



Ken Mosesian (left), executive director of the American Fertility Association, and actress Brenda Strong presented the Joyce M. Vargyas M.D. Visionary Award to Dr. Bush in March.

# IN SEARCH OF BABY

## NEW TECHNOLOGIES MEAN GREATER SUCCESS AT GETTING PREGNANT

BY ANGELINE GRENZ

**T**oday it is more common than not: many women choose to establish their careers first, getting married in their 30s, before deciding they are finally ready to tackle parenthood. By this time, they are often in their late 30s, perhaps 40s, and their chances of getting pregnant have declined, while the chance of an abnormal pregnancy has risen.

But new technology is enabling parents who are looking to start or continue building a family options that translate to greater success at becoming pregnant, less risk of an abnormal pregnancy and less risk of multiple births when they do become pregnant. This technology, available at Conceptions Reproductive Associates of Colorado, is making many families' dreams come true.

Mark Bush, M.D., leads the way, developing in vitro fertilization (IVF) technology to make the process more successful – and more economical. His successes have garnered him national praise. In March, Dr. Bush was awarded the Joyce M. Vargyas M.D. Visionary Award, presented by actress Brenda Strong

and the Board of the American Fertility Association.

The award honored Dr. Bush for his leadership as the medical director at Conceptions, his clinical application of complete chromosomal screening (CCS) of the embryo prior to IVF implantation, and his contributions to reproductive medicine on a national level.

Of particular interest is Dr. Bush' advances in CCS. When a woman plans to get pregnant after age 35, risk factors increase greatly and fertility becomes a concern. As you move even closer to age 40, the factors change exponentially. Finding the right fertility treatment quickly is a major concern.

IVF can be the answer to many fertility challenges, including blocked fallopian tubes, unexplained female infertility, and male infertility. Traditional IVF practices generally had two or three embryos implanted into the womb, and the doctors and parents would cross their fingers hoping that an embryo would take. Best-case scenario: one healthy baby nine months later. But more likely, other results included miscarriages due to abnormal pregnancies, no pregnancy, or multiple births.

Octomom is perhaps the most widely recognized

instance of multiple births because of IVF practices. Octomom Natalie Suleman had six embryos implanted via IVF, rather than the normal practice of two to three. All six successfully implanted, two embryos were twins, and in 2009 she gave birth to octuplets.

Through Conceptions' approach, the danger of multiple births is greatly reduced. Because of the use of CCS prior to implantation, Dr. Bush's clinic has increased the chances of healthy pregnancy and reduced the negative outcomes.

Women over 35 who are concerned about their pregnancy are often offered an amniocentesis to determine chromosomal abnormalities at about 15 weeks of pregnancy. Amniocentesis can detect Down syndrome, Edwards Syndrome and Turner syndrome. Through his process, Dr. Bush is able to perform amniocentesis on the embryos before implantation.

Prior to IVF, Dr. Bush takes embryos from each patient and tests them for chromosomal abnormalities. "We are all made up of made up of 23 pairs of chromosomes," explains Dr. Bush. "There are many serious, lethal chromosome abnormalities. As eggs age, they are prone to passing chromosomal



The lab at Conceptions Reproductive Associates of Colorado is helping improve pregnancy outcomes with complete chromosomal screening prior to in vitro fertilization implantation.

errors to the embryo resulting in one of the three negative outcomes at IVF: a negative pregnancy test, a miscarriage or a bad result at amniocentesis.”

Conceptions grows embryos to day five and tests them for DNA abnormalities prior to implantation. They are able to rule out the embryos that would not come to full term and identify any healthy embryos. Parents can then have one healthy embryo implanted, increasing the odds of a healthy birth, saving heartache, precious time and the expense of multiple IVF treatments. Other healthy embryos can be stored for future pregnancies.

Dr. Bush launched the technology in January 2009 in collaboration with Gene Security Network. Conceptions has currently done over 100 of these cycles “with outstanding results.” Conceptions asserts that because of this technology they have a demonstrated low number of embryos transferred per IVF cycle, low multiple pregnancy rates and maintain high pregnancy rates with their clients. “We can give families the ultimate answer,” says Dr. Bush, allowing families to attempt IVF with the safety net of knowing that abnormal embryos won’t be implanted.

He recounts the experience of a patient who had a daughter at age 34 with no problems. At age 37, she decided to try again and found she had fertility challenges. She tried ineffective fertility treatments that resulted in two DNA abnormal miscarriages before turning to Conceptions. She now has a healthy baby and represents a similar story among Dr. Bush’ patients.

An added benefit of Conceptions’ CCS process: not only can they tell which embryos have an abnormality, they can locate the source, whether from the mother or the father. This allows parents to more easily assess donor options. They are the only fertility clinic in the Denver metroplex that can map the parental source of chromosomal abnormality in the embryo.

In addition to new innovative IVF protocols, Dr. Bush is interested in educating women about their fertility choices and making those choices affordable to those not covered by health insurance. “Many

women are unaware of these protocols and technologies,” says Dr. Bush. “By not getting the word out, women may use up valuable time on their ovarian clock pursuing less effective treatments.”

Dr. Bush believes in starting that education early. Conceptions’ median group of patients is in the 35- to 40-year-old range. He does outreach to college students in their 20s, to help educate them that they can have their eggs tested at any time to determine health and plan families accordingly.

While timing is critical, the cost of fertility treatments can be significant. Dr. Bush has tackled the pricing structure to make it more affordable for his patients. “We give access with regard to our pricing.” Conceptions’ website outlines their pricing up front; they also accept most insurances.

“But I thought, ‘What about the women without insurance?’” he continues. To make fertility more attainable for those couples, “Our cash price for IVF is all-inclusive. It includes all the technologies: injecting the eggs, growing the embryo to day five, and the pricing structure is extremely competitive.”

Dr. Bush has also found ways to reduce other costs for women: insemination rates, laparoscopic surgery for fibroids, and preliminary work prior to fertility testing are all offered at reduced rates for cash paying clients. Part of Dr. Bush’s recognition in March was an acknowledgement of his effort to make these services available at affordable rates for his clients.

Conceptions’ success speaks for itself; they are one of the top programs in the country with regard to pregnancy rates. Conceptions complies with the regulations outlined by the American Society of Reproductive Medicine (SART), which is the industry standard for monitoring pregnancy rates. “A low average of embryos transferred translates to low multiples [births]. Our triplet rate over the past five years is anywhere from zero to 4 percent. This is very low.” +

---

Angeline Grenz is editor for *Style Magazine*.