

## **Cryopreservation**

**With the development of cryopreservation, embryos and sperm can be stored for long periods of time by freezing the cells in liquid nitrogen (-196°C).**

According to Austrian Reproductive Medicine laws (Fortpflanzungsmedizin-Gesetz (FMedG)), fertilized eggs and sperm may be frozen for a maximum of ten years.

## Embryonic Cryopreservation

Multiple eggs can be frozen if they have been extracted and fertilized during IVF or ICSI treatment. It only makes sense to preserve good quality embryos, since their "survival rate" is nearly 70-80% after unfreezing. Frozen embryos are a chance for a new pregnancy without further hormone stimulation or follicle punctures.

The so-called "cycle-monitoring" keeps track of follicle growth and endometrium structure; cryo-embryos can only be implanted starting from the moment of natural or medication-induced ovulation. The unfrozen embryos will be implanted through the cervix into the uterus using a thin, flexible catheter. Yellow body hormones will be supplied in the form of pills from the beginning of ovulation, to prepare the endometrium for nidation. Pregnancy can be determined two weeks after ovulation by measuring levels of the hormone hCG in blood or urine or by a pregnancy test.

The chance for successful pregnancy using cryo-embryo transfer is 30-40% per cycle, depending on the age of the couple, hormone levels, disease (Diabetes mellitus, hypertension, etc.) and lifestyle (excess weight, stress, alcohol and nicotine use ...).

## **Sperm Cryopreservation**

If the male partner can not be present during fertilization treatment, it is possible to preserve the sperm for later use.

Patients who require aggressive cancer treatment should be informed in advance about the effects on fertility; radiotherapy and chemotherapy can cause permanent fertility damage. If this is the case, we strongly suggest preserving the sperm and to consider fertility options after cancer treatment is completed.

### **Cryopreservation of Testes Tissue**

If there is no sperm in the ejaculate (Azoospermia), tissue is removed directly from the testes by a percutaneous testes puncture or by open testes biopsy (testes will be excised). Small tissue samples are taken and microscopically analyzed to determine if the tissue contains viable sperm.

If tissue samples contain viable sperm, the sperm can be cryogenically preserved and, if necessary, later unfrozen for use in the ICSI treatment.