

Fertility and You



Symptom Management



Alberta Health
Services

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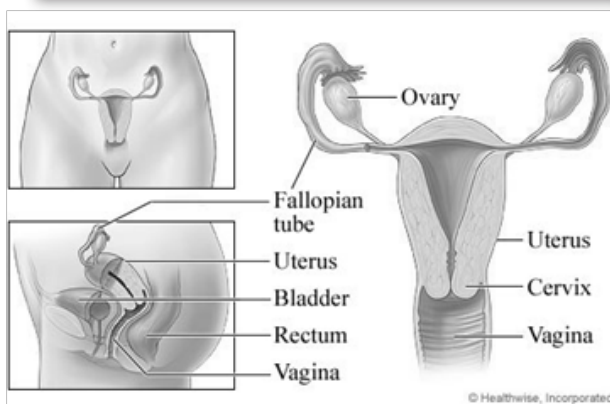
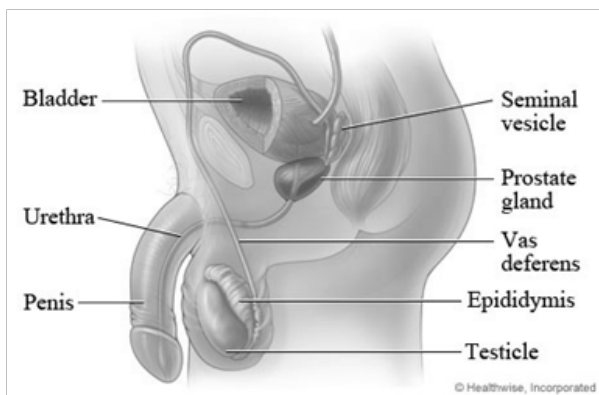
If you have been diagnosed with cancer, you may have many things to think about. Decisions about having children in the future may seem unimportant to you, or it may be your biggest worry. This booklet is to help you think about your options for the future.

Many patients who have finished cancer treatment said they wished they had taken more time to learn about fertility preservation options before they started treatment. Once you're over the initial shock of being told you have cancer, you can then take steps to preserve your fertility.

Will cancer impact my ability to have children?

Cancer and cancer treatment can sometimes damage the reproductive organs such as the ovaries and testicles. These changes can have long-term or short-term effects on your fertility. Fertility is the ability to get someone pregnant or to get pregnant and carry a child to a healthy birth.

Not all cancer treatments affect fertility and those that do can affect fertility at different levels.



Cancer treatment can cause changes to the reproductive organs like:

- decreased sperm quality, number, and motility
- irregular periods, or it may stop females from having periods
- premature menopause

How do I talk to my children about preserving their fertility during cancer treatment?

It's a good idea to talk to teens about preserving fertility, but it can be hard because it affects them in the future. Even young children can be told that their treatment might affect their ability to have children someday.

What treatments may affect my fertility?

Your fertility may be affected by the following cancer treatments:

A

Chemotherapy

Chemotherapy is medicine used to kill cancer cells. Some types of chemotherapy affect the ovaries and testicles more than others, including:

- methotrexate (Trexall®)
- fluorouracil (Adrucil®)
- doxorubicin (Adriamycin®)
- epirubicin (Ellence®, Pharmorubicin®)
- melphelan (Alkeran®, Evomela®)
- mechlorethamine (nitrogen mustard, Mustargen®)
- cyclophosphamide (Cytosan®, Procytox®)
- procarbazine (Natulan®)
- chlorambucil (Leukeran®)
- cisplatin (Platinol®, AQ®)

Not all types of chemotherapy that affect fertility are listed here. If you have questions about other types of chemotherapy or medicine:

- talk to your doctor or pharmacist
- go to the Canadian Cancer Society website and search: **reproductive organ damage and chemotherapy**



B**Radiation Therapy**

- Radiation to the pelvis can affect how the reproductive organs work. Because of this, the testicles may be shielded and the ovaries may be pinned (with minor surgery) before radiation treatment starts.
- Full body radiation therapy (used before transplants) will also affect fertility.
- Damage to the reproductive organs will vary depending on the dose of radiation therapy.

C**Surgery**

Females with gynecologic or reproductive types of cancer such as endometrial, cervical, or ovarian may need to have surgery to remove the uterus which is called a hysterectomy. Sometimes they may need to have one or both ovaries removed, which is called an oophorectomy. Some females with vaginal cancer may need a hysterectomy.

Some males with testicular cancer may need surgery to have a testicle(s) removed, which is called an orchiectomy. If one testicle is removed, it won't likely affect fertility, but if both are removed, it will leave a male infertile.

Any type of surgery can cause stress on the body, even surgery that isn't done on the reproductive organs.

This can affect:

- how sperm is produced in males
- menstrual periods for females (they may be irregular or missed)

D**Hormone-Blocking Treatment**

Some types of cancer grow faster because of hormones in the body. Because of this, a person may need to take a type of medicine called a hormone blocker. Hormone blockers help control the cancer or decrease the chance of the cancer coming back. Sometimes these types of medicine cause infertility.

Males with prostate cancer are often treated with androgen deprivation therapy (ADT), which helps decrease the levels of male hormones. Common types of ADT are:

- leuprolide (e.g., Eligard®, Lupron®), which is injected
- bicalutimide (e.g., Casodex®), which comes in pill form

People with breast cancer are often treated with hormonal blockers called:

- aromatase inhibitors such as exemestane, anastrozole, letrozole or
- estrogen receptor modulators such as tamoxifen

Many females have to take this medicine for 5 to 10 years. Don't try to get pregnant while you're taking this type of treatment. Some females can have children after they finish this type of treatment.

E**Pain Medicine**

Some research shows that opiate pain relievers can affect hormone levels, which can affect fertility. If you're taking these types of medicines long-term and have questions, talk to your doctor or health care provider.

Should I use birth control while I'm getting treatment?







Yes. If you're getting chemotherapy or radiation, use birth control. Treatments can damage sperm and eggs, which can cause birth defects.

Most chemotherapy is out of the body within 48 to 72 hours. Because of this, if you receive chemotherapy, use a condom (for intercourse and oral sex), or don't have sex for 72 hours.

When should I talk to my health care team?

It is very important to talk to your health care team **before you start your treatment**. You can ask them how or if your treatment may affect your fertility and what your options are for the future.

Questions to get the conversation started:

-  How will my cancer treatments affect my fertility?
-  What are my fertility preservation options?
-  How will I know if I am fertile after treatment?
-  If I don't preserve my fertility before treatments, what are my options after treatment?
-  Do I have a type of cancer that can be passed on to my children?
-  How long do I need to wait for after my cancer treatments finish before I start a family?

Men and Fertility

Some men are not able to have children because of the effects of their cancer treatment.

This can happen if:

- No sperm is produced
- There is not enough sperm or sperm that is unhealthy
- the reproductive system is damaged and the sperm cannot leave the body

After your treatment is finished, your level of fertility will be one of the following:

Normal fertility You produce healthy sperm

Temporary infertility

You don't produce sperm for a period of time. It may return right after you finish treatment or years later.

Compromised fertility

Your fertility is low. This can happen if you:

- do not produce enough sperm or the sperm isn't healthy
- have damage to your reproductive system that blocks the sperm from leaving your body

It may be difficult to get a woman pregnant naturally. Fertility doctors may be able to help.

Permanent sterility

No sperm when you ejaculate. Some men will no longer produce sperm. You will be unable to father a child naturally.

What can I do to preserve my fertility?

You can:

- Bank your sperm before you have cancer treatment. In a private room you'll need to produce a sperm specimen by masturbating. The sperm is analyzed, frozen and stored for future use.
- Get a hormone-blocking treatment such as goserelin (Zoladex®). This is a medication that's injected just before cancer treatment starts. It puts the reproductive system "to sleep" during cancer treatments. This may help prevent damage to the reproductive system. This treatment isn't for everyone and there are side effects. If you're interested and want more information, talk to your doctor.



Women and Fertility

Some women find that cancer treatments can damage or affect their fertility. This can happen when:

- the ovaries no longer have healthy eggs
- the reproductive system is damaged and stops a fertilized egg from implanting and growing in the uterus
- the reproductive system is damaged and will not allow you to carry a pregnancy to term



All people are different. After cancer treatment, many females don't have fertility problems. However, there is no way to know if you will have problems or not.

- Younger females are more likely to be fertile after cancer treatment.
- The closer a woman is to menopause, the more likely the cancer treatment will damage the ovaries.
- The longer the treatment, the longer it may take for a woman's periods to return.

After your treatment is finished, your level of fertility will be one of the following:

Normal fertility	Many women have no change in their fertility
Fertility followed by ovarian insufficiency	Cancer treatments may damage some, but not all, of the eggs in your ovaries. This means you may be fertile for a while after treatments. Once you go into ovarian insufficiency, you will no longer be fertile.
Compromised Fertility	This can happen when the ovaries, hormone production or reproductive system are damaged. Getting pregnant naturally may be difficult but possible with the help of fertility doctors.
Immediate menopause	This can happen if your: <ul style="list-style-type: none">• eggs are damaged or destroyed by cancer treatments• reproductive organs are damaged or removed

What can I do to preserve my fertility?

You can:

- Get a hormone-blocking treatment such as goserelin (Zoladex®). This is a medication that's injected just before cancer treatment starts. It puts the reproductive system "to sleep" during cancer treatments. This may help prevent damage to the reproductive system. This treatment isn't for everyone and there are side effects. If you're interested and want more information, talk to your doctor.
- Have a section of the ovary frozen to freeze eggs for future use. This is still very experimental. Eggs don't always freeze well and may not survive the thawing process. It's usually only offered at the time of cancer treatment if the female isn't in a committed relationship. To use these eggs in the future, a sperm donor will be needed.
- Have embryo freezing. This is when fertilized eggs are frozen for future use. Hormonal treatments are often needed before a woman's eggs can be harvested. This may not be possible with certain types of cancer that are sensitive to hormones. Harvesting eggs may also delay cancer treatment, which may not be possible with some types of cancer. This procedure and storage can be quite costly.

Your options will depend on the type of cancer you have and the type of treatment you receive. Talk to your doctor to find out what your options are before you start treatment.

Parenthood Options after Cancer

There are many ways to become a parent after cancer. It just depends on your fertility after treatment.

- For men, a semen analysis can tell us if you're producing enough sperm (sperm count) and if they are healthy.
- For women, a doctor can check if you are ovulating (releasing eggs) with hormone tests and ovarian ultrasounds. This information can tell us some but not all aspects of your fertility. Egg quality is also important for fertility but we don't have a really good test to assess for this yet.

To learn more about trying to get pregnant after cancer, go to Cancer.Net.

Some options for having children might include:

- Natural pregnancy
- Adoption
- Donor eggs or embryos
- Gestational surrogacy - a woman agrees to carry the baby to term for others to raise
- Pregnancy with the help of a fertility specialist - Assisted reproductive technology (ART). This includes banking sperm, eggs or embryos

Assisted Reproductive Technology (ART)

ARTs are expensive and aren't covered by Alberta healthcare. Costs for ARTs include the initial procedures and annual storage costs. Talk to your health care provider to see if you are eligible for help with funding or go to www.fertilefuture.ca.

Talk to your doctor or health care provider if you have questions about using donor eggs, or preserving sperm or embryos. Ask your doctor for a referral to a Fertility Program in Calgary or Edmonton.

For more information about ARTs

- Go to Cancer.Net and search for fertility concerns for men or women
- Go to Canadian Cancer Society and search fertility problems

When can I try to get pregnant?

It's usually recommended to wait 1 to 2 years after treatment is done before you try to get pregnant. Everyone is different and how long you need to wait depends on the type and stage of cancer and the treatment you get. Talk to your doctor or health care provider before you try to get pregnant.



