



Testicular Cancer

Testicular Cancer Treatment and Fertility

This factsheet is for men who have been diagnosed with or may be having treatment for testicular cancer and who might be concerned about its effect on their fertility.

It provides information on the most common forms of treatment for testicular cancer and its management along with information on the potential impact these treatments may have on a man's fertility. It also discusses some of the practicalities involved in storing sperm for future use.

What is sperm storage?

Storing sperm, also known as sperm banking, is the preservation of sperm by freezing. The sperm may then be used at a later date for artificial insemination or other assisted reproduction techniques such as In vitro fertilisation (IVF). This is when an egg is surgically removed from a woman's ovaries and fertilised with sperm in a laboratory. The fertilised egg, which is called an embryo, is then returned to the woman's womb to grow and develop.

Why consider sperm banking?

Sometimes treatment for testicular cancer with a combination of surgery (unilateral orchidectomy) and chemotherapy may lead to temporary or rarely, permanent infertility and therefore sperm storage should be discussed before treatment.

Even if a man does not plan to start a family, sperm banking is worth considering in case he changes his mind in the future.

Where can a sperm bank or clinic be found?

The specialist healthcare team will be able to advise men if the hospital where the nearest sperm banking facilities are. They can also provide them with information on a local fertility centre where they may be offered the opportunity to bank sperm.

Sperm can be stored for 10 years initially but this period can be extended if fertility remains impaired after this time.

Visiting the sperm bank or clinic

When a man first visits the clinic, the specialist healthcare team will discuss the process of sperm banking and answer any questions and concerns that he or his partner may have.

Men will be asked to provide a sperm sample, through masturbation, to the clinic which will then be frozen and stored. When a man is ready to have a child the semen can be thawed and used to artificially inseminate their partner. Prior to sperm banking men will also be asked to have some blood tests to check for antibodies to the infectious viruses HIV, Hepatitis B and Hepatitis

C. This is standard practice, and confirmation that they have not

been exposed to these viruses will be needed before their sperm can be frozen. Having any of the above viruses does not exclude them from storing sperm but further advice will need to be given.

To provide a sample men may be required to make several visits to a clinic. It is advisable to abstain from ejaculating three days before sperm storage to ensure the best amount and quality of sperm is obtained.

In some circumstances it is possible to ejaculate into a condom at home, providing the sample can be taken to the sperm bank within an hour. The condom will be provided by the sperm bank and will not contain lubrication or spermicide.

Not everyone is suitable for sperm banking and a low sperm count, poor sperm quality, and the freezing and thawing process can all affect the quality of the sperm.

Q. What is a normal sperm count?

A. On average men produce 1.5 - 5 mls of ejaculate which may contain between 20 - 150 million sperm per millilitre and approximately 60% of this sperm should appear normal.

Some men with testicular cancer have a low sperm count before they start treatment and sometimes in these men, successful treatment for testicular cancer can cause their sperm count to return to a more normal level.

However men in this situation should still consider storing their sperm before treatment as occasionally their sperm count may get worse after treatment.

For men who are unable to store sperm it can, in some instances be extracted from the testicles using Testicular Sperm Extraction (TESE); a surgical technique which involves removing small pieces of testicular tissue under a general anaesthetic and checking for the presence of sperm. If sperm is present and is successfully retrieved, it can be used to fertilise an egg outside of the uterus (IVF). In some instances the sperm removal can be performed at the time of orchidectomy. However this type of procedure does require a lot of preparation to ensure that the sperm is collected and prepared properly and will need to be discussed with the specialist healthcare team before an orchidectomy is performed.

Only one healthy sperm is needed to father a child.

What tests and consents are involved in banking sperm?

There are a number of tests and consent forms that men will need to complete including:

- If a man is under the age of 16 he will need his parent or guardian's permission to have his sperm treated and stored.
- Blood will be screened for HIV, hepatitis B and hepatitis C.
- Men will need to confirm what they would like done with their sperm in the event of their death.

Q. Following cancer treatment, what happens if tests show that a man is fertile?

A. They will need to discuss the results with their specialist healthcare team. They may wish to have the stored sperm destroyed. If a man's sperm count is still low, his sperm can be stored on an ongoing basis if desired.

What costs are involved in storing sperm?

Currently, the NHS will pay for the costs of the initial consultations, blood tests and storage of sperm and most centres will have cover to store sperm for up to 3 years. Funding for further treatment is under review and men should discuss this with their specialist healthcare team as it can be more expensive to store the sperm longer term.

Q. What happens to a man's stored sperm if he moves away from the area where he was originally treated?

A. He must ensure the clinic and his GP are provided with his new address details as they will need to contact him in the future. He does not need to move his stored sperm. However should he need to use it he can contact the facility where the sperm is stored and arrangements can be made to access it.

Sperm will be destroyed if no longer required for use after 10 years.

Treatment for testicular cancer will vary according to the type and stage of a man's cancer. Every case will vary but the vast majority of men will be able to father a child.

Treatment options: what are they and how will they affect a man's fertility?

Orchidectomy

Removing the affected testicle(s) and tumour by surgery is the standard treatment for testicular cancer. Having one testicle removed (unilateral orchidectomy) should not affect sexual performance and will not normally affect a man's fertility. However a man may be advised to perform sperm banking prior to an orchidectomy in certain circumstances if it is likely that further treatment with chemotherapy may be needed afterwards or there

is a possibility that the other testicle might be producing a low level of sperm.

A rarer option is surgery called a partial orchidectomy where just the tumour is removed, although this is not considered standard treatment.

Providing the cancer has not spread beyond the testicle further treatment may not be needed and men may choose to attend a strict regime of follow up care; regular blood tests, scans and hospital appointments. This is known as surveillance. Should cancer reoccur treatment with chemotherapy can be given and this will usually cure most men.

Chemotherapy

Chemotherapy treatments are drugs used to kill cancer cells or stop them multiplying and this type of treatment can be given through a plastic tube or cannula (drip) into the bloodstream, or in tablet form.

A small dose of chemotherapy can be given after orchidectomy to reduce the risk of any cancer returning provided that it is confined to the testicle.

A longer course of chemotherapy is given for more widespread or advanced disease which may have affected other areas of the body such as lymph nodes.

Q. What are Lymph Nodes?

A. The human body is covered by a special type of drainage system called the lymphatic system which is responsible for transporting excess fluid from the organs and tissues of the body as a fluid called lymph. Lymph fluid will contain various types of cells and substances that are no longer needed. These will be transported along the lymphatic system and pass through small nodules or nodes that act as filters responsible for removing them.. Cancrous cells can also travel in this way and can sometimes spread to other areas of the body.

There are some possible side effects associated with chemotherapy treatment, including lowering the number of sperm that the body produces. This may cause temporary infertility during and after treatment and, in rarely cases permanently. Men who are having chemotherapy in either of these situations will therefore be advised to store sperm.

The effect of chemotherapy on sperm is uncertain and there is no evidence that chemotherapy given to a man can harm any children born subsequently. However most specialist healthcare teams would advise men not to father a child for about a year after treatment.

It is not known how much chemotherapy may be present in the semen during treatment and there is a risk that partners may be exposed to chemotherapy during sexual intercourse. A condom is therefore recommended or if this is not possible men may need to avoid sex while receiving chemotherapy.

Radiotherapy

Radiotherapy uses high energy beams of radiation to destroy cancer cells and has been used in the past to minimise the risk of **seminoma** returning by treating lymph nodes situated in the back. This type of treatment is used less today and research has shown that both radiotherapy and a single dose of chemotherapy are as effective as each other at reducing the risk of early stage testicular cancer recurring.

Radiotherapy can also sometimes be given following chemotherapy in men who have more advanced disease and who are unable to have further treatment surgery such as RPLND (Retroperitoneal Lymph Node Dissection) explained below.

Radiotherapy will not normally affect a man's fertility but storing sperm may still be recommended.

Retroperitoneal Lymph Node Dissection

Retroperitoneal Lymph Node Dissection (RPLND) is an operation which is performed to remove lymph nodes from the abdomen following chemotherapy.

This procedure can sometimes damage the nerves that control ejaculation which may leave men unable to ejaculate normally. The sperm will not be released by the penis but will flow back into the bladder via the urethra, or water pipe (retrograde ejaculation) making them infertile. In these cases men should consider storing their sperm before surgery, if this has not already been performed.

In some instances however, it is possible to retrieve sperm from a urine sample which can then be subsequently used.

Further information on testicular cancer can be found on the Orchid website www.orchid-cancer.org.uk or at www.yourprivates.org.uk

If you have any queries regarding the information contained in this factsheet please contact the **Orchid Team on: 0203 745 7310** References are available on request.

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Orchid has a **Male Cancer Helpline** manned by specialist nurses on **0808 802 0010** or email helpline@orchid-cancer.org.uk



About Orchid

Over 50,000 men are diagnosed with a male cancer every year. Orchid is the UK's leading charity dedicated to testicular, prostate and penile cancer.

Established in 1996 by a young testicular cancer patient, Colin Osborne and the oncologist who saved his life, Professor Tim Oliver, Orchid works to improve the lives of people affected by male cancers through a range of dedicated support services, education and awareness campaigns and a pioneering research programme.



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