Male Fertility Laboratory
University of Washington

SPERM OR SEMEN CRYOPRESERVATION INFORMATION

Sperm or semen cryopreservation is a method of sustaining the viability of sperm over a long period of time by cooling and storage in or above liquid nitrogen (about -196°C). Cryopreservation of sperm allows the sperm to be used for attempts at insemination and fertilization, with the goal of causing a pregnancy.

PROCEDURES

Semen will be collected by self-masturbation into an approved sterile container, at a site provided by the Men's Health Center, except under special circumstances. The semen, or the sperm obtained from the semen will be processed according to established Male Fertility Laboratory (MFL) protocols and any directives from the referring physician and the laboratory director. Different techniques of sperm cryopreservation may be used on subsequent samples to optimize the results. The semen or sperm will be cryopreserved and stored in or above liquid nitrogen. A semen analysis is performed on the fresh semen. A small portion of the semen is generally cryopreserved as a "test freeze". The "test freeze" vial is warmed up (thawed) and analyzed about two or more days after cryopreservation to determine if the procedure adequately preserved the sample. The cryopreserved sperm, upon thawing, must meet certain criteria for motility and viability before they are considered adequate for use in inseminations. The estimated quality and quantity of sperm after thawing will determine the type of insemination technique (intra-uterine, in vitro fertilization, intracytoplasmic sperm injection) best suited for each sample.

The control and disposition of the frozen semen or sperm belongs to the patient, with exceptions listed on the Legal Statement for Control and Disposition of Cryopreserved Sperm or Semen. The patient must execute the legal statement regarding future control and disposition. The physicians and scientists of the MFL and Men's Health Center will be responsible for determining the appropriate conditions and procedures for cryopreserving, storing, thawing and transferring the semen or sperm. The MFL and Men's Health Center will not be obligated to proceed with any of these procedures if experience indicates that the risks outweigh the benefits.

BENEFITS & RISKS

The benefits of cryopreserving and subsequently thawing sperm or semen include: 1) Extend the chances of causing a pregnancy from the present to a much later time; 2) Preserve sperm that are present or normal now, to a time when only abnormal sperm, or no sperm may be present; 3) Enable sperm to be inseminated under selected and optimal circumstances, without the need of producing a semen sample at that time.

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There is a risk is that, as with any technical process that requires mechanical support, failure of equipment can occur. Back-up freezer systems decrease the possibility of sample loss. Our freezers do not rely on electricity or other external power to remain cold, but are subject to major structural collapse (as in a major earthquake) or interruption of service for more than two weeks. There is a risk of failure of fertilization and pregnancy with your frozen and thawed sperm. Experience has shown that the pregnancy rate for couples using cryopreserved sperm may be slightly lower than that experienced with fresh sperm. Studies do not show any increased risk of birth defects associated with the use of frozen-thawed sperm for insemination. Cryopreservation and thawing of sperm or semen generally adversely affects at least some of the measurable characteristics of sperm. The viability and motility of frozen-thawed sperm is usually lower than that of fresh sperm. For some men, or for some semen samples of any man, cryopreservation and thawing may adversely affect the sperm so that most or all of them may be non-moving or dead. There is no accurate method to determine ahead of time how well the sperm will survive the procedure, although semen samples with normal-to-excellent sperm characteristics generally can be cryopreserved and thawed successfully.
Another risk of insemination of frozen-thawed sperm is the possible infection of the recipient woman with a bacterium, virus or other micro-organism that was present in the semen at the time of cryopreservation. This risk may be the same as the risk of infection from the same man's fresh semen. Testing is available at your cost.

COST INFORMATION

The usual cost of the first cryopreservation procedure with semen analysis is approximately $390, which includes one year of storage. Cost of subsequent samples (within 3 months) is approx. $40 less for each. For any sample, the Lab may determine that additional procedures should be used to obtain an optimal sample. The rate of freezing and choice of cryoprotectant may be changed, at no cost. A purification step may be used to eliminate contaminating harmful cells and purify and concentrate highly motile sperm (approx. $140). An agent may be added to stimulate sperm motility and help prevent damage by oxygen free radicals (approx. $110). Beginning one year after the first cryopreservation, there is an annual $268 storage fee as long as any samples remain, regardless of number of samples. The MFL must be contacted directly to use, transfer, or dispose of cryopreserved samples. (Prices are subject to change without notice and may differ from the above due to necessary additional procedures).

CONTACT INFORMATION

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