

Should I protect my chances of having a family?

Beyond health and lifestyle factors, there are a number of things that can reduce your fertility level, sometimes very quickly. These can include cancer (and its treatments), your age and hormone replacement therapies. That's why it's good to know about fertility preservation, and the situations where it might be right for you.

For men, the main option for preserving the fertility of your sperm is sperm storage (sperm banking), where you freeze your semen in a professional facility.

How does cancer and cancer treatments affect fertility?

For many adolescent and young adult survivors of cancer, the disease itself, or more commonly the treatment, can affect the chance of having children later in life. When you're diagnosed, future [fertility](#) and parenthood might not be a high priority, but the best time to preserve your fertility is before cancer treatment starts. This is usually done through [sperm](#) storage (sperm banking).

In the longer term after a cancer diagnosis, you might still be able to have healthy children naturally, even if you have a lowered sperm count.

However, any type of cancer, especially if it's more aggressive, can affect sperm production. Those with [testicular cancer](#) often have lower fertility before treatment starts, and treatment can reduce fertility even further. Cancer and its treatment also affect the fertility of older men, so those who still might want to have children should think about fertility preservation.



Cancer treatments include surgery, [radiation](#) and [chemotherapy](#), and can cause temporary or long-term fertility problems.

Your level of fertility after treatment depends on the type(s) of treatment, how long you were treated for, and your age and fertility before diagnosis.

If you're sexually active, it's important that you don't conceive a child during cancer treatment, because the DNA in your sperm can be damaged during treatment, and for some time afterwards. You can talk about [contraception](#) with your doctor.

How does chemotherapy and radiotherapy affect fertility?

Chemotherapy, or 'chemo', is a very common form of cancer treatment. These medicines act to stop or slow the growth of cancer cells, but in the process they can also attack normal cells elsewhere in the body, including the sperm-producing tubes in your testicles. This means that chemotherapy can temporarily or permanently destroy developing sperm cells.



Radiation treatment, or radiotherapy, uses high energy X-rays to kill cancer cells in a specific area, while limiting damage to normal cells.

Radiotherapy for [testicular cancer](#), or other cancers near the testicles, can damage the testicles, leading to permanent problems with sperm production.

Radiotherapy to the whole body (used before a bone marrow transplant) and radiation to the brain can also lower your fertility. This is because it affects the hormone-producing glands that act on the reproductive system.

As radiation to the testicles can cause [genetic](#) damage in the early stages of sperm development, it's best to not try for a pregnancy for six to 12 months after radiotherapy.

How does surgery affect fertility?

Your fertility can be affected if you have a testicle surgically removed (orchidectomy) to treat [testicular cancer](#).

Cancer in a single [testicle](#) might not affect your chance of having children if your remaining testicle continues to make [testosterone](#) (male sex hormone) and [sperm](#). Surgery within the pelvic region (such as for bladder or colon cancer) can sometimes damage nerves in the region, which can cause [erection](#) and/or [ejaculation](#) problems.

When should I think about fertility preservation?

Being diagnosed with cancer can be a confronting experience, but it's important to think about whether you want to have children in the future.

You'd usually think about storing sperm before your cancer treatment begins, so it's important to find out about the risks and options as soon as possible. Your doctor can provide you with information and support you when making decisions.

Why is sperm storage important?

If you're going to have chemotherapy or radiotherapy, and want to be fertile in the future, speak to your doctors before treatment begins.

[Semen](#) can be frozen and stored long-term for future use. If you want to father a child at a later stage, the frozen semen is thawed and used in fertility treatments such as [in vitro fertilisation](#) (IVF).

Where should sperm be stored?

Specialist centres providing IVF and other assisted reproductive technologies usually have sperm storage facilities.

Sperm are frozen and kept in liquid nitrogen (-196°C) for long-term storage.

What other options are available to store sperm?

Sometimes you might not be able to produce a semen sample by masturbation because you feel unwell or anxious, or you're unable to get an erection for various reasons. If this is

the case, samples containing sperm can be taken from a small piece of testicular tissue. If sperm are found, the sample can be frozen and stored for later use.

Are there problems with the children born after cancer?

To date, no problems have been discovered in children born using frozen sperm collected before cancer treatment.

If your sperm are collected during treatment, it's important to speak to a genetic counsellor about any possible risks to children conceived from those sperm.

How are the frozen sperm used later for fertility?

Once the stored sperm is thawed, it can be used in several ways to achieve a pregnancy. This usually depends on the amount and quality of the sperm.

- Artificial insemination/intrauterine insemination (IUI): where semen is transferred into the uterus via the vagina with a small tube
- In vitro fertilisation (IVF): where the woman is given hormones so her ovaries release several eggs. The eggs are removed in a small operation, fertilised with the sperm in a laboratory, and then placed into the woman's uterus
- Intracytoplasmic sperm injection (ICSI): Intracytoplasmic sperm injection is similar to IVF. A woman's egg is injected with a single sperm to increase the chance of fertilisation. This procedure is common when you have low sperm quality or a low sperm count.

When is the best time to talk to my doctor?

The best time to talk to your doctor about fertility is as soon as possible after your cancer diagnosis. This will give you time to think about all the information you need to make a decision about storing sperm.

Other than my doctor, who else can I talk to about cancer and fertility?

A cancer diagnosis can be scary and confronting, and you might have a lot of feelings and thoughts about what it means for you now and in the future. That's why it can be good to seek out information and help from others going forward.

Health professionals involved in cancer treatment can talk to you about possible risks to your fertility. Fertility specialists, social workers, psychologists or genetic counsellors can also provide guidance.

It can be helpful to talk to your partner, family members and friends, as they can be great sources of ongoing support.

What factors might influence your decision?

The decision to store sperm is a very personal one. Your culture, religious beliefs, or your family can be important factors in your decision.

Sperm storage for boys and adolescents with cancer needs to be managed carefully, as it can be difficult to come to terms with the diagnosis of cancer at a young age. Often, the idea of fatherhood is far from their minds. Young people might also find it stressful to produce a semen sample by masturbation. This is when family support and encouragement without pressure can be extremely valuable.

How is fertility followed up after cancer treatments have finished?

The kind of follow-up you might have depends on the type of cancer and the treatment you've gone through.

If the cancer and/or treatment have put your fertility at risk, regular semen testing will check if your fertility has been reduced and if it improves over time.

You might need a referral to a fertility specialist when you're thinking about having children. They will talk to you about your options if your fertility hasn't returned to normal, including the use of stored sperm.

Do you need more help?

[Family Planning Alliance Australia](#)

[Your Fertility](#)

[Marie Stopes](#)