

Freezing and Storage of Sperm for Fertility Preservation

Why is sperm stored?

Some forms of chemotherapy, radiotherapy, surgery, and hormone therapy can lead to infertility which may be temporary or permanent. Therefore, fertility preservation is particularly important for patients undergoing cancer treatment. Before any of these procedures are carried out, it is possible to store sperm using a freezing process known as cryopreservation.

Frozen sperm samples can be thawed if/when required and used in procedures such as artificial insemination (IUI), in vitro fertilisation (IVF) or intracytoplasmic sperm injection (ICSI).


How does cancer treatment affect fertility?

Cancer treatments are important for your future health, but they may harm the reproductive organs and glands that control fertility. These changes to your fertility may be temporary or permanent. It is difficult to predict if the cancer treatment will affect your fertility. Whether or not your fertility is affected depends on factors such as:

- Baseline fertility
- Age at the time of treatment
- Type of cancer and type treatment you receive
- Other personal health factors

Your doctor will be able to talk with you about whether your cancer treatment is likely to lower your fertility or cause permanent infertility. Your doctor can then refer you to the Andrology Team at The Hewitt Fertility Centre to have your sperm stored.

I would like to store my sperm for future use, what happens next?

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Once referred, The Andrology Team at The Hewitt Fertility Centre will telephone you to arrange an appointment date and time to visit the centre and store your sperm. The appointment(s) made will be before your cancer treatment is due to begin.

On your sperm freeze appointment date, you will first have a consultation with a Reproductive Scientist to discuss the implications of storing your sperm and complete the relevant consent forms. It may be useful before your appointment to consider, if you have a partner, whether you would like them to be able to use your stored samples. You will be asked questions with regards to the storage and use of stored samples. At this appointment, you will have the opportunity to ask any questions you might have.

Next, you will be asked to produce a semen sample through masturbation. The centre has private, specially designed production rooms available for you produce your sample in. In some circumstances, it may be possible to produce your sample at home, provided it is delivered to the centre within 50 minutes of production.

Finally, you will first have a blood test where you are screened for HIV, Hepatitis B & Hepatitis C. This is for sperm storage purposes as there is a theoretical risk of viral cross-contamination between samples.

If it has been established that a surrogate might be required to carry a pregnancy in the future, then further extended screening will be required. This will involve urine testing, a physical examination and further blood testing.

What happens to my sperm once I've produced a sample?


Once you have produced your sample, a diagnostic semen analysis test will be performed to assess the quality of the sample. Your sample will then have cryoprotectant added (a liquid media that prevents damage to sperm cells during freezing) before being transferred into a number of units which are also known as 'straws'. The straws are gradually cooled to -196°C . Once cooled, your sample will be placed into special containers called dewars, where they will be kept in liquid nitrogen or liquid nitrogen vapour until you potentially require them for fertility treatment.

Have I produced enough sperm and what is its quality like?

The Andrology Team at The Hewitt Fertility Centre will ensure that enough of your sperm will be frozen for future fertility treatment(s). This may involve attending the centre for more appointments. We will know whether further appointments will be needed after you have produced your first sample and will arrange this with you. This is of course dependent upon when your treatment is due to start. If your sample is unsuitable for storage, you can discuss your options and next steps with your clinician. You are welcome to use our counselling service if you wish to do so.

How successful is the use of frozen sperm?

Success does depend on the quality of the sperm stored. Frozen samples with reduced numbers of sperm or high rates of sperm abnormality are less likely to be successful in

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treatment. There is always a reduction in sperm quality due to the freeze-thaw process. We cannot guarantee any samples frozen will achieve a pregnancy.

What are the legal implications for storing sperm?

All fertility centres are under the regulation of the Human Fertilisation and Embryology Authority (HFEA). Prior to freezing and storing sperm, it is a legal requirement that you give written consent concerning;

- Storage of your sperm and the length to which it is stored for
- The circumstances to which your sperm can be used in the future (you may have a partner with whom you wish to have a family with named on your form)
- Your decision over any embryos created using your sperm
- What happens to your frozen sperm in the event of your death or incapacitation
- What will happen if your sperm is not used

You are free to withdraw or vary the terms of your consent at any time. You should be aware that in the event of your death, you can have your name registered as the parent of any child or children born because of using your sperm, provided you have consented to this in writing. If your circumstances change, for instance you move address, change telephone number, or separate from your partner at the time of storage, it is vitally important that you make the Hewitt Fertility Centre aware of these changes immediately.

How long can sperm be stored?


The legal period for storing sperm is 55 years according to the HFEA. However, crucially, for storage to lawfully continue you will need to renew your consent every 10 years. Stored sperm can only be used by the person providing the sperm, or together with their partner, it cannot be donated to treat others. It is unlawful to store sperm beyond the period to which you consent, and The Hewitt Fertility Centre has a legal obligation to dispose of your sample once consent has expired.

Can I test my fertility once my cancer treatment has finished?

Twelve months after your cancer treatment has ended, you can contact the centre to arrange a semen analysis test along with a follow-up consultation to see a fertility specialist. Here, we will discuss whether your sperm function has returned and your available fertility options in the future. There is currently no evidence that children conceived naturally of a parent who has had cancer treatment will have an increased risk of abnormalities.

Do I have to pay for freezing & storing my sperm?

If you will be undergoing cancer treatment where there is a possibility of it affecting your fertility, funding for the freezing and storage of sperm is typically provided by the NHS for 10 years. This is dependent upon which NHS Integrated Care Board you fall under and what specific criteria they have set for funding sperm storage.

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When NHS funding for storage ends, you will be contacted by The Hewitt Fertility Centre to ask whether you wish to continue storage. Continued storage after this period, will incur an annual fee.

Will future fertility treatment be available on the NHS?

After your cancer treatment, if you require fertility treatment to achieve a pregnancy, your GP will have to refer you to a fertility centre.

Your Integrated Care Board will then make an assessment as to whether you and your partner meet the eligibility criteria they have set for NHS funding. If you do not meet these criteria, fertility treatment will have to be self-funded.

Safety & Quality

We promise to look after your sperm as carefully as possible but we cannot be held responsible for its safety or the risk of the loss of sperm due to equipment failure. In addition, we cannot guarantee your sperm will survive the freeze-thaw process or that a successful pregnancy will result from its use.

The Lewis-Jones Andrology Department at the Hewitt Fertility Centre has provided a dedicated Andrology service for over 30 years. We are attached to the Hewitt Fertility Centre HFEA licensed centre 0007) and can provide all fertility treatments potentially required in the future. We also have a centre at Knutsford (Centre number 0344) where the same care can be provided if more convenient and appropriate.

I am under 16 years old, can I have my sperm stored?

If you are under 16, you will be assessed for Gillick competence to ensure that you have capacity to understand and consent to having your sample stored. You would produce your sample through masturbation. Counselling is available to help support you and your family during this time.


How can I contact the unit?

Please feel free to contact the laboratory on 0151 702 4214 or email lwft.andrologylab@nhs.net if you require any further information about fertility preservation.

You must keep us informed of any change in your circumstances e.g. change of address. This is because we will contact you every three years to see if you still want your sperm to be stored. If we are unable to contact you, your samples will be destroyed when they reach the end of their statutory storage period. If you have any questions on sperm storage, please contact the unit and ask to speak to a member of the Andrology team.


This leaflet can be made available in different formats on request. If you would like to make any suggestions or comments about the content of this leaflet, then please contact the Patient Experience Team on 0151 702 4353 or by email at pals@lwh.nhs.uk

Liverpool Women's NHS Foundation Trust

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