

Under right conditions, fertility treatment can equal natural conception rates: study

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Older women would do well to consider using donor eggs from a younger woman.

(HealthDay) -- With enough cycles and the right egg and age of a woman, the chances of in vitro fertilization resulting in a baby approaches that of natural conception, a large new study finds.

A woman's age is the best predictor of whether in vitro fertilization will result in a baby, with [women](#) under age 34 having the greatest chances of success. But [older women](#) can largely overcome poorer odds by using [donor eggs](#) from a younger woman, according to the research.

Those are among the findings of a massive study on in vitro fertilization that, while offering few surprises, provides what experts say is the most detailed, nuanced look at who is likely to be successful using assisted reproductive technology.

"What this study does is look at a woman's chances of conception based on adding all cycles together and taking into account her age, the [diagnosis](#) that brought her in for fertility treatments, whether there were additional [embryos](#) [preserved] and the stage the embryos were transferred," said lead study author Barbara Luke, professor and [epidemiologist](#) at Michigan State University in East Lansing. "When women come in for treatment, there isn't a simple answer about their chances of conception. There are a lot of factors to be taken into consideration."

For example, after the third treatment cycle, women aged 31 and younger had a 63 percent to 75 percent chance of ending up with a baby, while women 41 or 42 using their own egg had a 19 percent to 28 percent chance. Those 43 or older had a 7 percent to 11 percent chance.

When donor eggs were used, the rates were much higher -- 60 percent and 80 percent, respectively, for all ages.

"If you use a younger egg, you will vastly improve the chances of conception," Luke said.

In other findings: The chances of getting pregnant were higher when physicians transferred a "blastocyst embryo" (an embryo that is five to six days old) instead of a "[cleavage](#) embryo" (one that is two to three days old). At the third cycle, live-birth rates were 52 percent to 81 percent for blastocyst embryos and 43 percent to 65 percent for cleavage embryos.

The study, published in the June 27 issue of the *New England Journal of Medicine*, looked at data on nearly 250,000 women who underwent 471,000 in vitro fertilization cycles from 2004 to 2009 at approximately 400 clinics. The treatments resulted in 141,000 babies. The data was from the Society for [Assisted Reproductive Technology](#) Clinic Outcome

Reporting System.

Rather than look at the likelihood of success per cycle, the researchers were able to track women over several years to determine their cumulative rates of success -- that is how likely they were to get pregnant and carry a baby to term on subsequent in vitro fertilization cycles if their first, second or even third cycle was unsuccessful.

Many women quit after one or two cycles, often because of stress, discouragement or finances. One cycle of in vitro fertilization costs approximately \$10,000 to \$12,000. The study findings, which included women who had up to seven or more cycles, suggested some may be giving up too soon, Luke said.

About 25 percent of women quit after the first cycle, and about one-third of the remainder quit after two cycles, Luke said.

"One of the messages to take away from this is to think about infertility treatment as a course of treatment that, for most women, will take more than one cycle," she said. "This is showing your success rate may be right around the corner. One more try may do it."

By the same token, women 40 and older should take a hard look at their odds and perhaps consider a donor egg more quickly, she added.

The new study also looked at infertility diagnoses that could influence chances of success. Having a low number of eggs or a diagnosis of diminished ovarian reserve was associated with lower odds of a live birth. Uterine factors -- such as fibroids, endometriosis or adhesions on the uterus -- also were associated with a markedly lower success rate.

Other factors, such as male infertility, polycystic ovarian syndrome and tubal factor infertility, had less of an impact, the study found.

Dr. William Gibbons, former president of the American Society for Reproductive Medicine and director of the division of reproductive endocrinology at Baylor College of Medicine in Houston, said the new study was unprecedented in that it involved such a large number of women.

He also commented that the data enabled researchers to track women over time to determine the overall chances of success based on a variety of factors.

Couples want to know their chances of ultimately having a baby, and if it makes sense for them to continue going through the expense and stress of multiple in vitro fertilization cycles, Gibbons said. One major message from the study is that an older woman's chances of getting pregnant after three cycles are pretty similar to a younger woman's chances if the older woman is willing to use a donor egg, he said.

The new statistics will enable doctors to give more detailed information to couples as they make their decision about whether they want to keep going with in vitro fertilization, to turn to donor eggs or to keep trying with their own.

"We can show this to couples, and it can be used in counseling patients," Gibbons said.

More information: The [U.S. National Library of Medicine](#) has more on in vitro fertilization.

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