

THE BLOG

As A Fertility Doctor, Here's What I Wish Women Knew About Egg Freezing

It is an exciting new technology for women who want to balance their fertility options with their careers

11/28/2017 16:46 EST | **Updated** 11/28/2017 16:47 EST



Dr. Caitlin Dunne

Specialist in fertility and egg freezing at the Pacific Centre for Reproductive Medicine based near Vancouver.

When it comes to fertility, women and men are not created equal; men have a huge biological advantage. Fertility specialists are trying to change that with the latest technology in egg freezing.

When a woman is born she has about one million eggs. She loses these throughout life, and when there are none left she goes into menopause. Since only one egg ovulates each month (around 500 in a lifetime) most of the eggs will die without ever getting the chance to create a baby. Eggs die even when a woman is on the birth control pill, pregnant or breastfeeding. Unfortunately, there is nothing that doctors can do to stop the egg-loss process.



GETTY IMAGES/ISTOCKPHOTO

Men, on the other hand, can make 50 to 200 million new sperm everyday. That's over 500 billion swimmers in a lifetime! So, while women lose the ability to have children in their 30s and 40s, men can be fertile into their 60s and beyond.

Egg freezing allows women to preserve eggs while they're still good quality, and use them later in life. The technology to freeze eggs has been around since 1986, but social egg freezing only really became popular after 2012. That was the year the American Society for Reproductive Medicine said egg freezing was no longer considered "experimental." Prior to 2012, most of the women who froze their eggs did so for a medical reason, such as before breast cancer chemotherapy.

In the past, eggs were preserved using a technique called "slow-freezing." It made the eggs very susceptible to damage from ice crystals that could disrupt the genetic material within. Only about 30 per cent of eggs would survive the slow-freezing process, and even fewer would actually fertilize properly to form an embryo.

These days, modern fertility clinics use "vitrification," commonly called flash freezing. Eggs are plunged into liquid nitrogen, which instantly transforms them into a glass-like state. Egg survival with vitrification is more than 85 per cent. This makes egg freezing a realistic option for women who want to preserve their fertility without a medical reason.

“As a feminist, I believe that women should have the choice to plan their lives and their families.”

Women are choosing to have children later in life. In 1994, the average age of a Canadian mother giving birth was 28.1 years, compared to 30.1 in 2014. British Columbia has the highest average age for mothers, at 30.8 years, followed closely by Ontario at 30.5 years. This shift reflects changes in our society. More women are pursuing education, travel, careers and personal goals before they think about having a baby. Women also have easier access to contraception.

As a feminist, I believe that women should have the choice to plan their lives and their families. As a fertility doctor, I also want women to be informed about how their eggs change as they get older. The correct information can be empowering.

In a large study of over 2700 patients, 21 per cent of embryos from 29-year-old women were abnormal. That may sound high, but in fact, it is pretty typical. Even women in their 20s have around a 20 per cent risk of miscarriage. Compare that to 35-year-old women, when 35 per cent of embryos are abnormal, and 40-year-old women, when 58 per cent of embryos are abnormal. By age 43, over 83 per cent of a woman's embryos will be abnormal.

In short, because women are born with all of their eggs, the internal mechanisms that control an egg's DNA start to break down over time. This is why women become increasingly prone to infertility and miscarriage as they get older.

The best time to freeze eggs is between the ages of 34 and 37. Most fertility doctors discourage egg freezing after the age of 40, because it is much less cost-effective than using eggs from a donor egg bank.

Egg freezing involves visiting a fertility clinic and going through the same process as an in vitro fertilization (IVF) cycle: hormone injections for 10 days with internal ultrasounds to monitor the ovaries' response. When the eggs are

ready, the fertility doctor performs a procedure to suction out the eggs. The IVF laboratory will then freeze the healthy eggs that same day. It costs \$10 000 to \$15 000 for the cycle, and \$250 to \$400 in yearly storage fees.



VGAJIC via Getty Images

Women may regard egg freezing as a reproductive insurance policy or back-up plan. However, it is important to know there is no number of eggs that will guarantee a baby in the future. The best chances of success are achieved when at least eight to 15 eggs are banked. For example, a study published in 2016 found that women younger than 36 who froze 10 eggs had a 60.5 per cent chance of successfully having a baby with those eggs.

In summary, egg freezing is an exciting new technology available to women who want to preserve the option of having a baby in the future. Egg freezing is becoming even more important as women take on diverse roles in our society and want to keep their fertility options open.