

## BY JILL JOHNSON

When she and her husband were unsuccessful in conceiving a child, Kara Mariotti, who was in her mid 20s, started seeing an infertility specialist. She saw a local doctor in Scranton, PA, for six years, and like 20 percent of infertility patients, the cause of her problem remained undiagnosed. Her doctor prescribed Clomid – a pill that stimulates the ovaries and carries only a small risk of twins (about 5 percent). She then underwent five artificial inseminations – a process in which the husband produces a sperm sample, the sample is carefully washed and prepared in the lab and the resulting sperm are deposited in the woman's uterus.

Artificial insemination aims to turn the sperm's usual marathon swim up the vaginal canal, through the cervix, across the uterus and into the fallopian tubes into a mere doggy paddle from the top of the uterus right into the tubes. However, the timing is crucial. Washed sperm may only live a few hours, rather than a few days, which means the insemination needs to happen within a few hours of ovulation. Even with a human Chorionic Gonadotropin (hCG) shot, which induces ovulation in the woman, targeting the exact window of opportunity is tricky.

The Mariottis' first four inseminations may have failed due to poor timing or some undetected reproductive problem, but the fifth attempt at insemination failed for another reason altogether. "I was sitting on the table, waiting for the insemination," says Kara, "when the doctor came in and told me the technician had left the building with the sperm sample!" The technician wasn't going to sell it to a sperm bank; she had left it in

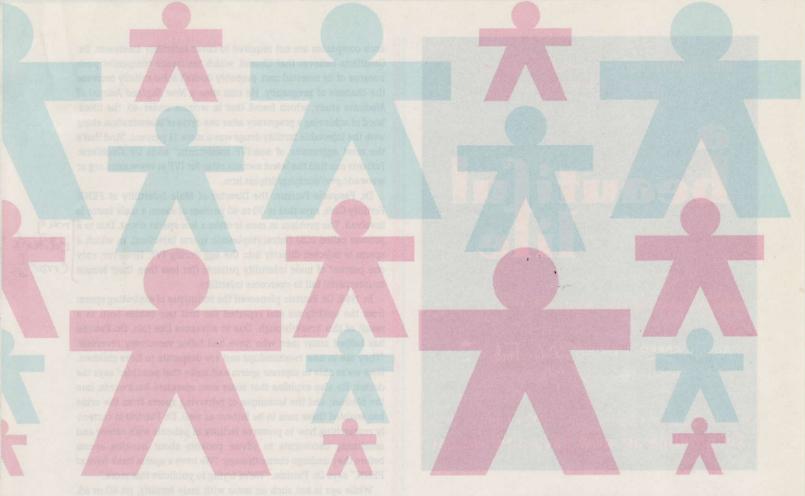
her bra, which was where she carried the samples to keep them warm, and apparently forgot about it. Needless to say, the Mariottis were upset. "We said, 'OK, that's it! Time to find a new doctor," recounts Kara.

Choosing the right reproductive endocrinologist is crucial to infertile couples who often can't afford to lose any time in the race against the biological clock. The Mariottis switched to Dr. Christos Coutifaris, Director of Reproductive Endocrinology and Fertility at PENN Fertility Care in Philadelphia. The two-hour drive to countless appointments was well worth it; 35-year-old Kara and her husband of 11 years are now the proud parents of a 3-year-old daughter and 6-month-old twin girls, all healthy IVF (in vitro fertilization) babies. Kara, who is starting an infertility support group in Scranton, advises the 10 to 15 percent of the American population who will experience infertility, to go to the right facility, with a good lab, and ask a lot of questions.

Fortunately, the Philadelphia area has a number of reputable programs where those struggling to build a family can go for help. The following guide will introduce you to these programs and provide information on the subject of infertility from doctors who have helped bring many a miracle baby into the world.

## PENN FERTILITY CARE

PENN Fertility Care, located at the University of Pennsylvania, is the only academic program in the area, says Dr. Coutifaris, who notes that



one benefit of this is free treatments for patients involved in innovative studies. He also explains that PENN Fertility Care, which has been around since 1965, is in the process of establishing a network of sites in the greater Philadelphia area, to make it easy for patients to get care close to home.

Kara is particularly thankful for the program's policy of not refusing patients whose chances are low. "We won't give false hope, but we present the data and leave it up to the patient," says Dr. Coutifaris, who accepted Kara as a patient despite her high FSH. High FSH (follicle stimulating hormone) levels are an indication of diminished ovarian reserve;

Like many doctors, Dr. Coutifaris sees that the use of donor eggs has duped many people into thinking fertility doesn't decline until 40 or even 50. "The problem is that the media glamorize successful pregnancies in older women - movie stars, musicians, people in the news - but what's not publicized is that often they are not using their own eggs." Most experts agree that fertility shows signs of decline by 30, dips precipitously at 35, and plummets as women approach 40.

Dr. Coutifaris has noticed a trend in women delaying childbirth due to professional reasons. "An awareness of the decline in fertility with age is so important. We don't mean to suggest that women should forego their

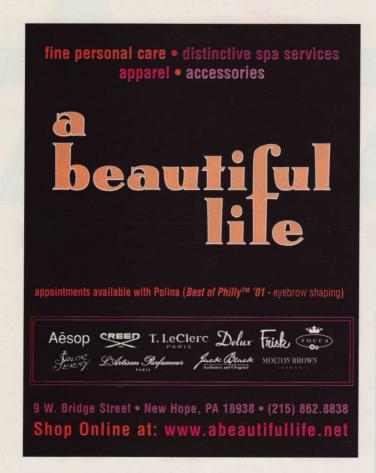
in other words, Kara, who was in her early 30s, was already running out of good eggs. Even one of the top fertility doctors in the United States turned her down. "He wouldn't even take my calls, my FSH was so high," says Kara. (Her FSH ranged from 15 to 18, but due to the use of different assays, 12 may be high at one lab and 25 high at another.)

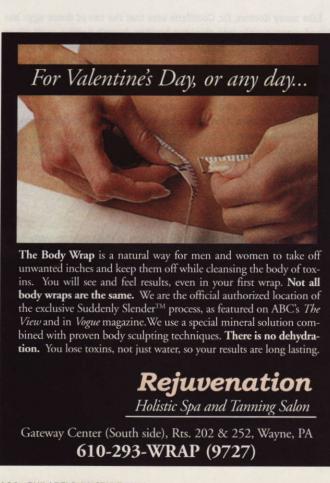
"I could give you a number of examples of patients who had been turned away elsewhere, and they've gotten pregnant." Dr. Coutifaris mentions a current patient who is 46 and pregnant with her own eggs. He does warn that these examples are the exception, not the norm. "One study, published in Human Reproduction, revealed that in women over 40 with high FSH levels, none got pregnant; in those of the same age with borderline FSH levels, some got pregnant, but all miscarried," explains Dr. Coutifaris, who encourages donor eggs if a patient falls into this category. PENN Fertility Care is developing an anonymous donor program to launch this spring, for patients who can't or prefer not to turn to a friend or family member for help in this complicated endeavor.

careers, but they should be aware and come to their own decision."

Dr. Coutifaris advises women under 35 to come see him if they haven't conceived after a year of trying. He suggests those 35 to 38 wait only 6 months, and women over 38 should set up a consultation right away to do some basic tests. "It would be a shame, a year later, to discover blocked tubes or some problem that could be corrected. One year can make a huge difference in the quality of an older woman's eggs."

Initial testing consists of determining that the patient ovulates, checking for endocrine abnormalities, doing a semen analysis on the partner and evaluating the endometrial cavity and fallopian tubes. "If everything is normal and the woman is under 35, it's up to her how aggressive she wants to be. The concept that's slowly emerging is that the method that has the highest success in the shortest time is IVF. Unfortunately, there's a financial concern. The best tool for success can't be used by the majority of people." The procedure can cost \$10,000 or more (including \$3,000 to \$4,000 in fertility medication) in Pennsylvania, where insur-





ance companies are not required to cover infertility treatment. Dr. Coutifaris believes that Clomid, which insurance companies push because of its nominal cost, probably doesn't substantially increase the chances of pregnancy. He also cites a New England Journal of Medicine study, which found that in women under 40, the likelihood of achieving a pregnancy after one cycle of insemination along with the injectable fertility drugs was a mere 11 percent. "And that's the most aggressive of non-IVF treatments," adds Dr. Coutifaris. Patients can find the latest success rates for IVF at www.asrm.org or www.cdc.gov/nccdphp/drh/art.htm.

Dr. Pasquale Patrizio, the Director of Male Infertility at PENN Fertility Care, says that in 30 to 40 percent of cases, a male factor is involved. The problem in men is often a low sperm count. Due to at ma q process called ICSI (intracytoplasmic sperm injection), in which a sperm is injected directly into the egg during IVF. However, only one percent of male infertility patients (far less than their female Crror counterparts) fail to overcome infertility.

In 1988, Dr. Patrizio pioneered the technique of aspirating sperm from the epididymis and reported the first two babies born as a result of this breakthrough. Due to advances like this, Dr. Patrizio has helped many men who have had failed vasectomy reversals. "They are in new relationships and are desperate to have children. Now we're able to aspirate sperm and make that possible," says the doctor. He also explains that some men ejaculate backwards, into the bladder, and the technique of retrieving sperm from the urine has enabled these men to be fathers as well. Dr. Patrizio is currently researching how to preserve fertility in patients with cancer and sensitizing oncologists to advise patients about banking sperm before they undergo chemotherapy. "We have a sperm bank here at PENN," says Dr. Patrizio. "We're trying to publicize this more."

While age is not such an issue with male fertility, (at 60 or 65, they start to see a decline) ego is. "Men associate a lack of fertility with their sexuality," says Dr. Patrizio. "Not being able to sire a child without help affects their masculinity." A clinical psychologist at the center is available to help patients work through these issues and the multitude of others that may arise as a couple battles infertility. (215-662-2952, www.obgyn.upenn.edu)

# WOMEN'S INSTITUTE FOR

The Women's Institute, which has had a full-service IVF program since the early '80s, has locations in both Philadelphia and Plymouth Meeting. Dr. Maureen Kelly, the Medical Director of the IVF program, explains that the Women's Institute also has a gestational carrier program that is unique to the area (for couples who need a woman to carry their baby, but not provide the egg as a surrogate mother would). They also have an anonymous donor program.

Dr. Kelly says that tubal disease (stemming from infection or endometriosis) and egg quality issues are the most common causes of infertility that she sees in women, and 40 percent of cases involve a male factor. She reiterates Dr. Coutifaris' concern about women waiting longer to have children. "As a woman ages, fertilization rates drop and the rate of miscarriage increases. Women don't understand the impact of age on fertility, and for now, we can't reverse the decline." While doctors, including those at the Women's Institute, are researching ways to preserve fertility by cryopreserving (freezing) eggs or ovarian tissue, no one knows how long it will be before young women can make a deposit at an egg bank and then safely postpone having a family until mid-life.

"I would advise anyone to attempt conception as soon as it makes sense for them," says Dr. Kelly. "The sooner the better. We have single women coming in who are 35 or older, they haven't met Mr. Right, and they want to conceive on their own 'before it's too late.' Unfortunately, the decline has already started at 35, so often 35 or 38 is too late." Dr. Kelly explains that women in this age range still have eggs, but often they develop abnormally. "We are trying to identify why eggs form chromosomal abnormalities as a woman ages," she says.

Since the quality of the egg is a key determinant of pregnancy success, egg donor programs are highly effective for those couples who are comfortable with the idea that the woman will not be genetically related to the child. On the positive side, she will be able to experience pregnancy and ensure that she provides a healthy prenatal environment for the baby. The Women's Institute looks for donors who are 21 to 32; applicants are carefully screened according to ASRM's (The American Society for Reproductive Medicine) guidelines. The donors receive \$4,000 for each cycle (donors are required to take fertility shots for several weeks and undergo egg retrieval surgery).

Most patients do achieve pregnancy before egg donation, adoption or childfree living become the only options. Dr. Kelly estimates that only 20 editors percent of her patients even end up trying in vitro fertilization (which error IT usually takes two or three attempts, as the odds of each successfully implanting are around 25 percent).

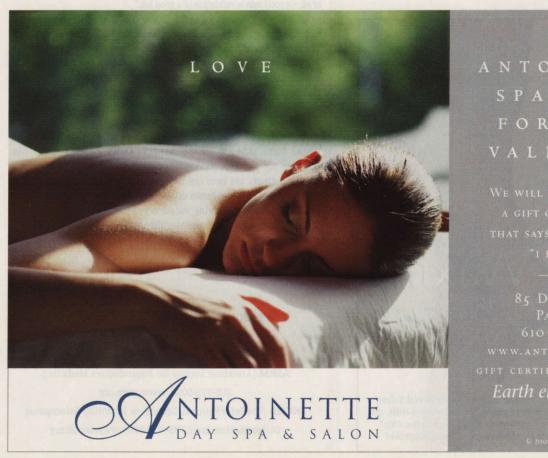
> Dr. Kelly puts the Women's Institute's IVF success rate at about 40 percent for a woman under 35 using her own eggs, and the donor egg success rate at about 72 percent. To minimize the risk of high-multiple births, the Women's Institute transfers one to two embryos less than most clinics across the country, says Dr. Kelly. "Some women choose to transfer only one embryo at a time." She hopes that the latest data will reveal

that more clinics are following suit and being more cautious.

Dr. Andrea Braverman, the Director of Psychiatric Services at the Institute, is available to help patients cope with everything from sadness and frustration to the practical concerns of juggling treatment, work and life. "Patients often feel guilty that they've done something to cause their infertility," says Dr. Braverman. "They hear everyone say, 'Just relax and you'll get pregnant...have a glass of wine...go on vacation.' While we should never dismiss the mind-body connection, right now there's no compelling research to suggest we have that much control. It would be great if we did." Dr. Braverman runs support groups for infertility patients, including egg donor recipient support groups and IVF workshops. (215-922-2206, www.womensinstitute.org)

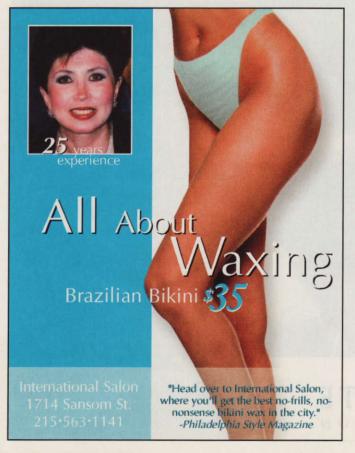
Northern Infertility is located in Meadowbrook, just north of Philadelphia, and the physicians also see patients for consultations in Sellersville (Bucks County) on Thursday afternoons. An initial consultation runs \$200, which is typical for the Philly area. Dr. Martin Freedman and his partner, Dr. Arthur Castelbaum, are the only two physicians and they each see their own patients directly. "Patients aren't shunted around to different physicians," says Dr. Freedman. "So there's a greater attention to detail. Even if a patient's egg retrieval or transfer is scheduled on a weekend that we're not on call, we will come in and do the procedure for our own patients. That gives us a different sense than a physician who is asked to step in mid-cycle."

The average age of Northern Infertility patients is 34 or 35, and Dr. Freedman says about half already show a perceptible decline in fertility rates. Half of his patients have some kind of ovarian dysfunction, meaning they're not ovulating well. "Often, simple alterations are highly effec-



SPA GIFTS





tive," says the doctor. The root of the problem is periodically endometriosis, which can show symptoms, (painful periods, ovulation and/or intercourse) but is asymptomatic in at least half the cases. Dr. Freedman explains that endometriosis is often discovered and treated via a surgical procedure called a laparoscopy. "More than two-thirds get pregnant subsequent to laparoscopy," says

Clomiphene (Clomid is a brand name) is generally the first course of action for patients, but Dr. Freedman recognizes that this drug can adversely affect the cervical mucous that paves the way for the sperm's journey to the uterus. That's why artificial insemination (also known as IUI, or intrauterine insemination) is usually advised, and Northern Infertility does two inseminations to increase the chances of a timely rendezvous between sperm and egg. Artificial insemination on its own costs about \$200 (and feels like a Pap smear). The next step is frequently to pair the insemination with injectable fertility drugs, which cost from \$700 to \$1,000.

About 15 to 20 percent of Northern Infertility patients try IVF. Dr. Freedman estimates the success rate for women under 35 to be about 60 percent. The cutoff for IVF at this clinic is 42. "Women older than that only have a one to two percent chance of success," says Freedman. Northern Infertility also has an egg donor program. "The majority of patients come with a relative or friend, but anonymous donors are available," says the doctor. Donors, who are 32 and under, are paid \$3,500 per cycle, and they are followed to enable recipients access to a long-term medical history. As is standard, a donor IVF cycle runs \$15,000 to \$18,000. Dr. Freedman puts the donor egg success rate at 70 percent, and he advises patients to look at this category if they want to draw some useful conclusions from the ASRM report. "If a program has a 25 percent success rate with donor cycles, that's not where the standard is these days. The donor rate should be the most ideal of all - a good rate is validation of a good lab."

In 1988, Dr. Freedman was the first doctor in the Mid-Atlantic U.S. to help a couple conceive via a cryopreserved, or frozen, embryo. The advantage of freezing embryos when there are a surplus after an IVF retrieval (which there frequently are) is that the IVF process is significantly easier should the patient need to make several attempts at pregnancy. She won't need all of the fertility drugs to coax her ovaries into superovulating, (maturing more than one egg, often up to 15 for an IVF cycle) and she won't need to undergo another retrieval.

"My wife and I had multiple miscarriages," says Dr. Freedman, whose three kids are all the result of fertility treatment. "I can relate to my patients, having been through it myself. Some of my former patients are now my best friends, and their kids are 12 or 13." As many of his patients do, Dr. Freedman feels lucky. "There's no better or more satisfying vocation you could have in this world." (215-938-1515, www.northerninfertility.com) -

RESOLVE: 888-623-0744, www.resolve.org AIA (American Infertility Association): 888-917-3777, www.americaninfertility.org ASRM (American Society for Reproductive Medicine): 205-978-5000, www.asrm.org

INCIID (The InterNational Council on Infertility Information Dissemination, Inc.): 703-379-9178, www.inciid.org

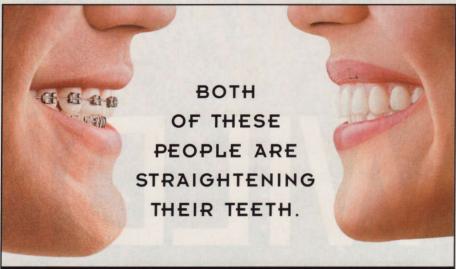
# TIPS ON **PROTECTING** FERTILITY

- · Use condoms. STDs can lead to infertility in both sexes.
- · Get screened for STDs and get treatment promptly.
- · Quit smoking. Nicotine depletes ovarian follicles (eggs) and reduces sperm count.
- Exercise, stress, diet, weight and air travel probably do not play a major role in fertility, unless they disrupt the menstrual cycle.
- Check that any prescription medication you are taking does not affect fer-
- Avoid exposure to toxic substances. Pesticides, fertilizers, etc., can be toxic to sperm, and women exposed to certain toxins in the workplace may be at risk for early miscarriage.
- Women should try to have children in their 20s or early 30s if it makes sense
- · Men should consider banking sperm before treatments like chemotherapy.
- Women should begin taking folic acid six months before trying to conceive and continue throughout pregnancy to protect the fetus from neural tube defects.

# **RED FLAGS**

- · Irregular periods longer than 35 days between periods. Women whose periods are like clockwork generally can be assured that they are ovulating, and ovulation predictor kits, available in most drug stores, are good tools for determining this.
- · Painful periods, ovulation and/or sex (signs of endometriosis).
- A family history of infertility or early menopause.
- · A shortening of the menstrual cycle (which may signify that a woman is approaching menopause).
- · For men, delayed development, small testes or a lump on the testes.
- A low volume of ejaculate just a few drops is not normal.
- Any past testicular surgery.





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