



Canadian  
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# Prostate Cancer

*Understanding your diagnosis*



1 888 939-3333 | [cancer.ca](https://cancer.ca)

# Prostate Cancer

## *Understanding your diagnosis*

When you first hear that you have cancer, you may feel alone and afraid. You may be overwhelmed by the large amount of information you have to take in and the decisions you need to make.

“ *All I could hear was ‘cancer.’ I heard my doctor say something like, ‘We’re going to try and get the surgery done as soon as possible.’ I didn’t hear one word after that.* ”

The introductory information in this brochure can help you and your family take the first steps in learning about prostate cancer. A better understanding may give you a feeling of control and help you work with your healthcare team to choose the best care for you.

### **For more information**

The information in this brochure provides an introduction to prostate cancer. More in-depth information is available on [cancer.ca](http://cancer.ca). You can also call our Cancer Information Service at 1-888-939-3333 to learn more about cancer, diagnosis, treatment, support and the services we offer.

Check out our video series on common cancer topics. These short, simple videos cover subjects like *What is cancer?* and *Coping when you’re first diagnosed*.

**Find the series at [cancer.ca/cancerbasics](http://cancer.ca/cancerbasics).**

## What is cancer?

Cancer is a disease that starts in our cells. Our bodies are made up of trillions of cells, grouped together to form tissues and organs such as muscles and bones, the lungs and the liver. Genes inside each cell order it to grow, work, reproduce and die. Normally, our cells obey these orders and we remain healthy.

But sometimes the instructions in some cells get mixed up, causing them to behave abnormally. These cells grow and divide uncontrollably. After a while, groups of abnormal cells form lumps, or tumours.

Tumours can be either benign (non-cancerous) or malignant (cancerous). Benign tumour cells stay in one place in the body and are not usually life-threatening. Malignant tumour cells are able to invade nearby tissues and spread to other parts of the body. It's important to find and treat malignant tumours as early as possible. In most cases, finding cancer early increases the chances of successful treatment.

Cancer cells that spread to other parts of the body are called metastases. The first sign that a malignant tumour has spread (metastasized) is often swelling of nearby lymph nodes, but cancer can spread to almost any part of the body.

Cancers are named after the part of the body where they start. For example, cancer that starts in the prostate but spreads to the bone is called prostate cancer with bone metastases.

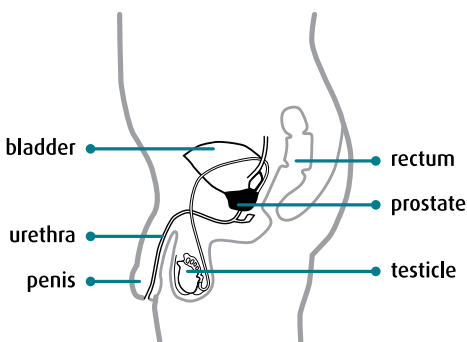
## What is prostate cancer?

Prostate cancer starts in the cells of the prostate gland. The prostate is part of the male reproductive system. Its main job is to make part of the liquid (seminal fluid) that mixes with sperm from the testicles to make semen. Semen is released (ejaculated) from the penis during orgasm.

The prostate gland is shaped like a chestnut. It is located close to the rectum just below the bladder at the base of the penis. The prostate surrounds the urethra – the tube that carries urine and semen through the penis.

Prostate cancer is the most common cancer in Canadian men. It usually grows slowly and can often be treated or managed successfully.

Male Reproductive System



## Diagnosing prostate cancer

Your doctor may suspect you have prostate cancer after taking your medical history and doing a physical exam. To confirm the diagnosis, your doctor will arrange special tests. These tests may also be used to “stage” and “grade” the cancer and to help plan treatment.

**Symptoms:** Prostate cancer may not cause any signs or symptoms, especially in the early stages. Symptoms may appear if the tumour makes the prostate larger than normal and it starts to press on the urethra. This can make passing urine more difficult or painful. Or you may need to pass urine more often.

The signs and symptoms of prostate cancer include:

- the need to urinate often, especially at night
- an intense need to urinate
- difficulty in starting or stopping the urine flow
- the inability to urinate
- weak or less urine flow
- interrupted urine flow
- a sense of not completely emptying the bladder
- burning or pain during urination
- blood in the urine or semen
- painful ejaculation

As a man gets older, the prostate may become enlarged and block the urethra or bladder. This is a common condition called benign prostatic hyperplasia (BPH). BPH is not cancer, but the symptoms of BPH are similar to the symptoms of prostate cancer. Testing is needed to confirm a diagnosis.

Other health problems can cause some of the same symptoms listed above. The process of diagnosis may seem long and frustrating, but it is important for the doctor to make sure there are no other possible reasons for a health problem.

Your doctor will do one or more of the following tests to make a diagnosis.

**Blood tests:** Your blood may be tested for a substance called prostate-specific antigen (PSA). If you have an enlarged prostate, the amount of PSA in your blood may be slightly higher than normal. Prostate cancer usually causes even higher levels of PSA in the blood than an enlarged prostate does. If your PSA level is higher than expected for your age, more tests will be done to find out whether this is because of prostate cancer or another prostate problem.

Other blood tests may be done to check your general health. Blood is taken and studied to see if the different types of blood cells are normal in number and how they look.

**Imaging studies:** Imaging studies let your healthcare team look at your tissues, organs and bones in more detail. Using ultrasounds, bone scans, CT scans and MRIs, they can see the size of the tumour and if it has spread. These tests are usually painless, and you don't need an anesthetic (freezing).

A transrectal ultrasound (TRUS) is usually the only imaging study needed to diagnose prostate cancer. A TRUS uses sound waves to form a picture of the prostate. The doctor passes a small probe into the rectum and looks for dark or dense areas on the image that may be cancer.

**Biopsy:** A biopsy is usually needed to make a definite diagnosis of cancer. Cells are taken from the body and checked under a microscope. If the cells are cancerous, they may be studied further to see how fast they are growing. There are different ways to do a biopsy.

A prostate biopsy is taken during a TRUS. Samples of prostate cells are most commonly removed through the rectum. You may feel a brief sharp pain during the procedure. A local anesthetic can be used to lessen the discomfort.

**Further testing:** Your doctor may order more tests to find out if the cancer has spread and to help plan your treatment.

## **Will I be OK?**

Most people with cancer want to know what to expect. Can they be cured?

A prognosis is your doctor's best estimate of how cancer will affect you and how it will respond to treatment. A prognosis looks at many factors including:

- the type, stage and grade of the cancer
- the location of the tumour and whether it has spread
- your age and overall health

Even with all this information, it can still be very hard for your doctor to say exactly what will happen. Each person's situation is different.

Your doctor is the only person who can give a prognosis. Ask your doctor about the factors that affect your prognosis and what they mean for you.



## Staging and grading

Once a definite diagnosis of cancer has been made, the cancer is given a stage and a grade. This information helps you and your healthcare team choose the best treatment for you.

The cancer **stage** describes the tumour size and tells whether it has spread.

For prostate cancer, there are 4 stages.\*

Stage	Description
1	Cancer is found in the prostate only.
2	Cancer is larger than stage 1 but is still found only in the prostate.
3	Cancer has spread outside the prostate but not to nearby organs.
4	Cancer has spread to nearby organs, lymph nodes or distant parts of the body.

\* This table summarizes the stages of prostate cancer according to the Union for International Cancer Control (UICC). For more in-depth information, visit [cancer.ca](http://cancer.ca).

A **grade** is given based on how the cancer cells look and behave compared with normal cells. This can help your healthcare team know how quickly the cancer may be growing. To find out the grade of a tumour, the biopsy sample is examined under a microscope.

For prostate cancer, the grade is usually taken from 2 biopsy readings with scores from 1 to 5 and added together to give a Gleason score of 2 to 10. A low Gleason score means the cancer cells are similar to normal prostate cells. A high Gleason score means the cancer cells are very different from normal cells. Grades 1 and 2 are not commonly used because the tumour tissue looks and acts like normal tissue. Most prostate tumours are grade 3 or higher.

Grade	Gleason score	Description
3	6 or less	Slow growing, less likely to spread
4	7	Grow slightly faster than grade 3 and may spread
5	8 to 10	Tend to grow quickly, more likely to spread

## Treatments for prostate cancer

Because prostate cancer usually grows slowly, it can often be cured or managed successfully. Your healthcare team considers your general health and the type, stage and grade of the cancer to recommend the best treatments for you. You'll work together with your healthcare team to make the final treatment choices. Talk to them if you have questions or concerns.

### **Some treatments can cause permanent infertility**

If you have radiation, chemotherapy or certain types of surgery for prostate cancer, you may not be able to have children. Before you have any treatment, talk to your doctor about how it might affect your fertility and ask about sperm banking (freezing sperm before treatment for use in the future). Sperm banking gives you and your partner more choices in the future.

If the prostate cancer is not causing any symptoms, you may not need treatment. Instead, your doctor may offer you a program called active surveillance (also called watchful waiting).

**Active surveillance:** Some prostate cancers grow very slowly and may not affect your health for years. Your healthcare team will watch the cancer closely. Your doctor will examine your prostate and test your PSA level regularly. A TRUS or biopsy may be done from time to time. Immediate treatment may be considered only if signs of cancer appear or change.

If immediate treatment is recommended, you might receive one or more of the following treatments.

**Surgery:** A decision to have surgery depends on the stage and grade of the cancer, your general health and your PSA level. During the operation, the entire prostate will be removed. This is called a prostatectomy. Some nearby tissue may also be affected by the surgery. Surgery is done under a general anesthetic (you will be unconscious), and you may stay in the hospital for several days after the surgery.

After surgery, you will have a narrow tube called a catheter in your bladder. This is usually removed within a few days. You may have some pain or nausea and vomiting. These side effects are temporary and can be controlled. You may also have problems controlling your bladder (incontinence). Problems with incontinence usually improve with time.

Surgery to the prostate can damage the nerves that control your ability to have or keep an erection (erectile dysfunction). When possible, nerve-sparing surgery is done to avoid nerve damage.

**Radiation therapy:** In external beam radiation therapy, a large machine is used to carefully aim a beam of radiation at the tumour. The radiation damages the cells in the path of the beam - normal cells as well as cancer cells. In brachytherapy, or internal radiation therapy, radioactive beads or seeds are placed directly into or near the prostate.

Radiation side effects depend on what part of the body receives the radiation. You may feel more tired than usual, have some diarrhea or bladder problems, or notice changes to the skin (it may be red or tender) where the treatment was given. Radiation for prostate cancer may irritate the rectum and cause changes to your bowel movements. You may also need to pass urine more often. These side effects are a result of damage to normal cells. The side effects usually improve or go away when the treatment is over.

Radiation therapy can damage the nerves and blood vessels in the penis. This may make it difficult to have an erection. Problems with erections usually do not occur right after radiation therapy but will appear later.

**Hormonal therapy:** Hormonal therapy is a treatment that removes or blocks hormones and stops cancer cells from growing. Prostate cancer needs the male hormone testosterone to grow. Hormonal therapy lowers the level of testosterone in your body to slow the growth of the tumour and to shrink it.

The level of testosterone in the body can be lowered by surgically removing the testicles (bilateral orchiectomy) or by using drugs. Hormonal drugs can be given as pills or injections (with a needle), or both. Today, it is more common to use drugs to lower testosterone than it is to remove the testicles.

Hormonal therapy may cause some side effects in some men. Different drugs cause different side effects, such as a loss of desire for sex, erectile dysfunction, hot flashes or weight gain. These effects can usually be reduced or controlled. They often go away when therapy is finished.

**Chemotherapy:** Chemotherapy uses drugs to treat cancer. Chemotherapy drugs may be given as pills or by injection (with a needle). They interfere with the ability of cancer cells to grow and spread, but they also damage healthy cells. Although healthy cells can recover over time, you may experience side effects from your treatment like hair loss, nausea, vomiting, diarrhea or fatigue.

**For more information on treatment**, you may want to read our booklets *Chemotherapy and Other Drug Therapies* and *Radiation Therapy*.

**Clinical trials:** Clinical treatment trials investigate new approaches to treating cancer, such as new drugs, new types of treatments or combinations of existing treatments. They are closely monitored to make sure that they are safe and effective for the participants. Ask your doctor if any clinical trials are available as a suitable treatment option for you. You may benefit and so may future cancer patients.

**Our brochure** *Clinical Trials* has more information, including how to find a clinical trial.

**Complementary therapies:** Complementary therapies – for example, massage therapy or acupuncture – are used *together with* conventional cancer treatments, often to help ease tension and stress as well as other side effects of treatment. They don't treat the cancer itself. More research is needed to understand if these therapies are effective and how they work.

Alternative therapies are used *instead of* conventional treatments. Alternative therapies haven't been tested enough for safety or effectiveness. Using alternative treatments alone for cancer may have serious health effects.

If you're thinking about using a complementary or alternative therapy, learn as much as you can about the therapy and talk to your healthcare team. It's possible that the therapy might interfere with test results or other treatments.

## Side effects of treatment

Some cancer treatments cause side effects, such as fatigue, hair loss or nausea. Because treatments affect everyone differently, it's hard to predict which side effects – if any – you may have.

Side effects can often be well managed and even prevented. If you're worried about side effects, tell your healthcare team about your concerns and ask questions. They can tell you which side effects you should report right away and which ones can wait until your next appointment.

## ***Possible long-term side effects***

Some side effects of treatment for prostate cancer can be long lasting or permanent. When choosing which treatment is best for you, it's important to consider the possible long-term side effects. Long-term side effects include problems with bladder control (incontinence), sexual function (erectile dysfunction) and the ability to father children (infertility).

**Incontinence:** Incontinence means you are no longer able to fully control the flow of urine. It can be caused by damage to the bladder, the bladder muscle or the nerves that help your bladder work properly. Urine may leak out suddenly when you cough, sneeze or laugh or during other physical activity. Sometimes urine may leak out when your bladder is too full or when the urge to urinate is too strong.

You are more likely to notice incontinence right after treatment, especially after surgery. As your body recovers, your bladder control may improve and return to normal. Some men never have complete control again.

There are many ways to help manage incontinence. Ask your doctor about special exercises to train your pelvic muscles if you have small leaks many times a day. Medicines can also help the muscle that controls the bladder.



**Erectile dysfunction (ED):** Erectile dysfunction is the inability to have or keep an erection. In some men, surgery or radiation therapy can cause long-lasting damage that will result in erectile problems.

Your doctor may wait several months after cancer treatment – to give you time to recover – before ordering tests to find the exact cause of the ED. The test results will help decide how to treat it. Talk with the healthcare team about treatments for ED, such as prosthetic penile implants, vacuum devices and medicines.

**Our booklet** *Sex, Intimacy and Cancer* has more detailed information.

**Infertility:** Infertility is the inability to father a child. Most treatments for prostate cancer cause infertility. Before you undergo any treatment, talk to your doctor about sperm banking.

## After treatment

Follow-up care helps you and your healthcare team monitor your progress and your recovery from treatment. At first, your follow-up care may be managed by one of the specialists from your healthcare team. Later on, it may be managed by your family doctor.

The schedule of follow-up visits is different for each person. You might see your doctor more often in the first year after treatment and less often after that. After treatment has ended, you should report new symptoms and symptoms that don't go away to your doctor right away, without waiting for your next scheduled appointment.

**Maintaining a healthy diet:** Diets that promote healthy, well-balanced eating from a variety of food groups will contribute to better health while recovering from prostate cancer. Because some studies suggest a link between prostate cancer and a high-fat diet, consider limiting the amount of fat in your diet. Men with prostate cancer should consult their doctor or dietitian about the best nutrition for them.

**Self-image and sexuality:** It's natural to be concerned about the effects of prostate cancer and its treatment on your sexuality. You may be worried about how your body looks after treatment, about having sex with a partner or that you may be rejected. Incontinence, erectile dysfunction and infertility may be side effects that you are

coping with. It may help to talk about your feelings with someone you trust. Your doctor can also refer you to specialists and counsellors who can help you with the emotional side effects of prostate cancer treatment.

The end of cancer treatment may bring mixed emotions. You may be glad the treatments are over and look forward to returning to your normal activities. But you could feel anxious as well. If you're worried about your treatment ending, talk to your healthcare team. They're there to help you through this transition period.

## Living with cancer

**Our booklet** *Coping When You Have Cancer* has more detailed information and resources.

Many sources of help are available for people with cancer and for their caregivers.

**Your healthcare team:** If you need practical help or emotional support, members of your healthcare team may be able to suggest services in your community or refer you to cancer centre staff or mental health professionals.

**Family and friends:** People closest to you can be very supportive. Accept offers of help. When someone says, "Let me know how I can help," tell them what they can do. Maybe they can run errands, cook a meal or drive you to your doctor's office.

**People who've had a similar experience:** Talking with and learning from others who've had similar experiences can be helpful. Consider visiting a support group or talking with a cancer survivor in person, over the telephone or online. Try more than one option to see which one works best for you.

**Yourself:** Coping well with cancer doesn't mean that you have to be happy or cheerful all the time. But it can mean looking after yourself by finding relaxing, enjoyable activities that refresh you mentally, spiritually or physically. Take some time to find coping strategies to help you through this experience. You may also want to talk to a counsellor for more help.

### **Talking to someone who's been there**

If you would like to talk to someone who's had a similar cancer experience, you can connect by phone with a trained volunteer who will listen, provide hope and suggest ideas for coping – all from the shared perspective of someone who's been there.

Register for this free program at [match.cancer.ca](http://match.cancer.ca) or call us at 1-888-939-3333.

### **Want to connect with someone online?**

If you'd like to join our online community, visit [CancerConnection.ca](http://CancerConnection.ca). You can read news, join discussion groups, get support and help others at the same time. You'll find caring, supportive people there.

## What causes prostate cancer?

There is no single cause of prostate cancer, but some factors increase the risk of developing it. Some people can develop prostate cancer without any risk factors, while others who have these factors do not get it.

Risk factors for prostate cancer include:

- age - over 65
- African ancestry
- family history of prostate cancer

Other possible risk factors being studied include:

- a diet high in fat, dairy products, calcium, or red or processed meat
- being overweight or obese
- being tall
- working with pesticides or with a metal called cadmium

## Canadian Cancer Society

*We're here for you.*

When you have questions about treatment, diagnosis, care or services, we will help you find answers.

**Call our toll-free number 1 888 939-3333.**



**Ask** a trained cancer information specialist your questions about cancer. Call us or email [info@cis.cancer.ca](mailto:info@cis.cancer.ca).



**Connect** with people online to join discussions, get support and help others. Visit [CancerConnection.ca](http://CancerConnection.ca).



**Browse** Canada's most trusted online source of information on all types of cancer. Visit [cancer.ca](http://cancer.ca).

Our services are free and confidential. Many are available in other languages through interpreters.

### **Tell us what you think**

Email [cancerinfo@cancer.ca](mailto:cancerinfo@cancer.ca) and tell us how we can make this publication better.



## What we do

The Canadian Cancer Society fights cancer by:

- doing everything we can to prevent cancer
- funding research to outsmart cancer
- empowering, informing and supporting Canadians living with cancer
- advocating for public policies to improve the health of Canadians
- rallying Canadians to get involved in the fight against cancer

Contact us for up-to-date information about cancer and our services or to make a donation.



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