



Medications are the primary treatment for prostate cancer that is advanced in the gland or has traveled outside the prostate. Prostate cancer medications are designed to reduce the activity of testosterone in the body, since this male hormone is thought to promote the reproduction of prostate cancer cells. There are two main types of medications used for treatment of prostate cancer, namely hormonal medications and anti-androgen medications.

**Hormonal medications** - Medications such as goserelin, leuprolide and buserelin are effective in reducing the amount of testosterone in the body. They stabilize PSA values and symptoms of the disease in about 90% of the men who use them. These medications are available as injections that are administered by a doctor once a month, every two months or every three months. Side effects of these medications may include reduced sex drive, impotence, hot flashes, enlarged and tender breasts, weight gain (about 5 to 7 kg) and reduced muscle and bone mass. After two or three years, prostate cancer often becomes resistant to this type of treatment as signaled by an increase in PSA values.

**Anti-androgen medications - Non-steroidal anti-androgen** medications such as flutamide, bicalutamide and nilutamide work by blocking the action of male hormones. They are usually used along with hormonal medications because they do not reduce testosterone levels on their own. Flutamide and bicalutamide cause breast enlargement and tenderness in approximately 60% and 25% of men respectively. Nilutamide causes reduced night vision in about one-third of the men who use it, and nausea in about one-quarter. Intolerance to alcohol occurs in about 20% of men taking nilutamide.

**Steroidal anti-androgen** medications include cyproterone acetate and megestrol. These medications inhibit the production of testosterone as well as block the activity of the male hormone, so hormone medications are not normally required. These medications may cause fatigue and depression.



**WHERE TO FIND MORE INFORMATION**

**Canadian Cancer Society**

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10 Alcorn Ave., Suite 200  
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Phone: 416-961-7223  
e-mail: [ccs@cancer.ca](mailto:ccs@cancer.ca)  
[www.cancer.ca](http://www.cancer.ca) (local branches listed)

**Canadian Prostate Cancer Network**

P.O. Box 1253  
Lakefield, Ontario K0L 2H0  
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[www.cpcn.org](http://www.cpcn.org)

**Prostate Cancer Research Foundation of Canada**

1262 Don Mills Rd., Suite 1-F  
Toronto, Ontario M3B 2W7  
Phone: 1-888-255-0333  
e-mail: [info@prostatecancer.ca](mailto:info@prostatecancer.ca)  
[www.prostatecancer.ca](http://www.prostatecancer.ca)

**American Cancer Society**

[www.cancer.org](http://www.cancer.org)

The information found in this PROfile health brochure is of a general nature only. It is not intended to replace the advice of your pharmacist, physician, or other healthcare provider. If you have questions relating to your specific health concerns, please contact your personal healthcare provider.



Your PROfile Pharmacist has many resources for prostate cancer education and is always available to discuss your health concerns!

EXCLUSIVELY AT



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Prostate Cancer





Prostate cancer is the most common form of cancer among Canadian men. Although only 10% of men with prostate cancer die within five years of the diagnosis, it is the second most common cause of cancer-related death among men. (Lung cancer is first).

## WHAT IS PROSTATE CANCER?

The prostate gland is normally about the size of a walnut and is located at the bottom portion of the bladder, behind the pubic bone and in front of the rectum. The prostate gland surrounds the urethra, the tube that carries urine from the bladder out through the penis. Prostate cancer occurs when, for an unknown reason, cells start to divide without any control or order. It usually develops slowly and can be successfully treated, but early diagnosis is important.

## WHAT INCREASES RISK FOR PROSTATE CANCER?

A number of factors appear to increase the risk of prostate cancer including:

- Age over 50 years (especially common after 70)
- Family history
- Using cadmium (a type of metal found inside batteries and metal lining) at work
- High levels of testosterone
- Possibly a diet high in animal fats (still under research)
- African American men appear to be at higher risk



## SCREENING OF PROSTATE CANCER

It is important not to confuse enlargement of the prostate known as benign prostatic hyperplasia (BPH) with prostate cancer. Although advanced prostate cancer can cause some of the same symptoms as BPH (e.g. difficulty starting the urine stream, reduced strength of urine stream), these symptoms are usually associated with BPH. Regardless of the cause, symptoms should be assessed by a doctor. Early prostate cancer usually causes no symptoms. Digital rectal examinations (DRE) and/or prostate-specific antigen blood tests (PSA) can detect the presence of early prostate cancer as well as BPH.

**Digital Rectal Examination** - Since the prostate gland is located beside the rectum, a doctor can feel the back wall of the gland and determine if a nodule or hard spot is present. If so, further investigation into the possibility of prostate cancer will be required. This exam also helps to determine the size of the prostate gland.

**Prostate Specific Antigen** - PSA is naturally produced in the prostate gland to help liquefy semen. A small amount normally enters the bloodstream. If larger than normal amounts are present, it may signal inflammation or enlargement of the prostate gland, or perhaps cancer. The PSA test detects early prostate cancer in about 80% of cases. About one-third of men with elevated PSA have prostate cancer while the other two-thirds have BPH or inflamed prostate.

## QUESTIONS FOR THE DOCTOR

*Often it is difficult to know what to ask the doctor. Some questions you might want to ask are listed below:*

- What is the exact type of cancer I have?
- Has my cancer spread to lymph nodes or organs?
- What stage is my cancer at? What does that mean?
- What treatment choices do I have? What do you recommend and why?
- What are the chances of my cancer coming back?
- How long will each course of treatment last?
- Should I follow a special diet?



The choice of treatment strategy for prostate cancer depends on the stage at which it is diagnosed, and the symptoms associated with the disease.

**Watchful Waiting** - This strategy may be appropriate for men over 70 years of age if the prostate cancer is at a very early stage, and is a small, low-grade cancer confined to the prostate gland. It may also be a consideration for men who have a life expectancy of less than ten years due to another medical condition. It may take several years for a tumor to double in size, but the knowledge that cancer is present may also be very troubling. The choice between watchful waiting or treatment that may be associated with side effects is obviously a very personal one for the man involved.

**Radical Prostatectomy** - This term refers to complete removal of the prostate gland by surgery, and is the most reliable method of curing prostate cancer. There is normally a period of days to weeks, or even months of bladder control loss after the operation, but 95% of men eventually regain complete bladder control. Recovery usually takes about one to two months. About 20-40% of men under the age of 50 and around 75-85% of men over the age of 70 are unable to achieve normal erections after surgery.

**Radiation** - Offers a viable alternative to men not able to undergo surgery due to health problems or other conditions. Radiation is usually delivered via an external beam for 5 days a week for 6 to 7 weeks. Each radiation exposure lasts about 1 minute. The procedure causes urinary problems (e.g. urgency, painful urination, urine leakage) in about 75% of men.

**Orchiectomy** - This procedure involves surgical removal of the testicles and is normally reserved for men with advanced local disease and/or for cases where the cancer has traveled beyond the prostate.

**Cryotherapy** - The prostate is frozen with liquid nitrogen, which kills the cells in the prostate. Involves a 1 to 2 day hospital stay and recovery usually takes a couple of weeks.