

Sperm Freezing and Storage

>>> protecting your fertility

Using Frozen Sperm

There are several treatment options. The choice depends on the number and quality of sperm available.

The simplest technique is called IUI (intrauterine insemination). The woman's menstrual cycle is monitored with blood tests, a scan or a urinary test kit for several days around the middle of the cycle to identify the time of ovulation. Some of the straws are thawed, motile sperm that have survived freezing are isolated and then the sperm preparation is placed in the uterus. IUI is only feasible if there are good numbers of sperm surviving the freezing and thawing process. As most men undergoing vasectomy will have normal sperm counts, at least prior to freezing, this is the most likely treatment option.

Sometimes IVF (in vitro fertilisation) is required. IVF is more complex and more expensive than IUI. If there are very few sperm after freezing and thawing, or the sperm quality is much reduced, IVF is coupled with sperm microinjection (called ICSI, (intracytoplasmic sperm injection). Instead of adding sperm and eggs together in a dish, as in IVF, a single thawed sperm is injected into each egg.

The pregnancy rate per treatment depends on the technique, being 30 to 40% with IVF or ICSI and about 15% with IUI, in women 37 or younger.

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what you need to know about sperm freezing and storage

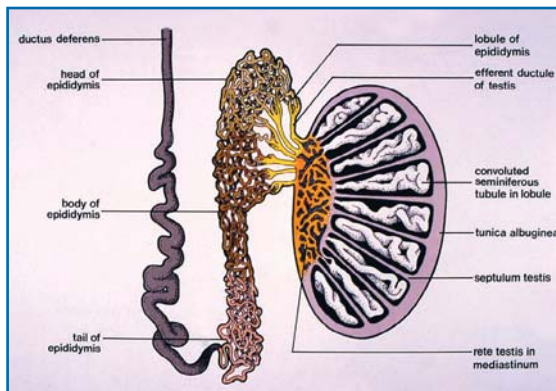
Why Freeze and Store Sperm

As life and relationships can be unpredictable, freezing and storing sperm has become an acceptable back-up method for men who may wish to keep their reproductive options open following a vasectomy, or who may face possible sterility due to cancer treatment or other surgery.

The reasons for preserving sperm are varied, however more men are choosing to protect their future from the loss of fertility and semen cryopreservation offers a measure of protection.

Blood Tests

In order for us to store your sperm, blood tests to screen for infectious diseases are required prior to storing sperm.



Structure of Testis and Epididymis

Collecting Sperm for Freezing

The best method of collecting sperm is by masturbation – the withdrawal method is much less reliable. Samples can be collected at home or in a room specially set aside at the clinic.

Generally, it is recommended that two or three samples be frozen. If subsequently needed for fertility, these should provide for at least ten treatments by intrauterine insemination (IUI), which is the simplest fertility treatment.

Even if only one sample is to be frozen, we recommend 1 to 2 days of sexual abstinence or ejaculation to allow sperm reserves to be maximised.

Samples need to be with the laboratory for processing within an hour after collection to ensure good survival of the sperm.

The Laboratory Freezing of Sperm

In the laboratory the semen is mixed with a cryoprotectant solution, which acts as an antifreeze and protects the sperm. This mixture is stored in small plastic straws, which are labelled. The straws are then cooled and stored in liquid nitrogen banks at -196°C .

The number of straws depends on the volume of the sample, but typically averages 5 to 10 per sample. The number of sperm and the proportion of sperm moving are recorded at the time of freezing. A small amount of the sample is thawed at this stage to check for survival.

Legal Aspects

All men storing sperm are required to sign a form designating what they wish their sperm stored for, how it is to be ultimately disposed of and what they wish done with their frozen sperm should they die. They must also acknowledge that they will inform the clinic of each change of address and if they no longer wish sperm stored.

Sperm storage is governed by the Human Assisted Reproductive Technology (HART) Act (2004). Sperm cannot be stored for more than 10 years unless permission is obtained from the Ethics Committee.

Fertility of Frozen Sperm

The freezing and thawing process is associated with damage to the cell wall of some sperm. Sperm that survive have intact cell walls and cell contents, including the nucleus with the important chromosomes with their DNA. Provided there are good numbers of motile sperm after thawing, the fertility of sperm is not affected, even after many years of freezing. More importantly, there is no evidence that the DNA is adversely affected – indeed, the chance of an abnormal child is no different than with sperm that has not been frozen.