



Embryo Cryopreservation

What it is and how it is done

This handout explains embryo cryopreservation and why you may want to choose this option.

When you consent to the IVF procedure, you will be asked to state whether you want viable embryos to be cryopreserved.

Please talk with your doctor about any questions you have about embryo cryopreservation.

What is embryo cryopreservation?

During an *assisted reproductive technology* (ART) cycle, we advise that no more than 2 or 3 embryos be transferred to the uterus at one time. This is because transferring more embryos greatly increases your risk for giving birth to multiples, but does not improve your chances of becoming pregnant.

But, more than 2 or 3 good quality embryos often result from an *in vitro fertilization* (IVF) cycle. These potentially viable embryos can be used later if they are frozen (*cryopreserved*). *Embryo cryopreservation* is the process of freezing the embryos that are not transferred.

What are the benefits and risks?

Cryopreservation allows you another chance of achieving a pregnancy without having to go through another expensive and demanding cycle of IVF. It may also be done if embryo transfer is not advised or is not possible during the actual IVF cycle.

Nationally, pregnancy rates are about 20 to 30% (20 to 30 out of 100) using frozen embryo transfer. Pregnancy rates vary from clinic to clinic, but we know that frozen embryo transfer is just as effective as fresh embryo transfers in creating a pregnancy.

There is no increased rate of miscarriage or birth defects in these pregnancies compared to natural pregnancies. The long-term health of children resulting from cryopreservation is being reviewed.

Good quality embryos have a high survival rate. Usually, more than 80% (80 out of 100) survive the freezing and thawing process.

How are embryos chosen for cryopreservation?

Embryos may be frozen at various stages during your cycle. Your doctor will determine what is best for you.

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Questions?

Your questions are important. Call your doctor or other UWMC health care provider if you have questions or concerns.

University
Reproductive Care:
206-598-4225

Website:
[www.uwmedicine.org/
uwfertility](http://www.uwmedicine.org/uwfertility)

Usually, all normally fertilized embryos are cultured to the *blastocyst stage* (day 5 after egg retrieval) to allow us to select the highest quality embryos for transfer. Any good-quality blastocysts that develop, that are not transferred, will be frozen.

Survival rates of frozen embryos relate directly to embryo quality, so only those that show normal growth and good *morphology* (appearance) will be chosen for cryopreservation. This will help ensure a positive outcome in later cycles.

How long can embryos be cryopreserved?

Frozen embryos are stored in liquid nitrogen at -321°F (-196°C). We do not know how long frozen embryos can stay *viable* (are able to live).

Healthy children have resulted from embryos that have been frozen for several years. Other mammals have had healthy offspring from embryos that have been stored as long as 10 years.

What else do I need to know?

- Couples whose eggs and sperm create embryos have full control over what happens with their embryos. You will read more about this in the embryo cryopreservation rider (another information sheet).
- You will need to stay in contact with University Reproductive Care about what you wish to have done with any frozen embryos you do not have transferred. You can ask us to:
 - Store them for future use. Stored embryos will be discarded if both partners die.
 - Donate them, either to another couple to create a pregnancy or for research. Please talk with your doctor about donating your frozen embryos if you do not wish to use them for your own future pregnancies.
- All embryos must be transferred before the woman's 51st birthday because of unknown medical risks of pregnancy beyond this age.
- Embryo cryopreservation is a developing area of medicine. Not all risks are understood or have been identified.

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