

## What is sperm cryopreservation?

Sperm cryopreservation is a term used to describe the freezing of sperm cells to preserve them for later use. This process involves the cooling and subsequent storage of sperm at a very low temperature in liquid nitrogen.

## Who may consider sperm freezing?

Some medical interventions such as chemotherapy, radiotherapy or surgery, may temporarily or permanently affect sperm quality or result in sterility. Semen cryopreservation prior to these treatments is therefore an important option to consider for men who have not had children or whose family is not yet complete.

Patients may wish to freeze a sample as a back up for fertility treatment if there are concerns about producing a sample, or if the male partner will not be available on the day of treatment.

Patients considering a vasectomy may choose to store sperm prior to the surgery as a back up option should their circumstances change in the future. Although vasectomy reversals are available, they are costly and not always successful.

Cryopreservation is also useful for patients who have undergone testicular sperm aspiration (TESA) for use in future fertility treatment.

## Freezing a sample

In order for sample to be frozen, a consent form for semen storage must be completed.

Before freezing, a routine analysis of the sample is performed. This includes measuring the semen volume, and assessing sperm concentration and percentage of motile sperm. The sample is then diluted with a cryoprotectant, which protects the sperm from damage during the freezing process, and put into straws. The sample is cooled and stored at  $-196^{\circ}\text{C}$  in liquid nitrogen. To assess how well the sperm survives the freezing and thawing process, a small amount of the frozen sample is thawed and analysed. Variability in the success of the freezing and thawing process occurs between individuals as well as between each semen sample.

Depending on the initial analysis and post thaw quality of the sample frozen, you may wish to freeze multiple samples.

Sperm can be stored for up to a maximum of 10 years (Human Assisted Reproductive Technologies Act 2004) and a written consent is required if you wish to discontinue storage before this time. If you still have sperm stored after 10 years you will be contacted regarding your sample disposal. If you wish to continue sperm storage beyond 10 years, an application for extended storage must be submitted to the Ethics Committee on Assisted Reproductive Technology.

## HIV, Hepatitis B and Hepatitis C testing

It is preferable, although not essential, that men have a blood test to screen for HIV, Hepatitis B and Hepatitis C before freezing sperm.

If recent blood results are not available, samples will be stored in an unscreened liquid nitrogen bank where there may be a theoretical risk of viral cross contamination between potentially infectious samples, although this has never been reported.

If results are available within the last year, samples will be stored in a screened bank with other similarly screened samples.

If you wish to arrange a blood test please contact a member of the medical or laboratory staff.

### **Future use of frozen samples**

How a frozen sample is used in the future depends on the semen parameters at the time of freezing such as the motility and concentration of sperm, and on the post thaw quality of the sample. Future reproductive options for the use of thawed sperm include Intrauterine Insemination (IUI), In Vitro Fertilisation (IVF) or Intracytoplasmic Sperm Injection (ICSI). Please be mindful that sperm cryopreservation does not guarantee future reproductive success.

### **Fees**

**Medical Referral:** No charges apply if sperm freezing is requested with a medical referral prior to treatments that may permanently affect fertility. You will receive an annual consent form to confirm your consent for continued storage of your sperm.

N.B. There is currently no public funding available for sperm freezing and storage for men who have at least one biological child. Sperm freezing is available privately as outlined below.

**Public and Private patients:** Charges do apply for patients who wish to freeze and store a semen sample prior to a vasectomy or as a fertility treatment back up. Please refer to the Fertility Plus fee schedule for prices. You will be invoiced annually (each July) for sperm storage until we receive written consent from you to discard the sample. Continued storage will be contingent on renewal of your consent for storage and payment each year. It is your responsibility to inform us of what you like to do with you sample.

**Please ensure you keep us informed of any change in contact address and phone number.**

**To make an appointment to freeze a sample please phone Fertility Plus Laboratory on  
(09) 630 9842**