

Family Celebration

SPRING 2011

DEPARTMENT OF OB/GYN • REPRODUCTIVE ENDOCRINOLOGY & INFERTILITY DIVISION

CMC Women's Institute helps deliver one of the First Babies in the Carolinas Born as a Result of Egg Freezing!

On December 13, 2010, one of the first babies in the Carolinas was born as a result of oocyte vitrification, a process where a woman's eggs are frozen until she is ready to conceive. This breakthrough technology allows the eggs to be thawed, fertilized and then transferred to the uterus.

Melissa Rhyne enrolled in a study offered by CMC Women's Institute's Program for Assisted Reproduction at Carolinas Medical Center. The study involved collecting and vitrifying (freezing) eggs, then thawing and fertilizing the eggs in the in vitro fertilization (IVF) laboratory. The Rhynes then had embryos from two frozen eggs placed back into her uterus, resulting in a successful pregnancy, and birth of a healthy baby girl! In addition, two other couples have achieved healthy pregnancies that have progressed beyond the first trimester with this approach, and another is awaiting results of the pregnancy test after completing an embryo transfer from a frozen egg.



Historically, the freezing of eggs has been harder to achieve because the egg is the largest cell in the human body and contains a lot of water. When frozen, ice crystals can form and destroy the egg, so an ultra-rapid freezing process is used to reduce damage. Vitrification can be completed in less than 15 minutes, and the eggs are stored in liquid nitrogen, but success requires technical expertise that few IVF centers currently have.

Oocyte vitrification is still considered investigational by the American Society for Reproductive Medicine, and should only be performed under the supervision of an institutional research review committee. In the right hands, this breakthrough technology has many potential benefits for women who want to postpone pregnancy. For example, ovarian failure and sterility may occur in women who are planning to begin radiation treatment or chemotherapy for cancer, and oocyte vitrification allows storage of eggs until she is ready to have children, even if it is years later. "Social freezing" may benefit a woman during her peak fertile years if she plans to delay childbearing because of her career or while she is waiting to find the right relationship. Furthermore, couples who wish to avoid fertilization of a large number of embryos during IVF procedures may consider oocyte preservation as the best possible solution.

Are you trying to get pregnant? Do you have polycystic ovary syndrome?

Polycystic ovary syndrome (PCOS) is the most common hormonal disorder in women of reproductive age. PCOS is a condition in which a woman's hormones are out of balance. Hormones are chemical messengers that trigger many different processes, including growth and energy production. Often, the job of one hormone is to signal the release of another hormone. In women with PCOS, the ovaries start making slightly more testosterone than usual. This may cause you to stop ovulating, get acne or experience extra hair growth. Women with PCOS often struggle with infertility due to irregular ovulation.



Since the 1950s, clomiphene citrate has been the leading medicine to help induce ovulation and achieve pregnancy in women with PCOS. In the 1990s, a newer medicine called letrozole has been used to help ovulation in women with PCOS. Letrozole is FDA-approved for daily treatment of breast cancer. When it is taken for only 5 days following a period, it acts much like clomiphene and helps to induce ovulation. The Reproductive Medicine Network and National Institute of Child Health and Human Development are conducting a clinical trial for women across the country to determine which drug, clomiphene or letrozole, is more effective at achieving live births. The Center for Reproductive Endocrinology and Infertility at CMC is excited to participate in this study and offer free treatment to women who qualify for the study.

Who is eligible to participate?

Women between 18 and 40 years old who want to become pregnant, who have eight or fewer periods per year and elevated testosterone level or excessive body hair, and who have PCOS determined by an ultrasound are eligible to be screened for this study.

What can I expect if I participate?

Participants will complete approximately 12 short visits at the CMC Women's Institute for monitoring while taking the study drug. The study drug will be administered up to 20 weeks or 5 cycles. Medication used to induce ovulation is provided by the study. Participation also includes a physical exam; pelvic ultrasound; measurements such as height, weight, vital signs, and hip and waist measurements; and acne, skin oil, and excessive hair growth assessments. Blood work will be done at each visit at no cost to participants. A test to determine if your fallopian tubes are open and a semen analysis from your partner are also part of the study. Pre-natal care during a pregnancy and the delivery of your baby if you become pregnant are not covered by the study.

For more information, please contact:

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