



Why is it important to think about your fertility when you have cancer?

A man's fertility—the ability to get a woman pregnant—can be damaged by some cancer treatments. Even before treatment, some cancers, such as testicular cancer and Hodgkin's lymphoma, can lower sperm counts. Many men facing cancer want to have children in the future. Some men may not know they have options to protect their fertility. The best time to do this is before cancer treatment.

Ask your doctor about your fertility-saving options as soon as possible after your cancer diagnosis.

How does cancer treatment affect fertility?

Chemotherapy, radiation therapy, and some surgeries can cause fertility problems. Infertility may occur right away or in a few months. It can last for months or years, or be permanent.

Chemotherapy can reduce or stop sperm production, which affects your ability to father a child.

Radiation therapy can lower sperm production when treatment is to your whole body, testicles, or certain other areas. These sites include your pelvis (near the testicles), pituitary gland (a small hormone-producing gland at the base of the brain), and brain. The brain works with the pituitary gland to signal the testicles to make sperm and testosterone, the main male sex hormone.

Surgery that removes both testicles stops sperm production forever.

What is the chance of infertility?

Not all men become infertile after cancer treatment. The impact that cancer treatment may have on fertility depends on many factors. These include:

- Type and total dose (amount) of chemotherapy
- Your age (risk of infertility rises as you age)
- Dose and location of radiation therapy
- Your fertility status before treatment
- Site of surgery

Some cancer drugs are more likely to cause infertility than others. If you plan to have chemotherapy, ask your cancer doctor (oncologist) about drugs that are less likely to damage your fertility.

What are the options for fertility preservation?

Your doctor may refer you to an urologist who specializes in treating male fertility problems.

Male fertility-sparing treatments include:

- Sperm banking. Freezing (cryopreservation) of sperm is the most successful way for men to preserve fertility before cancer treatment. The most common way to collect the semen sample is through masturbation. Men who cannot ejaculate may have vibrational or electrical stimulation to help them do so. The sperm stay frozen, or "banked," until you need them. Freezing—even for many years—does not damage sperm.
- Testicular sperm extraction. Even if a man's semen has no sperm, he may still have sperm in the testicles. In testicular sperm extraction, a surgeon removes small pieces of testicular tissue (biopsy) while the patient is sedated or under local or general anaesthesia. If the tissue contains sperm, the sperm are either frozen or used to fertilize a female partner's eggs. This technique may be an option before or after cancer treatment.

What are the success rates and costs of fertility preservation?

Many men who had cancer treatment go on to have children.

Fertility success rates vary by treatment. The chance of pregnancy with banked sperm improves with higher numbers and quality of sperm. Advanced fertility treatments now may allow pregnancy with just one sperm. Fertility preservation can be expensive. Besides procedure costs, there may be a yearly fee for storing frozen sperm.

How long should you wait after cancer treatment before trying to have a baby?

If you had chemotherapy or radiation, your doctor may suggest you wait 1 to 2 years or more after you stop treatment before you try to start a family. It can often take this long for healthy sperm production to start up again. Until then, use a condom or other form of birth control, even if you think you are infertile.



What are the options if you are infertile?

When fertility does not return after cancer treatment, there are other ways to build a family. These include getting sperm from a donor and adoption. Some adoption agencies may have restrictions on adoption by cancer survivors, but others do not.

It is common to feel anger or a sense of loss about not being able to have a child. You may find it helpful to talk to a counsellor or join an infertility support group

What are the effects of cancer treatment on male hormones?

Cancer treatment can lower or stop testosterone production. Lower-than-normal testosterone is called hypogonadism or androgen deficiency. Removal of the testicles, radiation, or chemotherapy can cause low testosterone. So can androgen deprivation therapy (hormone therapy) for prostate cancer.

Some symptoms of low testosterone are:

- Reduced sex drive
- Poor erections
- Low sperm count
- Low energy
- Tender, enlarged breasts
- Hot flashes

What are the long-term health effects of low testosterone?

Over time, low testosterone can cause health problems. They include:

- Loss of muscle mass (size) and strength
- Osteoporosis—thinning of bones, making them more likely to break
- Mood changes and depression
- Increased body fat

What are the options to treat symptoms of low testosterone?

Testosterone replacement therapy can improve sexual desire and erections as well as mood, energy, bone density, and muscle size. Men should not take testosterone if they have prostate cancer or breast cancer. Also, do not use this treatment if you and your partner are trying to get pregnant because it reduces sperm production.

Another type of hormone therapy is human chorionic gonadotropin (hCG). This fertility treatment is an option for men who want to father a child but have low sperm counts and testosterone due to a problem with the pituitary gland or brain. This problem can occur with radiation therapy or a pituitary or brain tumour.

For men who cannot take testosterone, other treatments are available for depression and osteoporosis. Your doctor can help you find a treatment that's right for you.

What should you do with this information?

Your doctor may not bring up the topic of fertility preservation or low testosterone. You should raise the issue if you have concerns. Here are some questions to ask your doctor:

- How quickly do I need to start cancer treatment?
- Will my cancer or its treatment affect my future fertility?
- What can I do now if I want to have children in the future?
- Do any of these treatment options make my cancer treatment less effective or raise the chance of a recurrence?
- May I still bank sperm even if I already started cancer treatment?
- Will my cancer treatment cause low testosterone? If so, what can I do about it?

Resources

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