



## **Education**

### **Prostate Cancer**

#### **What is prostate cancer?**

Prostate cancer is the abnormal growth of cells in a man's prostate gland. The prostate gland is part of a man's reproductive system. It is, on average, a little bigger than a walnut. It is located between the base of the bladder and the beginning of the penis. It surrounds the upper part of the urethra. (The urethra carries urine from the bladder out through the penis.) The prostate makes the fluid that nourishes and carries sperm.

Prostate cancer has become the most commonly diagnosed cancer among men in the US. It usually grows slowly. Men who have it more often die from other causes before the cancer kills them. Still, prostate cancer is one of the most common causes of cancer death in American men. The prostate cancer death rate is especially high among African-American men for unknown reasons.

#### **How does it occur?**

The cause of prostate cancer is not known. Studies have found or suggested the following risk factors for prostate cancer:

- **Age:** Age is the main risk factor for prostate cancer. Prostate cancer is rarely seen in men younger than 45. The chance of getting it goes up as a man gets older. Most men diagnosed with prostate cancer are older than 65.
- **Heredity:** A man's risk is higher if his father or brother had prostate cancer.
- **Race:** Prostate cancer is more common in African-American men than in white men, including Hispanic men. It is less common in Asian and American Indian men.
- **Diet:** Studies suggest that men who eat a diet high in animal fat or meat may be at increased risk for prostate cancer, whereas men who eat a diet rich in fruits and vegetables may have a lower risk.

#### **What are the symptoms?**

Prostate cancer often has no symptoms, especially in the early stages. Symptoms that may occur are:

- weak flow of urine
- urine flow that starts and then stops too soon
- trouble starting or stopping the flow of urine
- frequent and urgent need to urinate, especially at night
- not being able to urinate
- blood in the urine or semen
- pain or burning during urination
- trouble having an erection, or pain when semen comes out of the penis (ejaculation)
- frequent pain in the lower back, hips, or upper thighs (usually because of a spread of the cancer beyond the prostate gland).

More often these symptoms are due to BPH (benign prostatic hypertrophy), an infection, or another health problem. BPH is a growth of the prostate that is not caused by cancer. BPH normally occurs as men get older. If you have any of the symptoms listed above, you should see your health care provider so that problems can be diagnosed and treated as early as possible.

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## How is it diagnosed?

Because prostate cancer often causes no symptoms, it may be found as part of a routine rectal exam or during an exam for some other problem.

A blood test called the prostate-specific antigen (PSA) test may be done to check for prostate cancer. However, like many cancer screening tools, it is not perfect and can give misleading results. If the PSA is normal, there may still be cancer in the prostate. If it is a bit high, it may not be from cancer, but the abnormal result may cause undue anxiety, expense, and unnecessary medical procedures. For this reason, health care providers do not agree about when or if PSA tests should be done.

If you have a symptom or a test that suggests cancer, other tests that may be ordered are:

- Transrectal ultrasound to look at the prostate. A probe that gives off sound waves is inserted into the rectum to produce an image of the prostate on a video screen.
- Cystoscopy. The health care provider uses a thin, lighted tube to look into the penis, urethra, and bladder.
- Transrectal biopsy. The health care provider inserts a needle through the rectum into the prostate. A piece of the prostate tissue is removed to look for cancer cells. It is the only sure way to diagnose prostate cancer.

If a biopsy shows cancer cells, you will have other tests, such as a bone scan, CT scan, or MRI to see if the cancer has spread and help decide how to treat it.

## How is it treated?

Treatment depends on how large the tumor is, whether it has spread to other parts of your body, your symptoms, your overall health, and your age. Some of the treatments, and their side effects, are:

- **Surgery to remove the prostate (prostatectomy).** Surgery may cause short-term problems, such as discomfort and loss of control of the flow of urine (incontinence). Most men are able to control their bladder again after a few weeks. Surgery may also cause erectile dysfunction (an inability to have or keep an erection, also called impotence). Nerve-sparing surgery may help so that the impotence does not last. But in some cases, men become permanently impotent. Also, when your prostate is removed, you will no longer produce semen. You will have dry orgasms. If you wish to father children, you may consider sperm banking or a sperm retrieval procedure before surgery.
- **Radiation therapy.** This treatment uses high-energy rays to kill cancer cells. It may also lead to long-term problems such as diarrhea, erectile dysfunction, and poor control of the flow of urine. The radiation may be given externally (radiation beamed at your body from a machine). This may cause the urethra, rectum, and anus to become inflamed. Or the radiation may be given internally, which means the radiation comes from radioactive seeds implanted into the prostate. This may cause erectile dysfunction and loss of bladder control.
- **Hormone therapy.** Surgery to remove both testicles or drugs may be used to keep prostate cancer cells from getting the male hormones (testosterone) that they need to grow. The testicles produce the most of the testosterone in your body. Drug treatment can include medicines that prevent the testicles from making testosterone, block the action of male hormones on the prostate cancer cells, or prevent the adrenal gland from making testosterone. Side effects of treatment depend on the treatment used. They may include erectile dysfunction, hot flashes, loss of sexual desire, weaker bones, breast tenderness or slight enlargement, nausea, or diarrhea.

Watchful waiting, which means not having treatment, may be chosen if:

- The risks and possible side effects of treatment outweigh the possible benefits.
- You are an older adult.
- You have other serious health problems.
- You are diagnosed with early-stage prostate cancer that seems to be growing slowly.
- You have no symptoms.

## How long will the effects last?

Most prostate cancer grows very slowly. Prostate cancer is often found when the cancer is at an early stage and can be treated successfully.

## How can I take care of myself?

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- Follow the full course of treatment prescribed by your health care provider.
- Eat a healthy diet.
- Recognize that having the cancer is an added stress in your life. Take more time for your important relationships and for rest.
- Be candid with your family and your health care providers about your concerns.
- Ask your health care provider any questions you have about the course of the disease, treatments, side effects of the treatments, support groups, and anything else that concerns you.
- Find a counselor to help you deal with difficult issues.
- Spend time with people and activities you enjoy.

For more information, contact:

- American Cancer Society, Inc. Phone: 800-ACS-2345 (800-227-2345) Web site: <http://www.cancer.org>
- AMC Cancer Research Center and Foundation Phone: 800-525-3777 Web site: <http://www.amc.org>
- National Cancer Institute Phone: 800-4-CANCER (800-422-6237) Web sites: <http://cis.nci.nih.gov> and <http://www.cancer.gov>

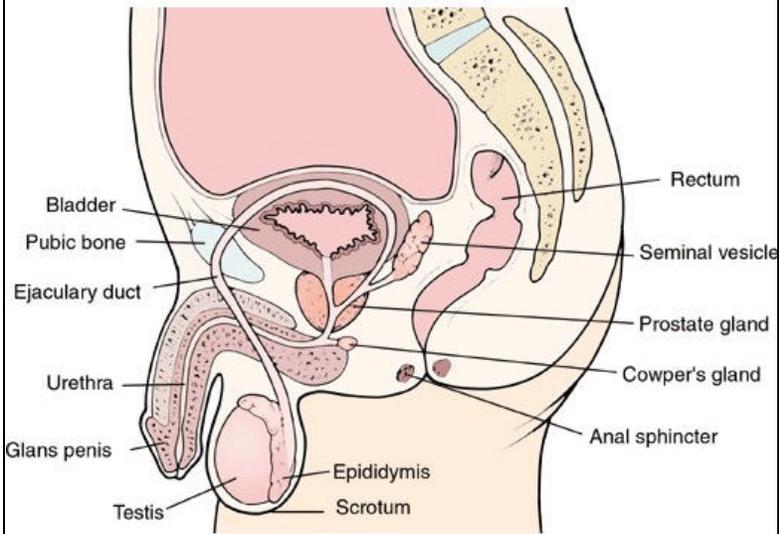
### **How can I prevent prostate cancer?**

Because the cause of prostate cancer is not known, health care providers do not know how to prevent it. However, researchers are actively studying possible methods of prevention, such as diet, supplements, and drugs.

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## Male Pelvis: Side View



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