

The 10 Best Fertility Centers

In the first data-driven comparison of in-vitro fertilization rates at fertility centers, *Child* found the chance of a woman under 35 bringing home a baby varies from about 10% to 60%, depending on the center. If you're among the 6.1 million Americans who are having trouble conceiving, see which facilities offer the greatest chance of success despite treating difficult cases.



Fertility stories are always filled with emotion, uncertainty, and controversy—childless couples who would make great parents, thrifty insurers who refuse to pay for treatments even though infertility stems from a medical problem, and ethical dilemmas that would make Hippocrates' head spin. So when we embarked on the search for the best fertility centers in the country almost two years ago, we were prepared for challenges. But we didn't expect that they would be nearly insurmountable.

Our goal was to rank centers based largely on their success rates with in-vitro fertilization (IVF), a form of assisted reproductive technology (ART) that involves removing eggs from a woman's ovaries and combining the eggs with sperm. We asked medical experts for advice, as we always do for our 10 Best investigations. But top fertility groups, unlike organizations in other rankings we've undertaken, didn't cooperate.

Still, with the help of several doctors and a pile of studies, we persevered and in 2004 sent an extensive survey to more than 75 of the nation's 400-plus centers that met our initial criteria, which included having a certified laboratory and maintaining at least average live-birth rates without high rates of triplets. Our data on these centers came from the Centers for Disease Control and Prevention (CDC), which publishes success rates for most clinics at www.cdc.gov/reproductivehealth.

The problem: Just a handful of centers returned the form. While some claimed they didn't have time to fill it out, others said they didn't want to release the information. A representative of one well-known center wrote: "They [the administrators] felt that they needed to reveal too much info about the clinic. They felt that a lot of the questions in the survey ask for things that they don't even have to provide to the CDC."

Our response: Wasn't that the point? The CDC's report gives consumers only a partial picture—for instance, it doesn't publish success rates at individual fertility centers by diagnosis even though the chance of bringing home a baby ranges from 14% to 34% depending on the reason for infertility—and it doesn't tell consumers whether a center handles a large or small percentage of difficult cases, which influences its success rates. "A huge number of clinics select the most favorable cases to make their success rates look good," says Sherman Silber, M.D., author of *How to Get Pregnant With the New Technology*.

We felt the public deserved better, given that treatments for infertility are emotionally draining, financially devastating, and may even pose a risk to a woman's health because there hasn't been a definitive assessment of the long-term consequences

of taking fertility medications (although studies thus far have been reassuring). So this spring we sent smaller surveys to centers that had achieved high live-birth rates without high triplets rates. Like the initial questionnaire, this one examined the complexity of the cases, research endeavors, and range of services. Between the two surveys, nearly 40 centers replied.



EXPENSIVE PROPOSITION
A single IVF cycle with all the latest technology can run up to \$35,000.

While lack of cooperation put limits on this special report, it's nevertheless the first-ever data-driven comparison of fertility centers. Read on to learn about our 10 winners, where medical breakthroughs happen routinely. (If your case isn't difficult, a local facility may be best for you. For guidance on evaluating your options, see "Judging for Yourself" on page 69.)

1 Colorado Center for Reproductive Medicine, Englewood

Number of ART cycles and transfers in 2002: 912 (Nearly all ART cycles use IVF. If a patient uses donor eggs or frozen embryos, the CDC labels the procedure a transfer rather than a cycle.)
Percentage of ART cycles from non-donor fresh embryos resulting in live births in 2002: 60% (under age 35), 51% (ages 35–37), 44% (ages 38–40), 23% (ages 41–42)

- Boasts 2002 IVF success rates that are twice the national average for women ages 38 to 42 who are using their own eggs
- Is researching ways to improve the chance of pregnancy for patients with endometriosis or polycystic ovarian syndrome ►

- Attracts 40% of its patients from outside the Colorado area

For most women trying IVF, physicians return two to seven fertilized eggs, called embryos, hoping one will implant. But about 30% of women who become pregnant are carrying twins, and 7% are expecting triplets or more. "Twin pregnancies are at a three- to five-fold greater risk for pregnancy complications and perinatal mortality [death between 28 weeks gestation and a week after delivery] compared to carrying one fetus. With triplets, there's at least a seven-fold greater risk," says Eric Surrey, M.D., medical director of the Colorado Center for Reproductive Medicine (CCRM) and president of the Society for Assisted Reproductive Technology, a top group in the field.

Dr. Surrey's team recruited patients, 48 in two years, between ages 26 and 48 to study the feasibility of returning just one embryo. "This is common in some Western European countries, but the success rate is about 30% to 35%," says Dr. Surrey. "We wanted to see if we could improve on those rates."

Earlier work at CCRM paved the way for embryos, which used to be returned three days after fertilization, to develop into blastocysts, a process that takes about two more days. Waiting longer gives doctors a better idea of the embryos' quality and helps them decide which one has the best chance of survival.

Half the women in the study received one embryo, and the remainder got two. All were given the option of freezing leftover embryos for use at another time. In the group receiving a single embryo, 61% had a clinical pregnancy (a heartbeat

shown on ultrasound) and there were no twins. By comparison, the ongoing pregnancy rate in the group receiving a pair of embryos was 76%, but nearly half the pregnancies resulted in twins. "The slightly lower chance for pregnancy in the single-embryo group outweighs the significant risks associated with multiples," says Dr. Surrey. "Larger trials will more carefully define just who the ideal candidates for this approach will be."

2 The Center for Reproductive Medicine and Infertility at NewYork-Presbyterian Hospital/Weill-Cornell Medical Center, New York City

Number of ART cycles and transfers in 2002: 2,012

Percentage of ART cycles from non-donor fresh embryos resulting in live births in 2002: 48% (under age 35), 43% (ages 35–37), 30% (ages 38–40), 18% (ages 41–42)

- Is one of the most experienced centers in the U.S., with 11,000-plus babies born through conventional IVF and 4,000 through ICSI—a technique that injects a single sperm into an egg; ICSI, invented by the center's lab director, is a must for couples with severe male factor infertility

- Specializes in preserving fertility in cancer patients
- Performed the first genetic testing on embryos for sickle cell anemia and retinoblastoma, an inherited eye cancer ▶

Judging for Yourself

Do you have to go to one of the fertility centers on this top 10 list to have a successful IVF cycle? Probably not. If you don't have a highly complex diagnosis, shop locally first because many centers have strong programs and traveling may add unnecessary stress. Here, six things to keep in mind during the interviews.

- 1 TALK IN THE SAME TERMS** Some centers define their ART success rate by pregnancy rates; others quote live-birth rates. Since live-birth rates are 15% lower than pregnancy rates in women under 35 (43% vs. 37%) and 60% lower in women ages 41 and 42 (17% vs. 11%), comparing them will give you an inaccurate picture.
- 2 INQUIRE ABOUT YOUR SPECIFIC CONDITION** Your chance of a successful IVF cycle depends on your diagnosis. For example, in 2002 only 14% of IVF cycles in the U.S. in women who were diagnosed with diminished ovarian reserve resulted in a live birth compared to 32% when endometriosis was to blame. While male factor infertility has a high live-birth rate of 34%, the success rate for specific conditions within this category can be much lower.
- 3 REVIEW THE CENTER'S EXPERIENCE** Ask about the number of patients your age with the same diagnosis. Also make sure the doctors and lab staff responsible for the success rates you're

being quoted still work there, says Thomas Pool, Ph.D., scientific director of the Fertility Center of San Antonio in Texas.

- 4 CONSIDER THE RATE OF MULTIPLE BIRTHS, ESPECIALLY TRIPLETS OR GREATER** New guidelines suggest the number of embryos transferred shouldn't exceed two in women under 35, two to three in 35- to 37-year-olds, and four in women 38 to 40 if a patient's chance of success is favorable. Implanting more embryos may slightly boost success rates, but it may also create dangerous pregnancies and complications for both mother and child. For instance, the rate of cerebral palsy is 17 times higher in a triplet birth than a single one.
- 5 SPEAK TO THE LAB STAFF** These employees handle your eggs, sperm, and embryos, so you have to be as confident of their competence as you are of the physician's, says Dr. Pool.
- 6 CALCULATE THE VALUE** The cost of IVF even within the same city can vary widely; charging up to \$35,000 per attempt isn't unheard of, but prices don't necessarily reflect quality. Request a written estimate including the price of the medications, testing, and special techniques you need, and factor it into your decision. If your insurance covers IVF, ask if the center accepts it.

Exclusive Survey

Priding themselves on a difficult caseload, doctors at The Center for Reproductive Medicine and Infertility (CRMI) conduct more than one-third of their IVF cycles on patients who have had two or more failed attempts at other clinics. "Other fertility specialists send us their patients who haven't gotten pregnant," says the clinic's director, Zev Rosenwaks, M.D.

Because many couples who have experienced several unsuccessful cycles want to put back more embryos than they did on the first few tries, the center's triplets rate in women ages 35 to 37 is the highest of our top 10. But its live-birth rate using non-donor fresh embryos is remarkable: 30% to 70% above the national average, depending on the woman's age. How is that possible? In a word: research. Since 2002, the center has published more than 200 studies in medical journals—the most of our survey. Among them: autologous human endometrial co-culture, which means growing a couple's embryos on a woman's endometrial cells instead of in the standard IVF liquid.

Before starting an IVF cycle, a woman undergoes an endometrial biopsy, in which a small piece of her uterine lining is removed. The sample is frozen until the next month, when

the woman's eggs are retrieved, fertilized, and put on her endometrial cells to grow. A study by CRMI researchers on 1,000-plus patients, who on average had three failed IVF attempts, found the technique improved embryo quality and resulted in an impressive clinical pregnancy rate of 42%.

3 University Fertility Consultants at Oregon Health & Science University, Portland

Number of ART cycles and transfers in 2002: 505
Percentage of ART cycles from non-donor fresh embryos resulting in live births in 2002: 34% (under age 35), 39% (ages 35–37), 34% (ages 38–40), 7% (ages 41–42)

- Reported the first live birth from an ovarian tissue transplant in a primate, paving the way for cancer patients to freeze their ovarian tissue before treatment
- Minimizes high-risk pregnancies; while the center's live-birth rate for women ages 35 to 37 undergoing IVF with their own eggs is about 25% above the national average (39% vs. 31%), its percentage of pregnancies with multiple fetuses is roughly half the average in that age range
- Boasts a very experienced lab staff

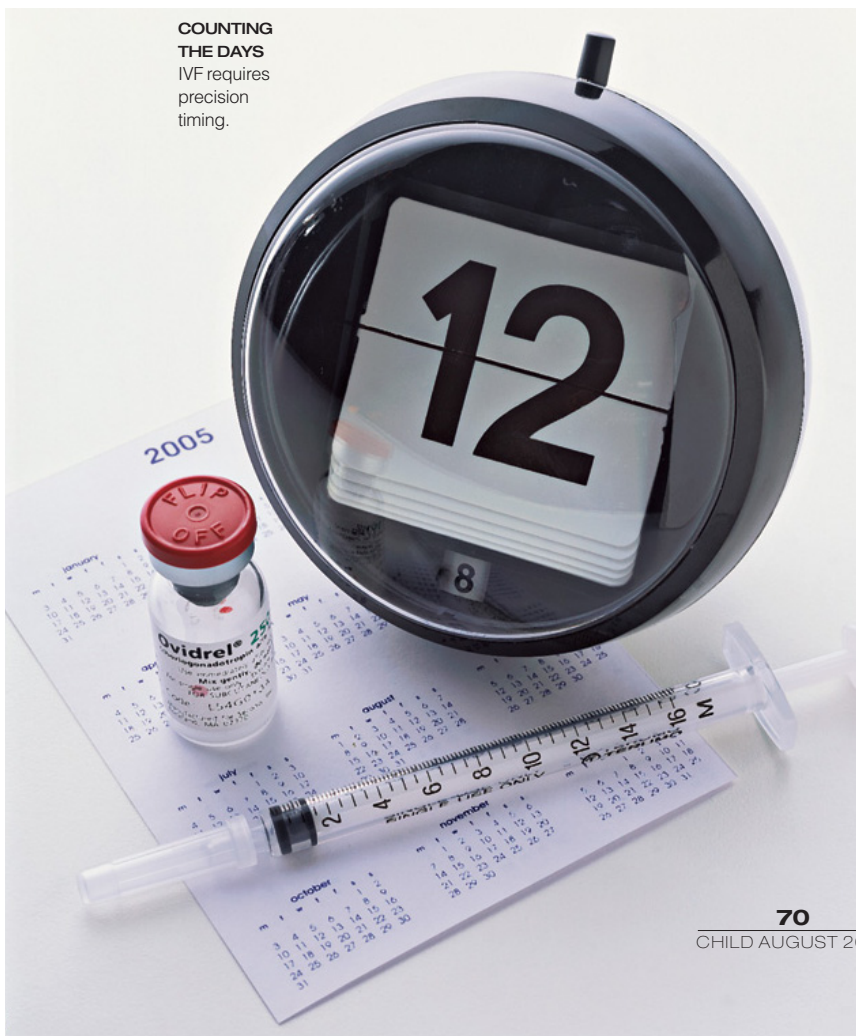
Some fertility centers don't allow women to try IVF with their own eggs if their level of follicle stimulating hormone (FSH) is over 10. FSH, produced by the pituitary gland, causes eggs to mature; a high level of it, measured on the third day after menstruation begins, may indicate that few eggs are left in the ovaries.

But physicians at University Fertility Consultants routinely take patients whose FSH is up to 15. In a recent study of 350 women over age 35, they found that the clinical pregnancy rate for women with FSH levels of 10 to 15 was about 33%—below the 42% pregnancy rate when a patient's FSH is under 7, but still pretty good. "My overall success rates are lower because about 25% of the women in my caseload have high FSH levels," says the center's director, Kenneth Burry, M.D. "But I don't feel comfortable referring patients for egg donation when they have a reasonable chance of success using their own."

4 New York University School of Medicine, Program for In-Vitro Fertilization, Surgery, and Infertility, New York City

Number of ART cycles and transfers in 2002: 1,362
Percentage of ART cycles from non-donor fresh embryos

COUNTING THE DAYS
IVF requires precision timing.



resulting in live births in 2002: 45% (under age 35), 42% (ages 35–37), 24% (ages 38–40), 17% (ages 41–42)

- Sees many difficult cases; about 70% of patients have failed at least one IVF cycle elsewhere
- Offers a patient library equipped with computers
- Is developing an egg-freezing program

Thirteen years ago, Jamie Grifo, M.D., Ph.D., was the first fertility specialist in the U.S. to successfully perform pre-implantation genetic diagnosis (PGD), the screening of an embryo for a specific inherited condition, such as cystic fibrosis. "It's heartbreaking to talk to couples whose children have died from a genetic disease," says Dr. Grifo, director of the division of Reproductive Endocrinology at New York University. "They tell me they couldn't go through it again—all they want is a healthy baby."

Dr. Grifo, who has been at NYU for the last 10 years and did his early work with PGD at Yale and Cornell, has begun to apply the technique to women who have suffered recurrent miscarriages. "We're searching for abnormalities in chromosomal numbers, and often we find them," he explains. "Last year, I started one of my patients, who had gone through five miscarriages, on an IVF cycle. She produced 11 eggs, which fertilized. When we checked them, we found that only two were normal. We put both back, one implanted, and she gave birth recently."

In fact, more than 70 babies have been born to NYU clients using the technique—which involves making a hole in the outer coating of the embryo and removing a single cell for analysis—and the clinical-pregnancy rate per cycle is about 40%. "If done properly, it really doesn't make the embryo much less likely to implant," he says. What about future consequences? Although long-term effects are still unknown, a recent study of 754 PGD babies suggests that they're no more likely to have birth defects than children conceived conventionally.

5 The Infertility Center of St. Louis at St. Luke's Hospital
Number of ART cycles and transfers in 2002: 176
Percentage of ART cycles from non-donor fresh embryos resulting in live births in 2002: 35% (under age 35), 26% (ages 35–37); there were too few cycles in women ages 38–42 to report the results as a percentage

- In 2002, performed the greatest percentage of IVF cycles due to male factor infertility of any center in the country; many cases involved very complex problems
- Has completed more than 4,000 microsurgical vasectomy reversals over the last 30 years, reporting in a recent study that nearly 90% of patients were able to impregnate their partners ➤

■ Conducted the world's first ovarian transplant, in which an infertile identical twin was given one of her sister's ovaries; the woman had a healthy baby girl in June

Over the last 30 years, Sherman Silber, M.D., founder of the Infertility Center of St. Louis, has published more than 200 studies on infertility, pioneering or advancing techniques that help men with little or even no sperm become fathers. Much of his research has focused on the estimated 2% to 5% of infertile men with congenital absence of the vas deferens, a condition in which the tubes that carry sperm from the testes haven't developed normally. "These men make sperm, but it's not in the ejaculate," says Dr. Silber. "We do a procedure to extract sperm from the testicles."

He's usually able to retrieve sperm to fertilize eggs through ICSI, a technique described on page 68. He often recommends that couples in this situation have their embryos screened for genetic abnormalities since a higher percentage of them may contain the wrong number of chromosomes even though they look normal. "By doing the testing, we can boost the chance of a live birth from about 35% to 45%," he says.

Filling his practice with extraordinarily difficult cases has taken a toll on Dr. Silber's success rates, but he doesn't mind. "For me, it's not about the numbers," he says. "It's about giving couples what they want most—a child."

6 The Nevada Center for Reproductive Medicine, Reno

Number of ART cycles and transfers in 2002: 281

Percentage of ART cycles from non-donor fresh embryos resulting in live births in 2002: 52% (under age 35), 49% (ages 35–37), 38% (ages 38–40);

there were too few cycles in women ages 41–42 to report the results as a percentage

- Is testing a new form of progesterone—a hormone that helps sustain a pregnancy—to see if it's better than the types currently available
- Has a successful donor-egg program; the 2004 pregnancy rate approached 70% for fresh embryos in women of all ages
- Arranges travel and sightseeing for out-of-town patients

Doctors can often tell by the quality of the blastocysts—embryos that have been grown for about five days—how likely a patient is to get pregnant. "But in some older patients who have repeated failed cycles, the blastocysts look beautiful," says Russell Foulk, M.D., director of the Nevada Center for Reproductive Medicine.

Dr. Foulk and other researchers working with the National Institute of Child Health & Human Development may have figured out what's causing the problem for at least some of these patients. They found that at the time of implantation, the blastocyst expresses much larger amounts of a protein called L-selectin than it does beforehand. If a woman's uterus doesn't have receptors for this protein, Dr. Foulk theorizes, the blastocyst won't attach. "I've started doing uterine biopsies recently and discovered that two of my patients lacked these receptors," he says. "One of them had nine unsuccessful transfers—all with good-looking embryos."

Future studies may confirm that checking for the receptors should be part of fertility screening. If that happens, Dr. Foulk says, some couples may avoid repeated failed cycles. Rather, they could consider surrogacy or adoption from the start.

7 Presbyterian Hospital ARTS Program, Dallas and Plano, TX

Number of ART cycles and transfers in 2002: 1,180

Percentage of ART cycles from non-donor fresh embryos resulting in live births in 2002: 49% (under age 35), 38% (ages 35–37), 23% (ages 38–40), 12% (ages 41–42)

- Is studying whether antibodies in a woman's blood affect her ability to get pregnant

- Offers an incentive program for the transfer of a single embryo to patients (age 37 or under if using their own eggs) who have two or more blastocysts; 200-plus couples have signed up, and more than six in 10 have conceived on the first try
- Has a policy that embryologists, in conjunction with nurses or administrative staff, give couples trying IVF a daily status report on how well their embryos are growing

Since about 90% of genetic abnormalities are caused by the egg alone, doctors in the Presbyterian Hospital ARTS Program are studying the feasibility of routine analysis of polar bodies, which are formed outside the egg after fertilization. "These are waste products—they degenerate within one to two days—but they provide mirror images of what's inside the egg," says scientific director Marius Meintjes, Ph.D. "With them, we can look for genetic problems, passed on by the mother, that would make the resulting embryo less likely to implant or more likely to cause a miscarriage."

Why might it be more beneficial to do that than screen the embryo for genetic problems, especially when you can't detect abnormalities passed on by the father? The test has no chance of damaging the embryo, unlike pre-implantation genetic diagnosis, which requires the removal of a small piece of the embryo.



Florida Institute for Reproductive Medicine, Jacksonville

Number of ART cycles and transfers in 2002: 832

Percentage of ART cycles from non-donor fresh embryos resulting in live births in 2002: 44% (under age 35), 40% (ages 35–37), 33% (ages 38–40), 17% (ages 41–42)

- Cancels a low percentage of cycles, which suggests a good response to treatments
- Is one of a handful of centers that publish comprehensive results on their Web sites
- Has persuaded drug companies to donate medications for the institute's cancer patients who are freezing their eggs, saving each person about \$3,000

When a woman doesn't conceive on her first IVF cycle using fresh embryos, she may be able to try again at about one-fifth the cost if she has embryos to freeze. The Florida Institute for Reproductive Medicine is a leader in freezing techniques, called cryopreservation. "Most of our patients get enough high-quality embryos to have one fresh and one or two frozen cycles, adding a great deal to their cumulative chance of conceiving at a reasonable cost," says Kevin Winslow, M.D., the center's director.

What the center has learned from embryos over the years has also helped them freeze unfertilized eggs for more than 200 patients, and they are continuing to study the technique to pinpoint the optimum environment for frozen eggs. "We have 33 babies born and nine ongoing pregnancies with this technique to date—the most of any center in the country," says Dr. Winslow.

Egg freezing is an option for cancer patients who want to preserve their fertility or those who fear they will be too old to conceive before they're ready to start a family. "But

Do You Need IVF?

The majority of couples who have trouble conceiving don't require in-vitro fertilization (IVF). Fertility drugs, interuterine inseminations (where washed sperm is placed in a woman's uterine cavity to bypass the cervix, which stops a lot of the swimmers), or a combination of the two will do the trick in many cases. "IVF is indicated as a first-line treatment only in women with severe tubal disease, men with an extremely low sperm count or no sperm present in the ejaculate, or couples who need their embryos screened for a genetic condition," says Kenneth Burry, M.D., director of University Fertility Consultants at Oregon Health & Science University in Portland. However, he notes that if other treatments don't work in six cycles (three if you're over age 35), you should talk to your doctor about whether it's time to move on to IVF.

LAST SHOT

By the time many patients reach one of our top 10 centers, they've failed an IVF cycle elsewhere.



we only do it for women 38 and under," says Dr. Winslow. "After that, the eggs aren't of high-enough quality to freeze."

9 Southern California Reproductive Center, Beverly Hills

Number of ART cycles and transfers in 2002: 217
Percentage of ART cycles from non-donor fresh embryos resulting in live births in 2002: 68% (under age 35), 56% (ages 35–37), 26% (ages 38–40), 21% (ages 41–42) (These numbers refer only to the practice of Hal Danzer, M.D.; occasionally, fertility centers provide the government with statistics based on the practice of individual physicians rather than the overall center.)

- Reported no pregnancies with triplets or greater in 2002 for women under 35 despite the fact that the live-birth rate for these patients was nearly twice the national average
- In 2002, performed 98 of its IVF cycles on patients who had at least two previous failed attempts
- Constructed a state-of-the-art lab with triple-gas incubators and a sophisticated air-filtration system to promote the best environment for growing embryos

Once a couple's embryos are ready, doctors put them in a woman's uterus, where the hope is that they'll implant—a process called embryo transfer. "Most transfers are easy. But in about 10% of patients, pinpointing the placement of embryos is difficult because of the shape or position of the

uterus," says Hal Danzer, M.D., a reproductive endocrinologist at the Southern California Reproductive Center (SCRC). The center is one of the few nationwide that use four-dimensional ultrasound for every transfer; it provides 3-D images in real time. A new SCRC study on more than 100 patients suggests the new technology does slightly increase pregnancy rates.

Another way the center makes transfers smoother: "Before every transfer, women are given the option of having an acupuncture treatment to help them relax," says Dr. Danzer. "Some research suggests that acupuncture helps improve pregnancy rates in women undergoing IVF."

10 Center for Reproductive Medicine of New Mexico, Albuquerque

Number of ART cycles and transfers in 2002: 183

Percentage of ART cycles from non-donor fresh embryos resulting in live births in 2002: 57% (under age 35), 55% (ages 35–37), 29% (ages 38–40); there were too few cycles in women ages 41–42 to report the results as a percentage

- Opened in 1986, making it one of the oldest fertility centers; at that time, there were approximately 40 centers in the U.S., compared to the more than 400 today

- Is one of five U.S. facilities collaborating on the development of quality-control measures in the analysis of sperm samples

- Boasts a 2002 live-birth rate of 72% for fresh embryo transfers from donor eggs, above the national average of 50%

Running the Center for Reproductive Medicine of New Mexico in a poor state that doesn't require insurers to cover infertility, Jim Thompson, M.D., focuses on giving patients value for their money. "My exam rooms and waiting areas have no frills," says Dr. Thompson, the center's director. "Instead, we try to keep our costs low and our success rates high."

He seems to be doing a good job at both: In 2002, the center's live-birth rate for women ages 35 to 37 using their own eggs was about 70% above the national average—55% compared to 30%—though its price for a standard IVF cycle (not including medications) is \$8,500, less than the typical charge. He also has stellar success rates for women under age 35 and those who are 38 to 40 years old.



Go to www.child.com/web_links to see which fertility centers didn't report their data to the CDC in 2002 and which ones filled out *Child's* extensive original survey.