

More than IVF

Options for more inclusive, less invasive family-forming benefits for your workforce



Infertility

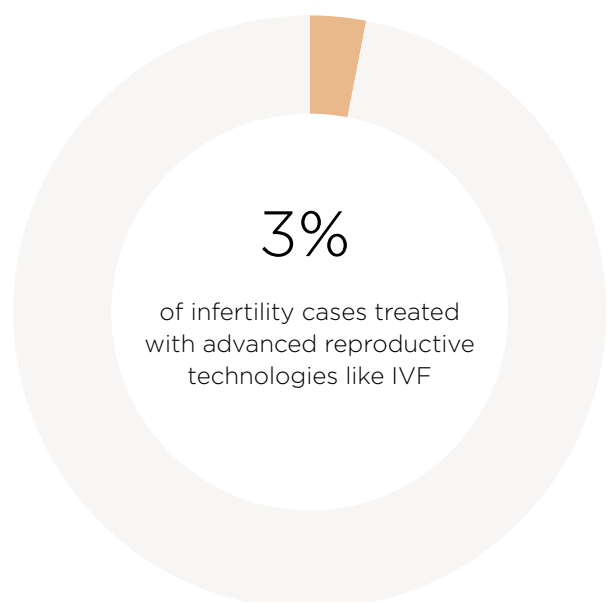
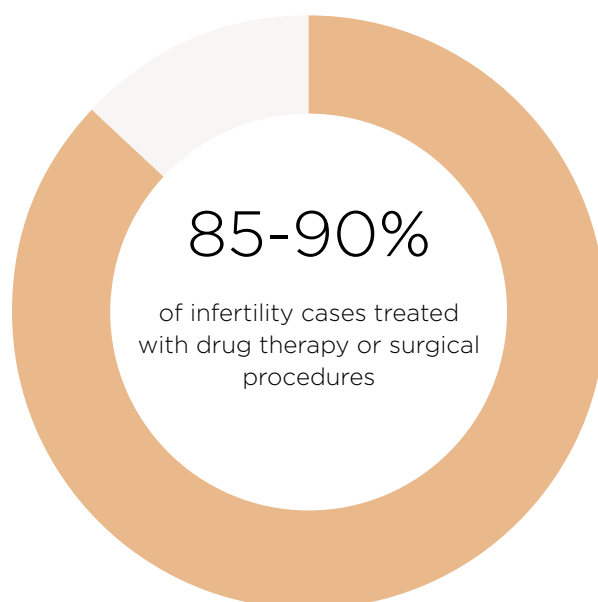
It's an issue that affects as many as [48 million couples and 186 million individuals](#) worldwide but one that remains largely misunderstood: infertility. Defined by the World Health Organization (WHO) as the inability to achieve a pregnancy after 12 months or more of regular unprotected sexual intercourse, infertility is characterized as a disease that can have significant physical, mental, and emotional repercussions.

For the [10% of women in the United States](#) (6.1 million) who have trouble getting pregnant, and for anybody who hopes to be a parent, infertility can be a confusing diagnosis often accompanied by one suggested solution in the form of in-vitro fertilization (IVF). And while IVF can be a profound tool (and in some cases, a life-changing opportunity), it's far from the only option for infertility.

Advanced Reproductive Technologies

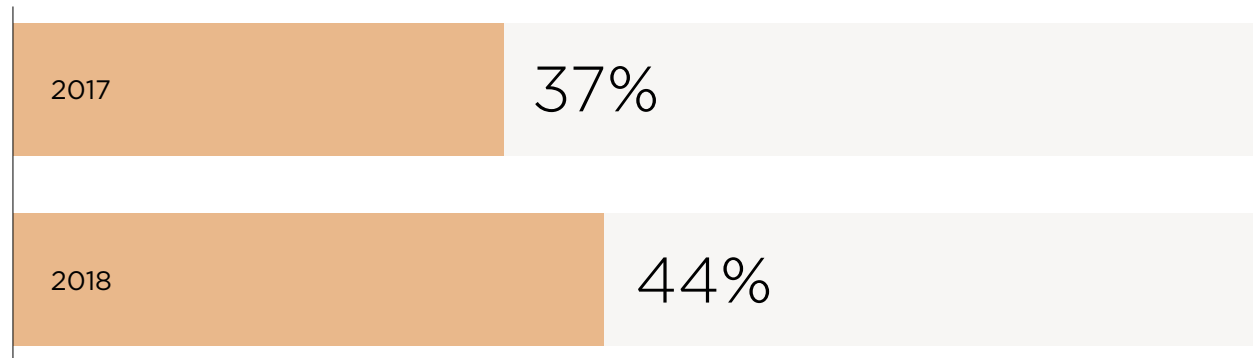
Historically, IVF has been framed as the solitary go-to treatment for those experiencing infertility. But the [complex series of procedures](#) isn't for everyone. In fact, according to [Resolve, the National Infertility Association](#), approximately 85-90% of infertility cases are treated with drug therapy or surgical procedures and fewer than 3% require advanced reproductive technologies like IVF.

These technologies can be game changers, but they often come with a high price tag in addition to their intense requirements and protocols. In the United States, the average cost of IVF is approximately \$21,600 but many patients ultimately pay much more. And with "live births" often requiring two or more cycles to get pregnant, the bill can be \$40,000 and up.



Infertility

EMPLOYERS WITH 20,000 WORKERS OR MORE OFFERING IVF BENEFITS



Better Access

Despite the small percentage of people who require IVF to get pregnant, an increasing number of employers are offering it as a benefit, presumably because it's long been positioned as the only option for infertility. According to the [New York Times](#), Mercer, a benefits consulting firm, analyzed big employers (that's 20,000 workers and up) and found that 44% offered some sort of IVF benefit in 2018, compared with 37% in 2017.

While it's admirable that companies are striving to provide comprehensive care to workers in all stages of life, including those hoping to build families, it's essential to understand that there are a multitude of other less invasive, more cost-effective strategies worth trying first.

According to [Raquel Hammonds, NMD, MPH, Carrot's Director of Integrative and Preventive Medicine](#), there are plenty of other no-cost and low-cost fertility routes to try before considering IVF. "Creating a fertility plan, whether you have a partner or are single, will help determine your next steps," Hammonds says. "If you're under 35, I advise trying to get pregnant for about a year before looking at other options, and if you're over 35, trying for six months."

Here, Hammonds helps break down some of the simpler strategies for infertility that are worth trying before exploring IVF. From nutrition to wearables and more, it's important for all potential parents to know they have plenty of accessible routes to try. If you're a benefits decision-maker looking to expand your fertility offerings, consider finding a program that incorporates the following family-forming options, as well.



RAQUEL HAMMONDS

Fertility Planning

Before considering any options, Hammonds says a comprehensive fertility evaluation should be the very first step in the family-building journey. This generally means receiving a panel of bloodwork to evaluate a variety of hormone levels and to rule out or identify imbalances that could be impacting fertility. Everyone is different, so depending on the results of this evaluation, a provider will work with the patient to determine the best course of action.

Anyone of any gender attempting to have a baby without medical intervention should consider this kind of hormonal evaluation, but Hammonds recommends those with ovaries seek out the following tests specifically:

ESTROGEN, SPECIFICALLY ESTRADIOL (E2)

Estradiol is a steroid hormone secreted into circulation by granulosa cells of developing ovarian follicles. Clinicians also commonly measure E2 levels as part of ovarian reserve testing. Levels of this hormone fluctuate from 10–300 pg/mL, depending on timing of the menstrual cycle. For ovarian reserve testing, clinicians typically assess E2 levels at their nadir early in the menstrual cycle, at days 2 or 3.

FOLLICULAR STIMULATING HORMONE (FSH)

This test measures the level of follicle-stimulating hormone (FSH) in your blood. FSH is made by your pituitary gland, a small gland located underneath the brain. FSH plays an important role in sexual development and functioning.

ANTI-MULLERIAN HORMONE (AMH)

In people with ovaries, AMH levels can provide information about fertility and the ability to get pregnant. The test may also be used to help diagnose menstrual disorders or to monitor the health of people with certain types of ovarian cancer.

TESTOSTERONE TO RULE OUT POLYCYSTIC OVARIAN SYNDROME (PCOS)

[Polycystic ovarian syndrome \(PCOS\)](#) affects 4% to 12% of people with ovaries of reproductive age and may contribute to infertility in some people. High levels of androgens (“male hormones”) can prevent the ovaries from releasing an egg (ovulation) during each menstrual cycle and can cause extra hair growth and acne, two signs of PCOS.

PROGESTERONE

A progesterone test measures the level of progesterone in the blood. Progesterone is a hormone made by a woman’s ovaries. Progesterone plays an important role in pregnancy. It helps make your uterus ready to support a fertilized egg. Progesterone also helps prepare your breasts for making milk.

Fertility Planning

“It’s amazing it even exists because you don’t need a referral and can literally go to any fertility center to request a fertility evaluation.”

Hammonds also recommends checking vitamin D, iron, and thyroid levels to get a comprehensive picture of potential fertility. She says that requesting these specific tests can be tricky in a traditional medical setting, but companies like Carrot can help make the process simpler, more streamlined, and far more accessible. “In some cases, your obstetrician/gynecologist (OB/GYN) will run these labs, but sometimes they will not because they may feel fertility is a specialized lane and prefer to refer out — that’s where Carrot comes into play. It’s amazing it even exists because you don’t need a referral and can literally go to any fertility center to request a fertility evaluation,” Hammonds says.

It’s also important to know that fertility testing isn’t exclusive to people with ovaries — people with testicles are also encouraged to check the health of their sperm before seeking out infertility treatments.

Carrot partners with [Legacy](#), a home sperm testing company, to ensure all potential parents receive a comprehensive evaluation upon request. The company provides users a secure and comprehensive fertility report in three business days and offers the option to schedule a video call with a fertility specialist in order to discuss results and how they relate to fertility. The fertility analysis includes sperm volume, count, concentration, motility, and morphology — all important factors in evaluating fertility.



Legacy is a Harvard-backed group of men and women who understand fatherhood—and how much it matters.

The Legacy team brings international experience in male fertility, healthcare policy, and business with a world-class advisory board.



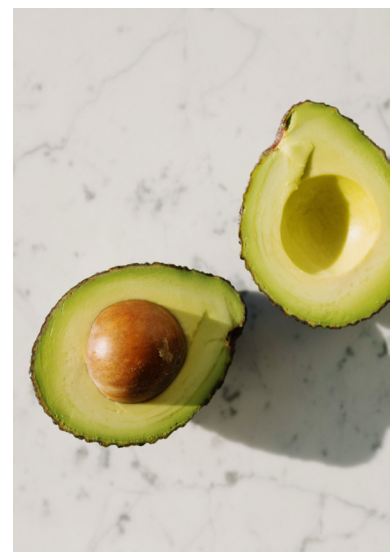
Nutritional Interventions

One often overlooked but hugely important factor in fertility is nutrition. Research has shown that the quality and variety of the foods people eat can have a direct and significant impact on fertility. According to one [scientific review published in the journal *Frontiers in Public Health*](#), integrating different types of foods can play a big role in optimizing fertility, and [diets high in unsaturated fats, whole grains, vegetables, and fish have been associated with improved fertility in](#) all genders. On the flip side, saturated fats (like those found in red meat, butter, and cheese) and sugar have been associated with poorer fertility outcomes and should be eaten in moderation.

Other evidence suggests that regularly consuming foods rich in certain vitamins and minerals can have a big impact on fertility as well. [One study from researchers at the Harvard T.H. Chan School of Public Health and Harvard Medical School](#) found that folic acid (found in foods like leafy greens), vitamin B12 (found in foods like eggs), and omega-3 fatty acids (found in foods like fish) were linked with positive effects on fertility. Overall balanced, healthy eating plans (like the Mediterranean Diet, rooted in healthy oils, whole grains, and plenty of fruits and vegetables) were also associated with good outcomes. However, trans fats (like those in processed and fried foods) and “unhealthy diets” rich in red meats, starchy carbohydrates like potatoes, and sweets were found to have negative effects.

Hammonds says eating in a way that supports fertility is simpler than it may seem. “My favorite thing to promote is intentionally eating whole foods — but I don’t use the word diet,” she says. “I recommend an [anti-inflammatory framework when creating meals](#). That just means that when you look at your plate, you make sure to include good proteins, vegetables, and fats.

One thing I’ve noticed is that for so long, we were taught to take the skin off our chicken or eliminate fat, but we need that fat — it’s so important for fertility and improves the blood flow to reproductive organs and helps balance hormones. I encourage wild-caught sources of fish, chicken, or whatever protein you prefer, and I encourage everybody to use fats like avocado, ghee, nuts, and seeds — those are so important. And be sure to include veggies. So a typical plate might include dark leafy veggies, a high-quality protein, and half an avocado.”



Wearables

One of the most precise, informed ways to keep an eye on factors affecting fertility is through the use of wearable technology. There are now an array of wearable devices from smart watches to fitness trackers on the market that collect and monitor real-time information like heart rate, respiratory rate, skin temperature, and more — all of which can offer important biological clues into the menstrual cycle.

By getting to know the body's cyclical fluctuations and understanding when ovulation occurs, people may feel more empowered to make informed choices around when they try to get pregnant. [One study published in the Journal of Medical Internet Research](#) found that participants who wore the [Ava bracelet](#), the first and only FDA-cleared wearable tracking device clinically proven to identify the opening and closing of the fertile window, were able to capture important data about their vital signs that could help predict their optimal time of the month to try for pregnancy.

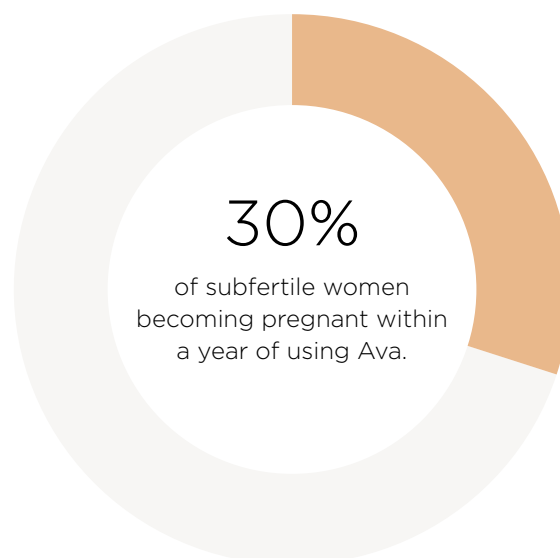
Powered with Ava

[Carrot's partnership with Ava](#), allows Carrot members to benefit from the evidence-based, clinically-backed bracelet. Supported by Carrot's expansive expert telehealth network, members are now able to add the Ava bracelet as another tool in their structured path towards pregnancy.

A 2020 analysis of Ava users revealed that nearly 30% of subfertile women (those trying to get pregnant for more than a year—or more than six months if over the age of 35) became pregnant within a year of using Ava. In fact, the bracelet predicts a woman's fertile window with 89% accuracy. When companies offer this technology in combination with Carrot's comprehensive fertility care and pregnancy telehealth resources, they effectively empower their workers and their partners with invaluable support in their fertility and reproductive health journeys (and potentially help save thousands of dollars in costs).

"Wearables like the Ava bracelet can help you narrow your fertility window down to a precise science," Hammonds says. "Some of us assume our fertility windows or use apps, but the Ava bracelet looks beyond typical measurements and looks at things like respiration and heartbeat and other parameters that let your body know this is the time to try to get pregnant."

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Adoption and Gestational Carriers

Because IVF and other interventions aren't an option for all people, it's important for companies to also consider the important roles adoption and gestational carriers (GCs) can have in the family-building journey. While anyone of any gender may benefit from these services, it's particularly crucial to note the impact these options can have on same sex cis-male couples, trans people, and single cis-male fathers.

Although both services can provide hope for potential parents, adoption and gestational carrying differ in important ways. According to [U.S. Department of Health and Human Services](#), "adoption is the social, emotional, and legal process in which children who will not be raised by their birth parents become full and permanent legal members of another family while maintaining genetic and psychological connections to their birth family."

Gestational Carrying (GC)

Gestational carrying sometimes called surrogacy, involves an arrangement where a surrogate carries and delivers a child for the intended parent or parents. The surrogate generally does not provide the eggs for the embryo, so in many cases, IVF is used as part of the process.

Very few companies offer adoption services, and Carrot believes that's a statistic worth changing: Currently, only 1 in 5 companies that offer fertility coverage also provide coverage for adoption or foster care, according to new research from FertilityIQ. Overall, 17% of companies with 500 or more employees offer some adoption assistance; 30% offer fertility assistance.

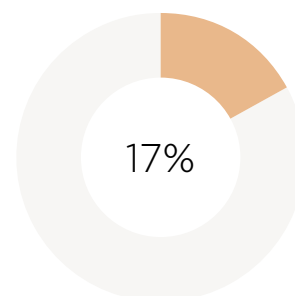
According to Carrot member, Samantha, having the ability to explore adoption through her employee benefits was life changing. "It's so painful going down the fertility route," she says. "It's financially debilitating. It set me back years. I'm single. My journey began at 33. There were four years of IUI and IVF. The reason I didn't do adoption is that it was so financially cumbersome. I had given up the hope for motherhood until I joined my company."

Carrot member Anita Jennison chronicled her experience using Carrot's adoption assistance services at her former employer, Goop, in this [Wall Street Journal article](#), stating, "This is a godsend, because no one offers this."

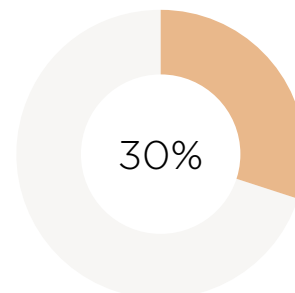
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COMPANIES WITH 500 OR MORE EMPLOYEES

Companies offering adoption assistance



Companies offering fertility assistance



Mental Health and Fertility

While tools and technology can play a major role in optimizing fertility, holistic strategies to manage stress and improve mental health are just as important. Research has shown that [women with infertility report elevated levels of anxiety and depression](#), and those issues can have serious, life-altering repercussions. Experts believe that for some people, the inability to get pregnant can stir up feelings of shame, guilt, and low self-esteem which in turn can lead to varying degrees of depression, anxiety, distress, and an overall poor quality of life.

To drive that point home, [one study of 200 couples](#) seen consecutively at a fertility clinic found that half of the women and 15% of the men said that infertility was the most upsetting experience of their lives. Another study of 488 American women who filled out a standard psychological questionnaire before undergoing a stress reduction program concluded that women with infertility felt as anxious or depressed as those diagnosed with cancer, hypertension, or recovering from a heart attack.

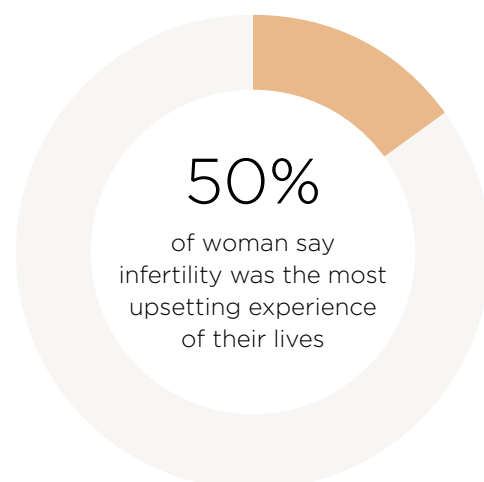
While it's tough to tease out the ways in which mental health issues impact fertility and vice versa, experts do believe that [psychological factors such as stress](#) can increase the risk of infertility. One 12-month study measured an enzyme called salivary alpha-amylase (an index of stress) in women starting to attempt pregnancy.

After adjusting for potential confounding factors like the age of the woman and whether or not they consumed alcohol or smoked cigarettes, researchers discovered that the baseline level of alpha-amylase predicted subsequent infertility. In fact, those with the highest levels of alpha-amylase were more than twice as likely to be infertile compared to people with the lowest levels.

Luckily, there are many accessible, affordable ways to manage stress (Hammonds recommends the [Ten Percent Happier Meditation app](#) as one option), as well as specialized physicians who are dedicated to diagnosing and treating a spectrum of mental health issues. [In addition to counseling](#), psychotherapy, and medications, many experts recommend that anyone dealing with infertility employ relaxation techniques like meditation, deep breathing, guided imagery, and yoga to promote stress management.

"Stress management is so important," Hammonds says. "Many people start to think of fertility from a place of fear — 'I'm getting too old, I have a career, I'll have to freeze my eggs, I'm scared,' etc. They're already operating from a place of fear. I always say the only way to combat fear is through knowledge. Instead of being fearful, create a plan so that in the future, you won't have to scramble to get all your ducks in a row. It's about shifting the conversation from infertility to fertility, and that is such an empowering space."

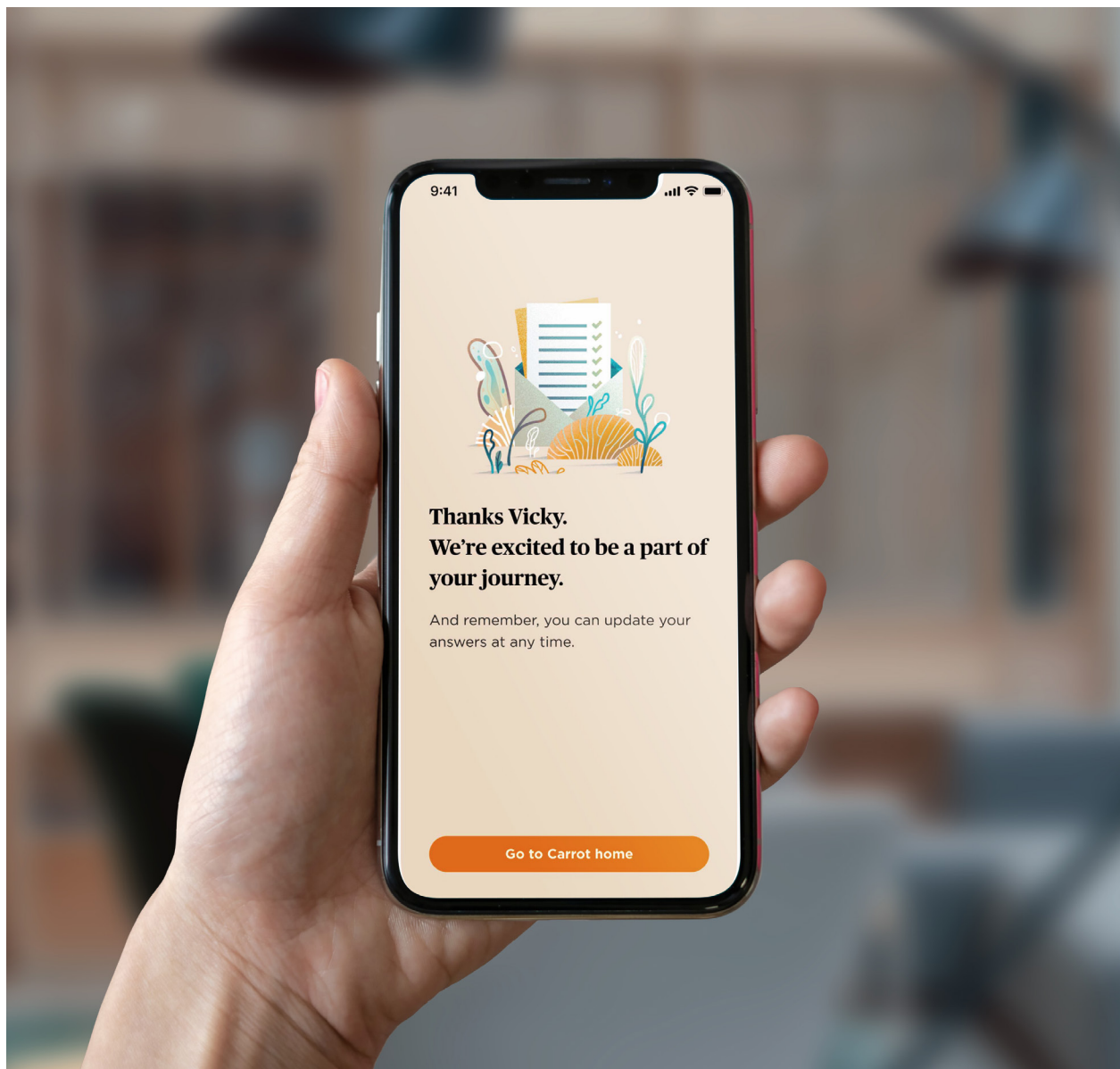
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Final thoughts on the role of IVF

There's no denying that advanced reproductive technologies like IVF are essential to some people's pregnancy journeys. But it's also important to recognize that IVF is a serious, invasive, and costly process that is only truly necessary for a small fraction of people struggling with their fertility.

[At-home interventions like the kind of nutrition counseling and access to the Ava bracelet that Carrot offers](#) make up the practical future of successful, low-cost fertility strategies that every company should be verifying their fertility vendor can support. With the variety of services and expert guidance Carrot offers, there's no reason employers need to seek out separate vendors for their fertility offerings.



Carrot provides all the essential fertility benefits that should be a top priority for any modern company and the customizable solution makes it a fit for any employer. For more information, visit get-carrot.com.

ABOUT CARROT

Carrot is the leading global fertility benefits provider for today's modern employers, providing flexible financial coverage and expert care navigation across every region of the U.S. and over 50 countries around the world. Carrot's innovative product:

Provides a turnkey solution for companies to establish an inclusive fertility benefits program for all employees regardless of age, sex, sexual orientation, gender identity, or geography.

Improves access to high-quality fertility care and dramatically reduces the emotional and financial strain for employees who need it.

Offers flexible plans recognized for inclusivity, price transparency, and focus on healthier outcomes.



CARROT

Founded in 2016, Carrot is the only fertility benefit with a global network of high-quality clinical providers of reproductive technologies in more than 50+ countries and at over 2,700 clinics. Carrot also works with numerous partners to ensure members have access to donor gametes, gestational carriers, and adoption services. Carrot's global team includes world-class healthcare operators, engineers, designers, benefits experts, fertility doctors, nurses, and clinicians. Learn more at carrotfertility.com.