RUTGERS
Cancer Institute
of New Jersey

NCI CCC
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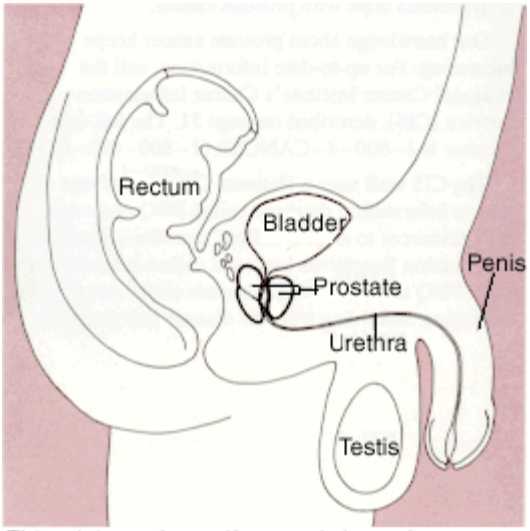
June is New Jersey's Prostate Cancer Awareness Month

What is the Prostate?

The prostate is a gland in a man's reproductive system. It makes and stores seminal fluid, a milky fluid that nourishes sperm. This fluid is released to form part of semen. The prostate is about the size of a walnut. It is located below the bladder and in front of the rectum. It surrounds the upper part of the urethra, the tube that empties urine from the bladder. If the prostate grows too large, the flow of urine can be slowed or stopped.

To work properly, the prostate needs male hormones (androgens). Male hormones are responsible for male sex characteristics. The main male hormone is testosterone, which is made mainly by the testicles. Some male hormones are produced in small amounts by the adrenal glands.



This picture shows the prostate and nearby organs.

What Are the Key Statistics About Prostate Cancer?

Prostate cancer is the most common cancer in American men and the second leading cause of cancer death in men in the United States. It is estimated that there will be 233,000 new cases in the United States during 2014. African-American men are more likely to have prostate cancer and to die from it than are White or Asian men. The reasons are still not known.

Who's at Risk?

The causes of prostate cancer are not well understood. Doctors cannot explain why one man gets prostate cancer and another does not. Researchers are studying factors that may increase the risk of this disease. Studies have found that the following risk factors are associated with prostate cancer:

- **Age**. In the United States, prostate cancer is found mainly in men 65 and older.
- **Family history of prostate cancer.** A man's risk for developing prostate cancer is higher if his father or brother has had the disease.
- **Race.** This disease is much more common in African-American men than in white men. It is less common in Asian and American Indian men.
- **Diet and dietary factors.** Some evidence suggests that a diet high in animal fat may increase the risk of prostate cancer and a diet high in fruits and vegetables may decrease the risk. Studies are in progress to learn whether men can reduce their risk of prostate cancer by taking certain dietary supplements.

A majority of the research does not support that having a vasectomy might increase a man's risk for prostate cancer. Scientists have studied whether benign prostatic hyperplasia (BPH), obesity, lack of exercise, smoking, radiation exposure, or a sexually transmitted virus might increase the risk for prostate cancer. At this time, there is little evidence that these factors contribute to an increased risk.

Some research suggests that high levels of testosterone may increase a man's risk of prostate cancer. The difference between racial groups in prostate cancer risk could be related to high testosterone levels, but it also could result from diet or other lifestyle factors.

Researchers also are looking for changes in genes that may increase the risk for developing prostate cancer. They are studying the genes of men who were diagnosed with prostate cancer at a relatively young age (less than 55 years old) and the genes of families who have several members with the disease. Much more work is needed, however, before scientists can say exactly how changes in these genes are related to prostate cancer. Men with a family history of prostate cancer who are concerned about an inherited risk for this disease should talk with their doctor. The doctor may suggest seeing a health professional trained in genetics.

What Are Signs and Symptoms of Prostate Cancer?

Early prostate cancer often does not cause symptoms. But prostate cancer can cause any of these problems:

- A need to urinate frequently, especially at night;
- Difficulty starting urination or holding back urine;
- Inability to urinate;
- Weak or interrupted flow of urine;
- Painful or burning urination;
- Difficulty in having an erection;
- Painful ejaculation;
- Blood in urine or semen; or
- Frequent pain or stiffness in the lower back, hips, or upper thighs.

Any of these symptoms may be caused by cancer or by other, less serious health problems, such as benign prostatic hyperplasia (BPH) or an infection. A man who has symptoms like these should see his doctor or a urologist (a doctor who specializes in treating diseases of the genitourinary system).

Can Prostate Cancer Be Found Early?

Two tests may be used to detect prostate abnormalities, but they cannot show whether abnormalities are cancer or another, less serious condition. The doctor will take the results into account in deciding whether to check the patient further for signs of cancer. The doctor can explain more about each test.
Digital rectal exam (DRE) -- the doctor inserts a lubricated, gloved finger into the rectum and feels the prostate through the rectal wall to check for hard or lumpy areas.
Blood test for prostate-specific antigen (PSA) -- a lab measures the levels of PSA in a blood sample. The level of PSA may rise in men who have prostate cancer, BPH, or infection in the prostate.

The American Cancer Society recommends that beginning at age 50, men who have a life expectancy of at least 10 years should have a PSA and DRE annually. Men at high risk (African-Americans and men who have first-degree relatives diagnosed with prostate cancer at a young age) should begin testing at age 45.

Can Prostate Cancer Be Prevented?

Because the exact cause of prostate cancer is not known, it is unclear if it is possible to prevent most cases of the disease. Several studies are under way to explore how prostate cancer might be prevented. The Selenium and Vitamin E Cancer Prevention Trail (SELECT) was a large clinical trial designed to determine if these two supplements can protect against prostate cancer. The study began enrolling patients on August 22, 2001, and closed enrollment on June 24, 2004, with 35,534 participants. About 15 percent of the participants were African-American. Results published in 2011 found that neither vitamin E nor selenium supplements lowered prostate cancer risk after daily use for about 5 years. In fact, men taking the vitamin E supplements were later found to have a slightly higher risk of prostate cancer. If you are interested in finding out more about this study, call the National Cancer Institute at 1-800-4 CANCER or visit the NCI Web site at www.cancer.gov.

Recent studies suggest that a diet that regularly includes tomato-based foods may help protect men from prostate cancer. Researchers also are investigating whether diets that are low in fat and high in soy, fruits, vegetables, and other food products might prevent a recurrence.

If you would like further information about clinical trials for preventing cancer, please call Rutgers Cancer Institute of New Jersey at 732-235-8675. For additional information about nationwide cancer prevention trials, you can call the National Cancer Institute at 1-800-4 CANCER or visit their Web site at www.cancer.gov.

Expert Advice from Rutgers Cancer Institute of New Jersey

Dr. DiPaola is the Director at the Cancer Institute of New Jersey. He is also a professor of medicine at Robert Wood Johnson Medical School and a medical oncologist with a focus on prostate cancer research. Currently, Dr. DiPaola has numerous active prostate cancer clinical trials. His research includes preventing prostate cancer and treating prostate cancer, including prostate cancer that has spread. Here are his thoughts on prostate cancer prevention:

> "Given an amplified understanding of prostate cancer in the laboratory, these are critical times where new strides can be made in prostate cancer prevention in the clinic. Everyone should be encouraged to consider and participate in important clinical trials in the area of prostate cancer prevention."

Where Can I Find Further Information?

The Resource and Learning Center
732-235-9639
http://www.cinj.org/rlc

The American Cancer Society
1-800-ACS-2345
www.cancer.org

National Cancer Institute
1-800-4-CANCER
www.cancer.gov

Prostate Cancer Foundation
1-800-757-CURE
http://www.pcf.org

Us TOO International
1-800-808-7866
http://www.ustoo.org

RLC prostate cancer website QR code. Scan with smartphone / device.

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