

Advances in fertility treatment allow more people to have children, but limits remain

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Credit: Yale University

Halle Berry. Janet Jackson. Mariah Carey. Those are just a few celebrities who gave birth well after turning 40. Browse any tabloid rack at your local supermarket and you're bound to see stories of women—some even pushing 50—who are now proud parents.

It's not only women over 40 sharing tales of success. Lesbians and gay

men are also fulfilling their dreams of creating a family (using sperm or egg and gestational surrogates, respectively). Transgender men are welcoming children, too.

Advances in reproductive medicine have made possible what once seemed impossible. But, what you read in gossip magazines might not always tell the whole story. Sure, a 45-year-old woman had healthy twins, but she might have used donor eggs (in conjunction with in vitro fertilization [IVF]) or any other number of fertility treatments. Her male partner might have needed a sperm extraction or another procedure.

Have modern treatments cured infertility? Can anyone who wants to start a family do so? Not quite. So what is the truth behind these headlines? The reality is that treatments are evolving and improving. At the Yale Fertility Center, physicians and researchers use the latest evidence-based fertility treatments.

We checked in with our reproductive endocrinology and infertility (REI) specialists to hammer out some little-known facts about infertility. In the field of baby-making, they, of course, want to offer hope for couples and individuals looking to become parents. But as physicians, they believe that hope should be tempered with realistic expectations.

"If you want to conceive traditionally, that requires family planning," says David B. Seifer, MD, an REI specialist who practices in the Yale Fertility Center's Westport office. "The biological clock is real. But there are lots of ways people can become parents."

Where patients receive their fertility care also matters, notes Lubna Pal, MBBS (a medical degree awarded in several countries outside of the U.S.), interim section chief of Reproductive Endocrinology and Infertility at Yale Medicine.

"There are so many places in the country—across the world—that are delivering good care. But I think academic centers are more up-to-date on best practices," she says. "For patients, my strategies are individualized and based on facts. And the Yale Fertility Center epitomizes that philosophy. Our providers are invested in our patients' well-being. We choose a data-driven approach to individualized care."

Fact: Fertility problems affect men, too.

If a couple is unable to get pregnant after a year of trying, it could be due to a reproductive problem or "factor" affecting the female or male partner—or some combination of both.

Worldwide, up to 30 percent of infertility cases are related solely to male factor infertility, says Amanda Kallen, MD, director of the Recurrent Pregnancy Loss Program.

A number of issues can contribute to male infertility, including abnormal sperm production, motility, blockage of sperm delivery or low sperm production. Fortunately, many of these conditions are treatable with medications or minor surgeries. The Yale Fertility Center also offers sperm-harvesting procedures for conditions including those in which there is no sperm in a man's semen. (Sperm can be retrieved from the epididymis, a tube behind the testicles, or from the testicular tissue.)

Fact: Even with IVF, age is still an important factor.

Even in the best of circumstances, IVF is successful only about 50 percent of the time. Many women need several treatment cycles, and sometimes, even that is not enough. Age is a powerful factor when it comes to reproductive health.

For a healthy couple in their 20s or early 30s, the odds of getting pregnant without assisted reproductive methods are about 20 percent each month, notes Pinar Kodaman, MD, Ph.D., an REI specialist. This percentage drops off significantly after age 37, and by age 40, a woman's odds of getting pregnant are less than 10 percent per menstrual cycle.

According to a 2015 report from the Centers for Disease Control and Prevention, a woman between ages 41 and 42 has a 14 percent chance of getting pregnant using IVF with her own eggs. Between ages 43 and 44, the success rate dips to 7 percent. However, with donated eggs, IVF results in births in about 50 percent of cases, reports the Society for Reproductive Technology. And the Yale Fertility Center raises the odds even higher. "Our donor egg cycles have much higher success rates than this," Dr. Kodaman says.

Women who know they want to have children later in life can also consider freezing their eggs.

"Many women postpone motherhood for a variety of reasons, including their career, further education or maybe they have not yet found the right partner," says Pasquale Patrizio, MD, MBE, director of the IVF, Male Fertility and Fertility Preservation programs.

The Yale Fertility Center has a state-of-the art lab for freezing (cryopreserving) eggs, embryos and ovarian tissue.

"Women can freeze eggs through vitrification [a technology used during the egg and embryo freezing process]. They can be cryopreserved for years, until they are ready to use them," Dr. Patrizio says.

Fact: If you have or have had cancer or other serious medical conditions, you can still have children.

Cancer treatments such as chemotherapy and radiation can negatively impact fertility. But thanks to cryopreservation, men, women—and even children who have gone through puberty—can preserve sperm, eggs, and testicular and ovarian tissue before they start treatment.

In fact, in Connecticut, insurance carriers must cover the cost of cryopreservation for men and women under the age of 40 who have cancer or other medical conditions. "The hope is that more states soon follow suit," Dr. Patrizio says. "Right now, elective egg banking for non-cancer patients is not covered, but hopefully, this will change, too."

The Yale Fertility Center REI specialists spend one day each week at Smilow Cancer Hospital. "We talk to patients who need to have chemotherapy or radiotherapy to beat their cancer about preservation methods," Dr. Patrizio says. "Now, the patient doesn't need to travel to the Fertility Center. We can see them there, and that has been great."

Plus, a number of other medical problems and their treatments can affect male and female fertility. For women, those include fibroids, polycystic ovary syndrome (PCOS) and endometriosis. Yale Medicine REI clinicians specialize in these disorders on both the treatment and research fronts. For fibroids and endometriosis, surgery may be an option to improve fertility. For PCOS, ovulation induction is often a first-line treatment.

Fact: LGBTQ individuals have multiple options if they want to have children.

There are many options for starting a family for individuals and couples who identify their sexual orientation or gender in a number of ways. Egg donation, sperm donation and gestational surrogacy are three primary choices.

Lesbian couples seeking fertility treatment may prefer to choose only one of the partners to undergo intrauterine insemination with donor sperm in order to achieve motherhood. However, others, in addition to donor sperm, may also need IVF or egg donation. Some same-sex female couples choose to have both partners involved in the process. One female partner can provide the eggs, and the other partner can be the recipient of the resulting embryos.

Gay male couples can achieve fatherhood through the process of IVF with an egg donor and a gestational carrier or surrogate. One or both male partners can contribute their sperm, which are then used to inseminate [eggs](#) provided by an egg donor; the resulting embryos are then transferred into the uterus of a gestational carrier.

For transgender men and women, the Yale Fertility Center provides services and support both before and after transitions. In addition to being a resource for hormonal management, our center offers [fertility preservation](#) options for female-to-male and male-to-female transgender patients, as well as assistance in third-party reproduction options.

Men transitioning to women may freeze their [sperm](#) or testicular tissue. For women transitioning to men, we offer egg freezing, embryo freezing and ovarian tissue freezing.

"The best option varies from person to person. For one, egg freezing may be an ideal strategy. Or [ovarian tissue](#), while considered experimental, is available as well," says Dr. Kallen, who also specializes in fertility preservation for transgender individuals. "This is specialized care—and you won't find it elsewhere in the state. Everyone should have the opportunity to have a child."

Advances in reproductive medicine are only continuing, and physicians and researchers are hard at work to make the tantalizing headlines you

see at the supermarket a reality for all.

Provided by Yale University

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