

# Against the Clock

## First wave of women trying to buy time by freezing eggs

By SHARI ROAN  
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**Egg freezing is a delicate procedure that hinges on the proper temperature and storage techniques.**

Last winter, with her boyfriend "dragging his feet" about a commitment and her 36th birthday come and gone, Megan Griswold decided it was time to frankly assess her prospects for having a child.

Within months, the Seattle acupuncturist was on a plane headed for Los Angeles. There, she had several dozen eggs withdrawn from her ovaries and frozen for possible use down the road. She may never need them -- she could marry in a year or two and become pregnant naturally -- but freezing the eggs has given her peace of mind.

"I would like to be a mother, and the anxiety was starting to build," she says.

Although not looking to be a trailblazer, Griswold is among the first wave of women poised to transform female fertility. Until recently, only healthy volunteers in clinical trials or women about to undergo cancer treatment have had eggs removed and frozen for possible future fertilization and implantation.

But as the ability to successfully thaw and use the eggs has grown, so, too, has the demand for the procedure and doctors' willingness to market it to healthy women. Now women who aren't ready to become mothers, but who want to preserve that option, are signing up to have some of their eggs removed and frozen.

Nationwide, the number of clinics offering egg banking is expected to double this year from the handful of centers that have pioneered the technology. Huntington Reproductive Center in Pasadena, Calif., which Griswold used, is one of three egg banks to open in the last few months in California. The others are at

the University of Southern California and Stanford University. These banks join a few other California infertility clinics that have been offering egg freezing for some time.

The trend has the potential to rewrite the script for young adulthood, allowing women to further defer marriage and motherhood. Female fertility peaks at age 27 and by age 40, the chance of getting pregnant is less than 10 percent. By freezing their eggs, women can be relatively free of their biological clock's stressful drumbeat.

"I wanted to separate my desire to have kids with my timing for choosing to be with someone," Griswold says. "It has helped relieve the pressure that fertility is clouding your judgment about whether to be with someone. You want to have children with the right person."

The procedure is expensive -- upwards of \$10,000 -- and the resulting pregnancy rate thus far has been low. But if that success rate rises, more women probably would be willing to undergo the procedure. Census figures show there are more than 5 million single, childless women in their 30s in the United States.

And they're not the only takers. Extend Fertility, a national company that partners with infertility clinics to offer egg freezing, says a market survey it conducted found that 25 percent of women seriously interested in egg freezing were married and 13 percent had children. Divorced women with children who think they may want to have another child someday also are potential clients.

Barbara Bestor recently signed up for egg freezing at USC Fertility after a candid discussion with her gynecologist. A divorced architect with two children, ages 5 and 6, she knows time is running out on her fertility.

Egg freezing "is like an investment in the chance that I might want to have another kid," the 38-year-old Los Angeles woman says. "It's the ultimate feminist solution. You don't have to say, 'I have to have a kid right now.'"

The ability to postpone motherhood in this fashion was made possible by the discovery that the age of a woman's eggs is more important than her biological age. In the last two decades, even postmenopausal women have become pregnant and delivered babies by using donor eggs from much younger women. Those developments created the incentive to preserve a woman's own eggs while they were still young.

But egg freezing -- the scientific term is oocyte cryopreservation -- has been fraught with difficulty. Although sperm and even embryos have proved easy to freeze, the egg is the largest cell in the human body and is waterlogged. When frozen, ice crystals form that can destroy the cell. Over the years, researchers have learned that they must dehydrate the eggs before freezing and place them in a special medium. Because the shell of the egg hardens when thawed, sperm must be injected with a needle to fertilize the egg.

These advances have produced between 100 and 200 babies worldwide (no one keeps official statistics). Most of the births are concentrated at a dozen or so centers.

Because egg freezing is still a new science, experts disagree about whether this first generation of clients can depend on the technology's success.

Based on recent data, many doctors say a healthy woman younger than 37

has about a 20 percent chance of getting pregnant (estimates vary from 15 percent to 30 percent) using frozen eggs. In contrast, a 37-year-old woman undergoing traditional in vitro fertilization has about a 35 percent chance of giving birth. Egg freezing is typically not recommended after age 37.

"It's a quantum leap from five years ago," says Dr. Thomas Kim of CHA Fertility Center in Los Angeles of success rates. In 2002, CHA Fertility became the first Los Angeles clinic to offer egg freezing. "I don't think births are isolated incidents anymore."

It takes a lot of frozen eggs to produce a single baby, however. Most clinics recommend a woman store at least 30 eggs -- which may require more than one menstrual cycle to stimulate and retrieve eggs.

"The truth is that we have a long ways to go to give women concrete statistics," says Dr. John Wilcox, medical director of Huntington Reproductive Center. "We do believe that women who are able to produce high-quality oocytes -- ideally women under age 38 -- have a good chance of achieving a pregnancy if they can store about 30 oocytes."

A study by Kim showed that of 186 eggs taken from 10 patients, just under 75 percent survived the thawing process. About 55 percent of those eggs were successfully fertilized. Four of the 10 women became pregnant and two miscarried. Of the two patients who delivered babies, one had triplets. The study was presented in May at a meeting of the Pacific Coast Reproductive Society. Since then, four more of Kim's patients have become pregnant using frozen eggs.

"Until we have statistically significant numbers we can prove, I don't want to push this," he says. "Everyone can say, 'I can freeze eggs.' But you need to be able to thaw it and make an embryo and get a woman pregnant."

Even clinics skilled at the technique don't have large numbers of pregnancies to back their estimates of success.

"We've got the recipe, now we need to fine-tune it," says Dr. John Jain, a reproductive endocrinologist at USC Fertility, which recently announced a triplet pregnancy with frozen eggs.

All of the centers in the Los Angeles area are following guidelines developed by the American Society for Reproductive Medicine that present egg freezing as an experimental procedure to be conducted in a research setting and under the auspices of an institutional review board. Such boards protect the rights and welfare of patients involved in unproven science.

In guidelines published in October, the organization urged caution in proceeding with egg freezing in healthy women, noting that it has yielded only a limited number of pregnancies and that success rates are still below those seen in standard IVF.

"An important part of counseling these women is what the anticipated results might be," says Dr. Marc Fritz, a reproductive endocrinologist at the University of North Carolina and chairman of the group's guidelines committee on egg freezing. "But those estimates are an extrapolation of little more than 100 children.

"That's not a terribly well-founded number."