



Patient Information Kit: Sperm Banking

What is Sperm Banking?

Sperm banking (also called sperm cryopreservation) is a method used to preserve sperm by cooling and storing them at low temperatures (-60°C). They can be thawed at a future date when you want to use them to begin a pregnancy.

Who Qualifies?

Men who might be interested in sperm banking include:

- those with cancer who will be receiving therapeutic surgery, radiotherapy or chemotherapy;
- those with failure of ejaculation (e.g. after spinal cord injury) from whom semen must be obtained by electro ejaculation or vibrator;
- those with a blockage of the sperm transport system who require vassal/epididymal aspiration or testicular aspiration to obtain sperm.

What are the benefits of Sperm Banking?

Freezing sperm is a way to preserve male reproductive potential. For example, men preparing to undergo chemotherapy or radiation therapy can have samples of their semen frozen and stored in our facility. The sperm can be used later to achieve pregnancy through a variety of methods, including artificial insemination, in vitro fertilization (IVF) or intracytoplasmic sperm injection (ICSI).

What are the Risks?

Most sperm samples will have some decrease in motility (forward movement) after thawing. In addition, ongoing illness (e.g. cancer) itself may affect semen quality. Semen from a man with cancer often has a decreased sperm count (number), motility (movement), and/or morphology (shape). These changes may reduce or eliminate the sperm's ability to fertilize an egg.

That said, sperm cryopreservation can still be considered even in cases of decreased semen quality because assisted reproductive technologies, using very low numbers of sperm, can still result in pregnancies. A post-thaw sperm test is performed on all cryopreserved sperm specimens to determine if they are suitable for long-term storage. All participants should be aware though that the ability to achieve pregnancy will depend on sperm quality, the female's fertility factors, and age. It is also possible that stored specimens could inadvertently be destroyed in the rare event that liquid nitrogen is lost from the storage tank.

What Screening Tests are Necessary Before Banking Sperm?

Screening tests include human immunodeficiency Virus (HIV-I and-II), human T-cell lymphotropic virus (HTLV-I and-II), hepatitis B surface antigen, hepatitis C virus (HCV) and syphilis/VDRL.

Does the Use of Thawed Sperm Result in an Increased Number of Birth Defects?

No. It appears that if a sperm is healthy enough to fertilize an egg, the incidence of birth defects is no higher than it would be with fresh sperm (1-2%). However, there may be an increased risk of abnormal pregnancy from sperm taken from men exposed to toxic agents such as cancer chemotherapy.

How is Sperm Frozen?

The quality of the sperm helps determine how many specimens should be frozen. If a second specimen is required we will contact you to make an appointment. We suggest that that semen be collected in a private room near our andrology laboratory. The semen should be kept warm, next to your body, and delivered to the laboratory as soon as possible. A semen analysis is then performed and the semen is diluted with a cryoprotective medium and frozen in special straws using liquid nitrogen.

How long will my Sperm be Frozen?

Sperm samples are initially frozen for one year. After that, the sperm depositor may renew the storage of his sperm on an annual basis upon payment of storage fees to the Ottawa Fertility Centre. A renewal notice will be sent to you; it is your responsibility to notify the OFC of any change to your address or other contact information.