university's successful in-vitro fertilization program. Dr. Sepilian also received a master's degree in Reproductive Sciences and has been active in research pertaining to minimally invasive surgery, ectopic pregnancy, abnormalities of ovulation, polycystic ovary syndrome, and infertility. He has published extensively and has presented his findings in numerous national and international conferences.

Dr. Sepilian has helped couples with infertility from all over the world. His compassionate and individualized approach towards patient care and his cutting edge knowledge of infertility have received much praise from his patients.

- Diplomate of the American Board of Obstetrics and Gynecology
- Fellow of American College of Obstetrics and Gynecology
- Member of the American Society of Reproductive Medicine
- Associate Member of the Society of Reproductive Endocrinology and Infertility