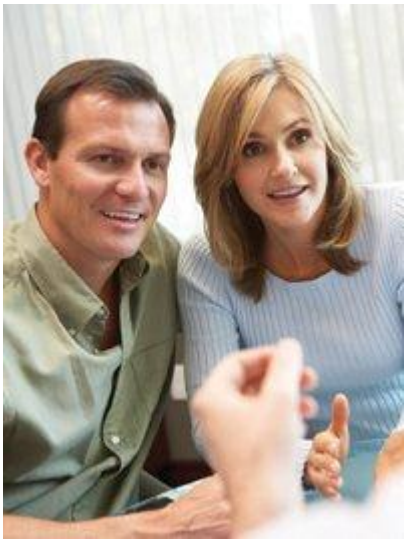
Parents' Press

Infertile Ground

Progressive Fertility Treatments to Enhance Chances of Conception

by Candace Murphy



The playground chant made it seem so simple.

First comes love,

Then comes marriage,

Then comes baby in a baby carriage!

But boy, is that rhyme woefully outdated — not even considering the fact that the presumptive linear nature of love, followed by marriage, followed by baby seems ill-suited to the modern world.

No, the school recess taunt is outdated in large part because conception — and the miracle of childbirth — just isn't that easy for everyone.

"In general, somewhere around 10 to 15 percent of the population have difficulty getting pregnant," says Dr. Eldon Schriock, an infertility expert at Pacific Fertility Center in San Francisco, and a member of the medical team that performed the first in vitro fertilization treatment in Northern California. "Meaning, if a couple has sex for a year and they're not pregnant, that's when we think there is a fertility issue."

Of course, even these statistics are squishy. Factor in that most fertility data is based on information from 20 to 30 years ago, when women weren't waiting as long to get pregnant, and percentages begin to climb. To wit: More than 25 percent of 40-year-old women won't get pregnant in six months, the timeline of urgency commonly used in older demographics, as opposed to the year afforded women in their mid-30s.

"If you're over 35 and trying six months with no luck," says Schriock, emphasizing that egg quality diminishes exponentially year by year in women, "it's time to look into things."

Looking into things varies from woman to woman, doctor to doctor. But there is, generally speaking, a flow chart that gynecologists and, later, endocrinologists adhere to when trying to assist a woman in her quest to get pregnant. After a gynecologist has gone through the basic examinations — a pelvic exam, an ultrasound, a semen analysis of the partner and a battery of blood tests testing

the woman's thyroid, prolactin, follicle-stimulating hormone and estradiol levels as well as another testing progesterone levels a week after ovulation — and the infertility is still a puzzle, it's time to ramp up both diagnostic testing and treatment.

Depending on the results of all those previous tests, family and personal history, as well as age, here's what a patient seeking reproduction intervention might expect to encounter after walking through a fertility specialist's door. In general, the treatments are listed in order of progressive intervention.

TREATMENT: Progesterone supplementation.
WHO'S A TYPICAL CANDIDATE: Women whose cycles aren't standard or who have a hormone imbalance.
WHAT IT IS: "This is the first level of treatment that might be done," says Dr. Mary Hinckley, an endocrinologist with the East Bay's Reproductive Science Center. Hinckley prefers to start patients with a progesterone vaginal pill to help correct a luteal phase defect – the luteal phase, the period of time following ovulation and preceding menstruation, must be at least 10 days to support a pregnancy — or to boost a low progesterone level.

TREATMENT: Clomiphene (trade name Clomid or Serophene) or Letrozole (trade name Femara).
WHO'S A TYPICAL CANDIDATE: Women who tried progesterone supplementation without success or those who don't ovulate regularly.
WHAT IT IS: Jokes about Clomid babies, usually twins, have been around a long time for good reason: Clomid, which is FDA-approved, has been used since the 1960s in women to induce egg production. "If progesterone supplementation alone didn't work, we think, 'Let's boost the eggs that produce the progesterone,' " says Hinckley. "Clomid can also standardize a period." Doctors have more recently been using letrozole as well; it operates similarly to clomiphene but is used in populations with more challenges in terms of age. It also has fewer side effects than clomiphene.

TREATMENT: Clomid with insemination (usually referred to as IUI, or intrauterine insemination).
WHO'S A TYPICAL CANDIDATE: Women with hormonal challenges, timing difficulties and a partner who may or may not have lower sperm counts.
WHAT IT IS: "Fertility pills with insemination are good for folks who aren't ovulating well or who have subtle problems, like sperm with low motility," says Schriock, who calls Clomid with insemination, an intervention that treats multiple fertility issues at the same time to optimize outcomes, his "Plan A" mode of treatment. Essentially, taking Clomid will give the woman a better hormonal surge and more eggs, while an intrauterine insemination with a catheter during the crucial hours of ovulation — not too different than having a turkey baster of washed, motile and concentrated sperm delivered almost directly to the area of the ovulating egg or eggs — will provide more sperm at just the right time.

TREATMENT: Follicle-stimulating drugs plus IUI.
WHO'S A TYPICAL CANDIDATE: Women who have had no success with Clomid or Femara treatments, or who are at an age where egg quality is becoming an issue.
WHAT IT IS: Moving on to a treatment that requires injectable drugs, such as FSH drugs, is what most people think of when treating more hard-core fertility problems. Expensive and laden with side effects, injectable fertility drugs are usually only used when other treatments have failed and a woman has what's known as unexplained infertility or age-related fertility. "If you've been on Clomid and you're still not ovulating, for example, that's a ticket straight to Plan B," says Schriock. "It's for a 42-year-old in who we want more than one egg, or a 22-year-old who has only one in three eggs that are fertile." Not for the squeamish, an injectable cycle requires the patient to give herself shots of a drug or combination of drugs that will cause multiple eggs to mature in her ovaries. The endocrinologist carefully follows the cycle with multiple ultrasounds, and when the follicles are appropriate size, the patient gets an hCG shot (a shot of human chorionic gonadotropin, used quite differently here than in the case of baseball player Manny Ramirez), which ensures ovulation. An IUI of washed, motile and concentrated sperm 36 hours later optimizes the woman's chances of conceiving.

TREATMENT: In vitro fertilization.
WHO'S A TYPICAL CANDIDATE: Women who didn't have success with IUI treatments and who may have issues with endometriosis, blocked tubes or whose partner has sperm issues.
WHAT IT IS: In vitro fertilization, or IVF, is similar to an injectable drug cycle in an IUI, but instead of putting the sperm in a catheter and delivering it to the vicinity of the woman's eggs, the eggs are surgically removed from the woman after they reach an appropriate size and they are introduced to washed and concentrated sperm in a petri dish. The eggs that fertilize are then closely monitored and, depending on the health of the embryos, are transferred back to the woman's uterus via catheter after either three or five days. Usually, only one or two embryos are placed in the uterine cavity to reduce the likelihood of multiples. "IVF is our Plan C," says Schriock. "In cases of ugly sperm, blocked tubes, endometriosis, that's the ticket. Also, about 70 percent of our patients with egg problems do IVF because in an IVF cycle, I can make a lot of eggs. I can't turn a bad egg into a good egg, but it can help you sort through until you find a good one."

TREATMENT: Egg donation.
WHO'S A TYPICAL CANDIDATE: Women who've had no success with other fertility treatments and/or have very poor egg quality or age-related issues.
WHAT IT IS: "A common misconception out there is that IVF is the most aggressive treatment — that 'my eggs are running out, my FSH is elevated, I'm old … let's go to IVF,' " says Hinckley. "In

truth, IVF is not going to help in that case. It only works if women can make multiple eggs. If you only make two eggs a month, IVF is not going to help you. If the sperm is not swimming well, the tubes are blocked, IVF is not your only option … and that's when we say 'let's switch to donor eggs.' " In egg donation, the patient looks through the profiles of several egg donors and selects one based on whatever characteristics are important to her — usually a woman of similar height, build and educational background — or else she select a known donor, such as a family member or friend. Then the donor and the patient sync their cycles with a variety of drugs: First, with contraceptive pills and then with a drug that suppresses the ovaries. When both donor and patient's ovaries are suppressed, the patient begins injections to prepare her uterine lining for transfer, while the donor begins injections to stimulate the growth of follicles in her ovaries. The eggs are eventually retrieved as they are in an IVF cycle, fertilized and then the embryos are transferred to the patient's uterine cavity with a catheter after either three or five days of growth.

TREATMENT: Egg preservation (aka, freezing).
WHO'S A TYPICAL CANDIDATE: Cancer patients, and, in the probable future, women seeking to delay childbirth but wishing to preserve egg quality.
WHAT IT IS: While the freezing of eggs has been around a while for patients with cancer — there was no other choice but to try to preserve their egg quality — it wasn't done with much success. That is, the eggs didn't go on to produce babies, until much more recently. That's because the technology in egg freezing has improved vastly in the past few years. "Freezing the old fashioned way, we'd have to dehydrate the eggs," says Schriock. The new way, though, employs "fast freezing," which has increased egg survival rates. Still, it's not an established treatment and is considered an experimental procedure. "We've been very conservative about fertility preservation," says Schriock, who adds that at Pacific Fertility Center, they had great success with a recent experimental trial using six egg donors whose eggs were frozen and then given to people waiting for embryos on am embryo donation list. PFC paid for fees for freezing the eggs and gave the embryo recipients a reduced-fee IVF cycle. "It worked great," he says. "That makes me confident that if the eggs are good, when we freeze them, we have a chance. It's the next big thing."

TREATMENT: Complete chromosome screening (CCS).
WHO'S A TYPICAL CANDIDATE: Women or couples with known diseases that can be passed on to a child and, in the probable future, women of advanced age seeking to avoid bearing a child with Down Syndrome.
WHAT IT IS: Formerly known as PGD — pre-implantation genetic diagnosis — technology has improved in just the last couple years to such an extent that the treatment is now better know as complete chromosome screening, or CCS. Essentially, this allows a developing embryo to be tested just as a 20-week-old fetus is tested with an amniocenteses. "We can now test all 23 chromosomes

and we know exactly what to look for," says Schriock. "It makes it very accurate. And we can now safely do it on day five [of an embryo's growth after insemination]."

No matter what fertility option chosen by a person seeking to have a baby, one of the best things about doing so in the Bay Area is the very healthy and open attitude about such medical interventions that exist in the community, not to mention the number of respected centers specializing in the practice. That means a lot in a field that pretty much governs itself and sets its own standards, practices and, let's face it, prices.

"In the Bay Area, we're used to a population that's thinking about child-bearing later in life, with more time pressures," says Hinckley. "You've got educated patients on the whole out here, you've got patients that are very tech-savvy, that have been on the Internet and have read and learned. Doctors like to rise to that challenge."

Schriock, at the Pacific Fertility Center, agrees.

"The Bay Area is blessed with a lot of good programs, but of course this comes with a personal bias," says Schriock, who, as part of the PFC fertility team, is a pioneer in the the field of assisted reproductive technology and has served as a mentor and teacher for other doctors at other offices now practicing in the Bay Area. "But the other blessing is the acceptance and openness in every facet of this. We were able to recruit more egg donors than the northeast was; we were also at the forefront of rainbow flag parenting. Any person deserves to be a parent, gay or straight, and that forces us to provide for those couples because we really want to. And then there is the demographic here that is waiting longer to get pregnant. I just think there are some things about the Bay Area that have helped us all thrive."