

FACTS ABOUT PROSTATE CANCER

If you or someone in your family is a man over the age of 45, one of the most important things you can do for yourself, or can recommend to that family member, is to get tested for prostate cancer. Prostate cancer is the most common form of cancer in men. One of every five American men will develop the disease in his lifetime and it is estimated that close to 400,000 new cases of prostate cancer will be detected this year in the United States.

The highest incidence of prostate cancer is in North America and northwestern Europe. It is rare in Asia, Africa, Central America, and South America. The way that prostate cancer is distributed among these populations suggests that diet may play a role in the development of this disease, especially if diet affects the level of hormones in men.

For reasons that have not yet been identified, the highest incidence of prostate cancer in the world is among African-American men. Once diagnosed, African-Americans have poorer survival rates for prostate cancer than white Americans. This may be because more prostate cancers in African-Americans are diagnosed in advanced stages compared with cancers in white Americans. African-American men are more than twice as likely to die of prostate cancer than are white American men.

WHAT IS THE PROSTATE?

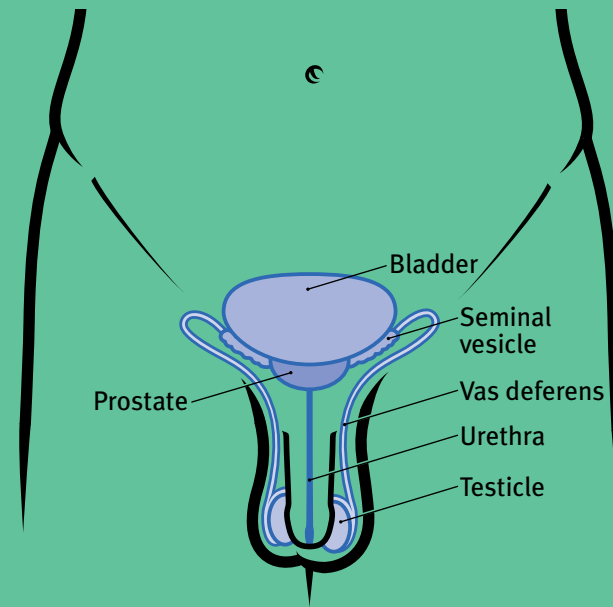
The prostate is a key part of the male reproductive system and is linked closely with the urinary system. It makes and stores seminal fluid, a milky fluid that nourishes sperm.

About the size of a walnut, the prostate is located below the bladder, where urine is stored, and in front of the rectum. It encircles, like a donut, the

upper part of the urethra, the tube that empties urine from the bladder.

The prostate is made up of lobes enclosed in an outer covering or capsule. On either side of the prostate are the seminal vesicles, a pair of pouch-like glands that contribute secretions to the semen. Next to the seminal vesicles run the two vas deferens that carry sperm from the testicles. The testicles, in addition to manufacturing sperm, also produce testosterone, a male sex hormone that controls the prostate's growth and function.

The prostate usually is healthy in younger men. As a man grows older, however, the prostate gland frequently becomes a source of trouble. The three most common prostate problems are inflammation (prostatitis), prostate enlargement (benign prostatic hyperplasia/BPH) and prostate cancer. Neither prostatitis or prostate enlargement is known to cause cancer, however, it is possible for men who have one or both of these conditions to develop prostate cancer as well.



WHAT ARE THE RISKS FOR DEVELOPING PROSTATE CANCER?

The causes of prostate cancer are not well understood. A man can have all of the risk factors and never develop cancer or none of the risk factors and develop cancer. Doctors cannot explain why one man gets prostate cancer and another does not. Researchers studying factors that may increase the risk of this disease have found that the following risk factors are associated with prostate cancer:

- **Age.** In the United States, prostate cancer is found mainly in men over 55. The average age of patients at the time of diagnosis is 70.
- **Family history of prostate cancer.** A man's risk for developing prostate cancer is higher if his father or brother has 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.

Although a few studies suggested that having a vasectomy might increase a man's risk for prostate cancer, most studies do not support this finding. Scientists have also studied whether benign prostatic hyperplasia, 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.

WHAT ARE THE SYMPTOMS OF PROSTATE CANCER?

When prostate cancer is in its earliest stages, it often causes no pain or other symptoms. It usually grows slowly and symptoms do not appear for years. However, 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
- Pain or burning when urinating
- Difficulty in having an erection
- Painful ejaculation
- Blood in urine or semen
- Frequent pain or stiffness in the lower back, hips, or upper thighs.

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

HOW IS PROSTATE CANCER DETECTED?

Because prostate cancer is so prevalent and symptoms may not be apparent, it is extremely important that men over the age of 50 get tested for the disease. An early diagnosis will provide crucial information, because the appropriate course of treatment changes as the disease advances.

Every man age 40 and over should ask his doctor when to begin screening for prostate cancer (even if he does not have symptoms), what tests to have, and how often to have them.

Your doctor may suggest the screening tests described below. These tests are used to detect prostate abnormalities, but they cannot show whether abnormalities are cancer or another, less serious condition. Your doctor will take the results into account in deciding whether to check you further for signs of cancer.

- Digital rectal exam (DRE) – Your doctor inserts a lubricated, gloved finger into the rectum to feel the size, shape, and texture of the prostate. Your physician is feeling to see if there are any areas that are not soft, smooth and symmetrical. If an abnormality is felt, it simply suggests that cancer may be present. Cancers in the middle or front of the prostate may not be felt, and small cancers, especially cancers toward the front of the prostate gland or deep within it, may be missed. Although it is a useful screening procedure, DRE is most effectively used in combination with other tests to determine whether cancer is present.
- Blood test for prostate-specific antigen (PSA) – This is a blood test that measures the level of prostate specific antigen (PSA), a protein produced by the prostate gland and found in the blood. The level of PSA may rise in men who have prostate cancer, benign prostatic hyperplasia or infection in the prostate. A PSA test alone indicates that cancer might be present, however, a prostate biopsy is always needed to confirm the diagnosis of cancer. The normal range for the PSA level is 0 to 4.0 nanograms per milliliter (ng/ml). Regardless of age and race, PSA levels greater than 10 ng/ML are suspicious for prostate cancer.
- Transrectal ultrasound (TRUS) – With a small probe inserted in the rectum, TRUS uses sound waves bouncing off the prostate to create an image of the prostate on a video screen. It is sometimes used along with DRE and PSA to diagnose prostate cancer.

If DRE or PSA results suggest that cancer may be present, your doctor will recommend a biopsy. This is an office procedure in which a few sample cells are removed for microscopic examination, allowing for an accurate assessment of the presence and types of cancer cells within the prostate. A prostate biopsy should be done during a TRUS. This technology allows the urologist to accurately guide the biopsy needle to various parts of the prostate and to sample from various parts of the gland.

TREATING PROSTATE CANCER

Should cancer be found in the prostate biopsy specimen, the cancer is graded to estimate how fast it is likely to grow and spread. In addition, more tests, called staging, are performed to discover how far the cancer has spread in the prostate and if it is in nearby tissues or other parts of the body.

Treatment options depend on the prostate cancer stage. Options include:

- Surgery in which the entire prostate gland is removed.
- Radiation therapy, in which high-energy rays or particles are used to kill cancer cells.
- Hormone therapy, which lowers the levels of male hormones.
- Chemotherapy, used for patients whose cancer has spread outside the prostate and for whom hormone therapy has not been effective.

SAINT LOUIS UNIVERSITY CANCER CENTER

Our standing as an academic medical center puts it at the forefront in developing and providing the latest medical treatment and procedures for prostate cancer patients. Our cancer services are accredited by the American College of Surgeons (ACOS) Commission on Cancer (COC). Urologists who are part of the Saint Louis University Cancer Center offer all the recommended tests and procedures for prostate cancer. For more information about the programs available through the Saint Louis University Cancer Center, call (314) 268-5880 or toll-free 1-800-268-5880.

Saint Louis University Cancer Center PROSTATE CANCER



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