

When Frozen is Better Than Fresh

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When a couple decides it is time to use In Vitro Fertilization (IVF) to grow their family, they have often been trying to have a baby for a year or more. Many couples

tried other types of fertility treatments before moving to IVF. It is understandable that once the decision is made to undergo IVF treatments, patients are anxious to be pregnant as soon as possible. Working with a reproductive specialist with proven high pregnancy rates will ensure the best outcomes for mom and baby.

IVF centers may offer both fresh and frozen embryo transfer cycles. An embryo is created when sperm fertilizes a female's egg. A fresh embryo transfer cycle occurs when an embryo is transferred back into the woman's uterus during the same cycle in which her egg(s) are retrieved and fertilized (about five to six days after fertilization). Extra embryos are frozen (cryopreserved) for future use.

A frozen embryo transfer cycle occurs when embryos are frozen then thawed and transferred to the uterus at a later time. Improvements in freezing especially vitrification—a flash freezing technique and storage processes have resulted in high rates of frozen embryo survival and pregnancy rates that are equal to or higher than pregnancy rates for fresh transfers.

Improved pregnancy rates and lower miscarriage rates have led many IVF centers to move to “freeze all” cycles for couples undergoing IVF. In “freeze all” cycles, all embryos are frozen for future use. Researchers have identified several reasons why freeze all cycles improve pregnancy outcomes. Freezing embryos:

- Permits the uterus to return to normal after

IVF medication stimulation. This provides more natural embryo implantation conditions. Several recent studies have found that if there is a premature rise in certain hormone levels, pregnancy rates are reduced. This causes the uterine lining to be less receptive to the embryo when it is transferred.

- Reduces the pregnancy risks associated with a fresh embryo transfer cycle. Studies show that pregnancies occurring from a fresh transfer have higher rates of complications including preterm labor, preeclampsia, placenta previa and low birth weight babies.



- Allows for preimplantation genetic screening (PGS). PGS screening involves taking a small sample of cells from the embryo to determine if the embryo contains the correct number of chromosomes. This testing can take several weeks to obtain results. 20-25% of embryos are abnormal even in women less than 35. Women over 35 are at increased risk of having abnormal embryos. Replacing normal embryos greatly increases the chances of a successful pregnancy, healthy birth and decreases the risk of miscarriage.
- Preserves all viable embryos. Most IVF practices

freeze embryos when they reach a stage called a blastocyst. Embryos can take 5 to 7 days to become blastocysts. The length of time it takes an embryo to become a blastocyst is not an indication of quality. When all embryos are frozen, the best quality embryo is usually selected for transfer to the uterus, increasing pregnancy rates. Because of higher pregnancy rates, many IVF practices encourage couples to transfer one embryo at a time (single embryo transfer or SE). Transferring more than one embryo results in higher rates of twins, and twin pregnancies are high-risk pregnancies. Risks to the mother include high blood pressure and diabetes. Risks to the babies include early delivery, low birth weight, breathing and feeding problems and learning disabilities.

- Significantly reduces the risk of ovarian hyperstimulation syndrome (OHSS) which in severe cases is life threatening. It can cause blood clots and fluid to build up in the abdomen or lungs causing pain and difficulty breathing. High estrogen levels during a stimulation cycle increase the risk of OHSS in a fresh transfer cycle. Other risk factors for OHSS include age under 35, a history of polycystic ovarian syndrome (PCOS) and producing more than 20 eggs.

Frozen embryo transfer cycles involve less medication and are less expensive than a fresh IVF cycle. The process involves preparing the uterus—first with estrogen pills or patches to thicken the uterine lining and then adding progesterone to make the lining receptive to the embryo. This process can take 3-4 weeks.

A healthy baby is the goal for both patients and providers. Frozen embryo transfer cycles (FET) may add a little time to the process but the higher pregnancy rates and lower complications rates for mom and baby are worth the wait. **WJ**



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