

# Fertility and You



Symptom Management



Cancer Care  
Alberta

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This booklet is meant to give you some general information about your options for preserving fertility.

Your cancer doctor will talk with you about your diagnosis, treatment, and possible risks to your fertility. They can also refer you to a fertility expert to talk about these options.

Being diagnosed with cancer can be a scary, overwhelming and confusing time. One of the things you may need to think about is how cancer and its treatments can affect your fertility now or in the future.

**Fertility** is the ability to have biological children.

Cancer treatments can affect how you think, feel and experience your body. This can affect your relationships, sexual activity and your ability to have children.

It is normal to feel anxious, frightened and even a bit lost. Having to think about whether you might want to have children in the future doesn't make this any easier.

There are many things which may influence your decisions about your fertility such as your:

- gender
- sexual orientation
- culture
- past experiences
- family views
- financial situation

Preserving your fertility can cost a lot and is not covered by Alberta Health Care. But it's free to talk with a fertility specialist, so you can still learn about your options.

Speak with your cancer care team or fertility clinic to learn more about the cost. Ask if there are any funding or cost reduction programs you might be able to use.

## B Fertility Risk

### Will cancer impact my ability to have children?

Cancer and cancer treatments may damage the reproductive organs including the uterus, ovaries and testicles. These changes may be short-term or long-term.

Cancer treatments that may affect fertility include surgery, systemic treatment, and radiation treatment.

They may cause:

- Decrease in the quality of the sperm
- Lower sperm count
- Loss of sperm production
- Loss of healthy eggs causing early menopause
- The ovaries to age quicker or the quality of the eggs to decrease

Other treatments, like hormone-blocking treatment, can also affect fertility by delaying your ability to have children for several years.

## C Preserving Your Fertility

Fertility preservation is a procedure used to save eggs, sperm or embryos. This may give you an opportunity to have biological children in the future.

### Fertility preservation if you produce sperm:

#### Sperm banking

You will need to produce a sperm specimen by masturbation. The sperm is then examined, frozen and stored for future use.

## Fertility preservation if you have ovaries:

### Ovarian suppression

This is an injection of medication, every 1-2 months. It stops the ovaries from maturing and releasing eggs just while you are getting certain cancer treatments.

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### Egg (oocyte) banking

A normal monthly period usually releases 1 mature egg. To help the ovaries grow more eggs than usual, you will get a medication 9-14 days. The eggs are then collected and preserved using a process called **vitrification** (fast-freezing). In the future, the eggs can be fertilized with semen to create embryos.

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### Embryo banking

Same as egg banking, except once the eggs are collected, they are fertilized with sperm to create embryos, and then frozen for future use.

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### Ovarian tissue banking

A surgery that removes part of the ovary before cancer treatment starts and is frozen for future use.

When the person is ready to get pregnant, the ovarian tissue is returned also using surgery.

## When should my healthcare team and I talk about preserving my fertility?

Your cancer doctor should talk to you about how treatment could affect your fertility **before** you start your treatment.

If you haven't had the conversation, 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:

- What are the risks to my fertility with my treatment plan?
- What can I do to preserve my fertility?
- What is my risk if I delay treatment for fertility preservation?
- If I don't preserve my fertility before treatment, what are my options after treatment?
- How will I know if I am fertile after treatment?
- How long do I need to wait after my cancer treatments finish to start or continue my family?
- Are there resources available to help me decide whether or not I might want to have a family in the future?



### Systemic Treatment

Systemic treatment is any medication that travels through your body in the bloodstream to find, damage or destroy cancer cells. Systemic treatments include chemotherapy, immunotherapies, and targeted therapy. Some types of medicines affect the ovaries and testicles more than others. This may depend on the amount or combination of the medication that you get.

Your oncologist (cancer doctor) will talk with you about your treatment plan and fertility risk with you.



### Surgery

If you have a gynecological cancer, such as cervical, endometrial, or ovarian, you may need to have surgery to remove the uterus or ovaries. This may impact your ability to have children.

Gynecological cancer is any cancer that starts in the female reproductive organs.

If you have testicular cancer, you may need surgery to remove one or both testicles. This is called an **orchietomy**. If you have one testicle removed, it likely won't affect your fertility, but if both are removed, you will no longer be able to produce sperm.



## Radiation Treatment

Radiation treatment uses high energy x-rays to kill cancer cells and shrink tumours. It can damage the reproductive organs, which can affect fertility. How much damage will depend on what part of the body is being treated or how much radiation is used.

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**Radiation to the pelvis** can cause:

- The ovaries to stop producing eggs.
- The testicles to stop producing sperm.
- Damage to the lining of the uterus, which means you may not be able to carry a baby through pregnancy.

To try to prevent these things from happening, we may need to:

- Shield these areas during radiation treatment — a protective cover is placed on the outside of the body during treatment.
  - Pin the ovaries. This is a minor surgery and it moves the ovaries away from the area the radiation will affect.
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**Radiation to the brain** can sometimes affect the **pituitary gland**. The pituitary gland produces hormones that help the ovaries mature and release eggs, and the testicles to produce sperm.

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**Total Body Irradiation** treatment means that the whole body is given radiation treatment. This gives you a very high dose of radiation and can cause infertility. It is sometimes used before some stem cell transplants.





## Hormone-Blocking Treatments

Some types of cancer grow faster because of hormones in the body. Medicine called **hormone blockers** help block the effects of the hormones. This helps control the cancer or decreases the chance that the cancer will come back.

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### If you have breast cancer:

You may need to take hormone blockers. These medicines do not usually cause direct damage to your fertility, but you should not get pregnant while you are taking it because they can harm an unborn baby.

You have to take this medicine for 5 to 10 years, so it may reduce your fertility chances because you lose those years to reproduce and your body will age. Talk with your doctor about your plans about pregnancy.

Types of hormone blockers:

- Tamoxifen is an estrogen receptor modulator
  - Anastrozole, exemestane and letrozole are aromatase inhibitors
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### If you have prostate cancer:

You may need to be treated with androgen deprivation therapy (ADT), which helps decrease the levels of male hormones. These medications will impact fertility. Common types of ADT are:

- Leuprolide (Eligard)
- Bicalutamide (Casodex)

**Is it safe to have sex during my treatment?**

You can still have sex during treatment, but both you and your partner should use birth control and condoms.

**Why is it important to use birth control and condoms?**

There are a couple of reasons why you should use birth control and condoms:

- Systemic treatment medications (like chemotherapy or checkpoint inhibitors) can stay in your body fluids for many days after treatment. We recommend you use a condom for both intercourse or oral sex so that these medications do not get passed on to your partner through fluids from the penis or vagina. Ask your healthcare team how long you should follow this guideline if you are unsure.
- Cancer treatments can cause damage to sperm and eggs. Getting someone pregnant or becoming pregnant during cancer treatments can cause birth defects.

**What should I do if I think I'm pregnant or I have gotten my partner pregnant?**

Tell your healthcare team right away so you can talk about next steps.



## F

## Parenthood Options After Treatment

Going through treatment may be a very challenging time and you may feel many different emotions. After treatment it may take time before you are ready to think about relationships, sex or having children. It may also take time to adjust to changes in your body, life goals and priorities.

Whether you had fertility preservation done or not, you still have options for the future. These may include:

**If you have testicles** — we can test the semen to see if you're still able to produce sperm.

**If you have ovaries** — your doctor can order blood tests and ultrasounds to check your hormone levels and see if you're ovulating (releasing eggs).

Other options you can choose:

- Donor eggs or donor sperm
- Surrogacy — this may be an option if you no longer have a uterus due to surgery, or had radiation in the area of your stomach or pelvis
- Adoption

We know there are a lot of things to think about when deciding what to do about your fertility, and it may bring up many different emotions.

We are here to help. We have counsellors or patient navigators who can help you. Please speak with your cancer care team so they can refer you to the best resource for you.

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