

Male reproductive health

Health information after cancer treatment as a child or teenager

The purpose of this factsheet is to tell you about long-term side effects (called 'late effects') that can happen after having cancer treatment. They can happen soon after treatment has finished or later in life. The medical team at the hospital where you received your treatment or are attending follow-up checks will be able to help you with specific information about which late effects are relevant to you.

This may be a sensitive topic and you may want to read this with a family member, partner or trusted friend. You may or may not want to bring this person with you to clinic appointments.

Reproductive health in males covers all life stages and includes puberty, sexual health and fertility.

Most young people who have been treated for cancer will have no problems with their reproductive health, but some cancer treatments may affect how your body works such as reduced fertility, low levels of hormones, or having problems with erections and ejaculation.

At the start of puberty, the pituitary gland (a small gland in the brain) releases two hormones, follicle stimulating hormone (FSH) and luteinizing hormone (LH), that signal the testicles to enlarge and begin producing sperm and testosterone. As puberty progresses, testosterone causes the voice to deepen, the penis becomes bigger, face and body hair grows and muscles become more developed. Sperm is produced by the testicles and is mixed with other fluids to form semen which is then ejaculated through the penis (see CCLG late effects factsheets - puberty).

The most common way that cancer treatment can affect male reproductive health is by reducing fertility either temporarily or permanently.

In the general population, one in seven couples struggle to achieve pregnancy and in around half of cases this is because of sperm problems. Reduced fertility following cancer treatment is usually related to a problem with semen quality such as not enough sperm, or abnormal shape or movement of sperm.

The other way that cancer treatment can affect male reproductive health is by reducing production of testosterone. This may delay the start or progression of puberty. It may affect muscle and bone health, physical appearance, and sex drive which can affect sexual function.

Who is at risk?

The following may affect sperm levels, testosterone and sexual function:

- cancer of the brain, spine or testicles
- chemotherapy drugs such as cyclophosphamide, procarbazine and ifosfamide
- conditioning for a stem cell transplant including total body irradiation (TBI)
- surgery to the brain, spine, bladder or prostate
- radiotherapy to the testicles or pelvis that could affect fertility
- radiotherapy to the lower spine and nervous system that could affect sexual function
- radiotherapy that may affect the normal functioning of the pituitary gland

Discuss with your long-term follow-up team which ones may affect you.

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How do we monitor male reproductive health?

Testosterone levels are usually checked by having a blood test in the morning, as your testosterone levels are highest at this time. Checking the hormones from the pituitary gland at the same time gives information about whether there is damage to the pituitary gland or testicles. If your testosterone levels are low, you may require testosterone replacement.

Your clinical team will ask you questions to assess your sexual function and may also offer you an examination as the size of your testicles can indicate whether they are functioning normally. If issues are identified, you may require specific specialist advice.

You may be referred to a specialist for a fertility check, which is done by giving a semen sample, in private. This may only be relevant around the time that you want to start a family.

What are the treatment options available to maintain reproductive health?

Sex and fertility are topics that can make many people feel embarrassed and uncomfortable. Managing the effects of cancer on your fertility and sexual health can be difficult. It is important to find someone you feel comfortable talking to so you get the information you need and understand your options.

Low levels of testosterone

If you have low levels of testosterone, you may need to have testosterone replacement. This is usually via a gel applied to your skin every day or an injection every few weeks or months. If fertility is your priority, this should be addressed before starting testosterone as this may temporarily reduce any natural sperm production.

Fertility

Fertility is often discussed before starting cancer treatment, but you may have been too young at that time to understand, so it is a good idea to think if you would like to discuss these issues.

Options for fertility treatment are advancing all the time. If you stored sperm before your cancer treatment started, this could be used if you have a low sperm count. You may also have the opportunity to see if you still need to store sperm as your own sperm count may not have been affected by your cancer

treatment. Further information about the storage of your sperm will be discussed with you by the fertility clinic.

If you have not stored sperm and your sperm count is low, the options depend on the cause which can be discussed with specialists. If a low sperm count is due to damage to your testicles, options include donor sperm or potentially retrieving sperm from the testicle through a small surgical procedure. If it is related to your pituitary gland not working rather than damage to your testicles, sometimes giving the pituitary hormones through injections can help your testicles make sperm.

Sexual function

There are a number of reasons why you may not be able to have a normal sex life after treatment for cancer. Some of these reasons are physical, such as difficulties in getting or maintaining an erection. Some may be psychological, as treatment for cancer can alter how you feel about yourself and your body which can also affect sexual relationships.

Try and talk to your Late Effects team about the difficulties you are experiencing as there are often treatment options and psychological support that can be offered too.

Common questions asked

What can I do to help myself?

It is still possible to achieve a pregnancy naturally even if fertility is reduced, so if you want to avoid pregnancy it is important that you use contraception. Whether your fertility is reduced or not, you are also still at risk of sexually transmitted infections therefore maintaining sexual health using condoms during sexual intercourse is important.

Make changes to your lifestyle such as not smoking, limiting alcohol intake, not taking illicit drugs (for example, anabolic steroids), and reducing stress. All these are linked to reduced fertility and some are linked to reduced sexual function and lower levels of testosterone.

Exercise regularly and maintain a healthy diet and weight. It is recommended to have a good calcium intake, good vitamin D levels and do exercise that is good for developing strong bones, such as running, jumping, and basketball.

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How do I check my testicles?

Check your testicles regularly and contact your GP if you notice:

- any lumps
- changes in size, shape or consistency
- a heavy scrotum
- discomfort or pain in the testicle or scrotum

Baggy Trousers UK

www.baggytrousersuk.org/check-your-nuts/

Odd Balls Foundation

www.theoddballsfoundation.com/pages/check-yourself-guide

Will my sex life be affected?

For most people, it is possible to enjoy relationships and sex after cancer even if the cancer and its treatment has damaged their ability to have children. The cancer experience may have changed how your body looks, feels and works and this may affect your relationships and sex life. Everyone experiences confidence and body image issues at some time in their life, particularly as a teenager and young adult, and this can be worsened by their cancer experience.

If you are feeling worried about a lack of sexual desire, pelvic pain, or difficulties with sex, including penetrative sex, it is a good idea to seek help. Doctors and specialist nurses are used to dealing with these kinds of issues and can offer practical advice and support including referral to for specialist help if required.

Whether your fertility is reduced or not, you are still at risk of sexually transmitted infections and therefore it is advised that you maintain sexual health by using condoms.

What if I am gay, bisexual or transgender?

Sexual preference or gender orientation does not stop you from discussing the effects of having had cancer on your sexual function, fertility and options for future parenthood. You may find it hard to ask for professional advice if you are still 'coming out' or adjusting to your sexual orientation. Your doctor or nurse may be able to recommend sources of support and the charity

Stonewall

www.stonewall.org.uk

What if I cannot become a parent naturally?

It can be hard to accept that you are not able to have your own child and you may feel deeply upset and a sense of loss. If you feel like this, it can be helpful to talk to someone; talking to your doctor or nurse specialist can be helpful and you may wish to request a referral to a specialist counsellor.

Would my children be at risk of birth defects?

In most cases, there is no increased risk of birth defects in children born to childhood cancer survivors. Some inherited cancers can be passed on to children, and gene tests can be done to look at this. Check with your oncologist if you are not sure whether the type of cancer you had could be passed on to your children.

Where can I find more information?

Human Fertilisation and Embryology Authority (HFEA)

www.hfea.gov.uk

The NHS has a range of information about mens reproductive

www.nhs.uk/live-well

Teenagers and Young Adults with Cancer

www.tyac.org.uk/sex-and-relationships/after-cancer-treatment

