

LOST TEMPLE FITNESS

PROSTATE

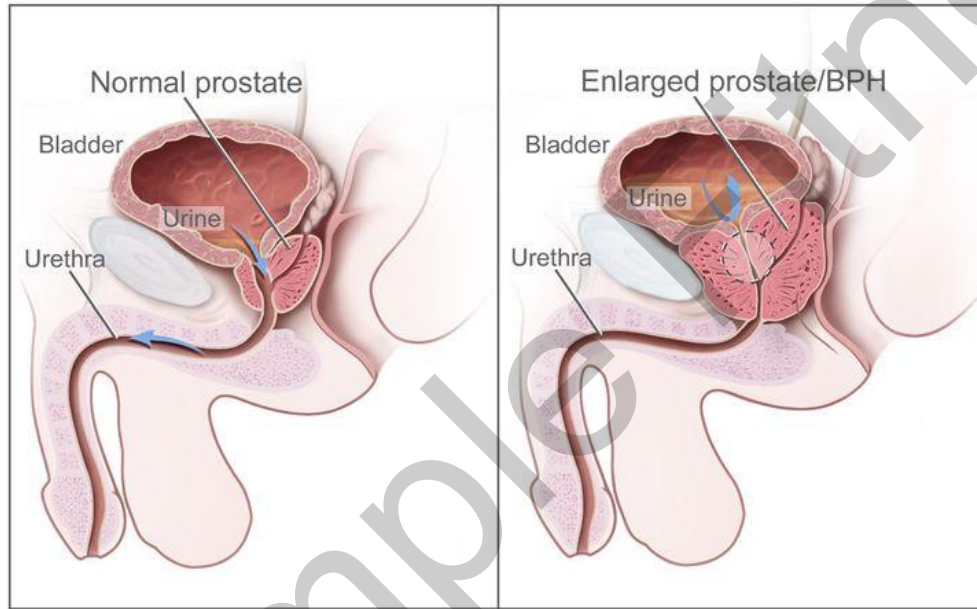
Information and pictures from *National Cancer Institute* unless otherwise specified

Description

Prostate cancer is a disease in which malignant (cancer) cells form in the tissues of the prostate.

The prostate is a gland in the male reproductive system. It lies just below the bladder (the organ that collects and empties urine) and in front of the rectum (the lower part of the intestine). It is about the size of a walnut and surrounds part of the urethra (the tube that empties urine from the bladder). The prostate gland makes fluid that is part of the semen

Normal prostate and benign prostatic hyperplasia (BPH).



- A normal prostate does not block the flow of urine from the bladder.
- An enlarged prostate presses on the bladder and urethra and blocks the flow of urine.

Risk Factors

- Age
 - Age is an important risk factor for prostate cancer. Prostate cancer is rarely seen in men younger than 40 years; the incidence rises rapidly with each decade thereafter. For example, the probability of being diagnosed with prostate cancer is 1 in 456 for men 49 years or younger, 1 in 54 for men aged 50 through 59 years, 1 in 19 for men aged 60 through 69 years, and 1 in 11 for men aged 70 years and older, with an overall lifetime risk of developing prostate cancer of 1 in 8.
- Ancestry
 - The risk of developing and dying from prostate cancer is higher among Black men, is of intermediate levels among White men, and is lowest among native Japanese. Conflicting data have been published regarding the etiology of these outcomes, but some evidence is available that access to health care may play a role in disease outcomes. According to the Surveillance, Epidemiology, and End Results (SEER) Program, incidence of prostate cancer in African American men exceeds those of White men at all ages. Family cancer history.

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Risk Factors <i>Continued</i>	<ul style="list-style-type: none"> • Family History <ul style="list-style-type: none"> ○ Approximately 15% of men with a diagnosis of prostate cancer will be found to have a first-degree relative (e.g., brother, father) with prostate cancer, compared with approximately 8% of the U.S. population.[2] Approximately 9% of all prostate cancers may result from heritable susceptibility genes. • Hormones • Dietary Fat • Dairy and Calcium Intake • Multivitamin Use • Folate • Cadmium Exposure • Dioxin Exposure • Prostatitis <p><i>See Prostate Cancer Prevention (PDQ®)–Health Professional Version AND Genetics of Prostate Cancer (PDQ®)–Health Professional Version for more information.</i></p>
Treatment	<p>Radiation therapy Targeted therapy Chemotherapy Watchful waiting or active surveillance Hormone therapy Biologic therapy Bisphosphonate therapy</p> <p>Radiopharmaceutical therapy uses a radioactive substance to treat cancer including:</p> <ul style="list-style-type: none"> • Alpha emitter radiation therapy, which uses a radioactive substance to treat prostate cancer that has spread to the bone. A radioactive substance called radium-223 is injected into a vein and travels through the bloodstream. The radium-223 collects in areas of bone with cancer and kills the cancer cells. <p>Surgery</p> <p>Patients in good health whose tumor is in the prostate gland only may be treated with surgery to remove the tumor. The following types of surgery are used:</p> <ul style="list-style-type: none"> • Radical prostatectomy: A surgical procedure to remove the prostate, surrounding tissue, and seminal vesicles. There are two types of radical prostatectomy: <ul style="list-style-type: none"> ○ Retropubic prostatectomy: A surgical procedure to remove the prostate through an incision (cut) in the abdominal wall. Removal of nearby lymph nodes may be done at the same time. ○ Perineal prostatectomy: A surgical procedure to remove the prostate through an incision (cut) made in the perineum (area between the scrotum and anus). Nearby lymph nodes may also be removed through a separate incision in the abdomen. • Pelvic lymphadenectomy: A surgical procedure to remove the lymph nodes in the pelvis. A pathologist views the tissue under a microscope to look for cancer cells. If the lymph nodes contain cancer, the doctor will not remove the prostate and may recommend other treatment.

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Treatment Continued

- **Transurethral resection of the prostate (TURP):** A surgical procedure to remove tissue from the prostate using a resectoscope (a thin, lighted tube with a cutting tool) inserted through the urethra.
 - This procedure is done to treat benign prostatic hypertrophy and it is sometimes done to relieve symptoms caused by a tumor before other cancer treatment is given.
 - TURP may also be done in men whose tumor is in the prostate only and who cannot have a radical prostatectomy.

Cryosurgery is a treatment that uses an instrument to freeze and destroy prostate cancer cells. Ultrasound is used to find the area that will be treated.

Cryosurgery can cause impotence and leakage of urine from the bladder or stool from the rectum.

High-intensity–focused ultrasound therapy is a treatment that uses ultrasound (high-energy sound waves) to destroy cancer cells. To treat prostate cancer, an endorectal probe is used to make the sound waves.

Proton beam radiation therapy is a type of high-energy, external radiation therapy that targets tumors with streams of protons (small, positively charged particles). This type of radiation therapy is being studied in the treatment of prostate cancer.

Hormone therapy

Hormone therapy is a cancer treatment that removes hormones or blocks their action and stops cancer cells from growing. Hormones are substances made by glands in the body and circulated in the bloodstream. In prostate cancer, male sex hormones can cause prostate cancer to grow.

Drugs, surgery, or other hormones are used to reduce the amount of male hormones or block them from working. This is called androgen deprivation therapy (ADT).

Hormone therapy for prostate cancer may include the following:

- Abiraterone acetate can prevent prostate cancer cells from making androgens. It is used in men with advanced prostate cancer that has not gotten better with other hormone therapy. It is also used in men with high-risk prostate cancer that has improved with treatments that lower hormone levels.
- Orchiectomy is a surgical procedure to remove one or both testicles, the main source of male hormones, such as testosterone, to decrease the amount of hormone being made.
- Estrogens (hormones that promote female sex characteristics) can prevent the testicles from making testosterone. However, estrogens are seldom used today in the treatment of prostate cancer because of the risk of serious side effects.
- Luteinizing hormone-releasing hormone agonists can stop the testicles from making testosterone. Examples are leuprolide, goserelin, and buserelin.
- Antiandrogens can block the action of androgens (hormones that promote male sex characteristics), such as testosterone. Examples are flutamide, bicalutamide, enzalutamide, apalutamide, nilutamide, and darolutamide.
- Drugs that can prevent the adrenal glands from making androgens include ketoconazole, aminoglutethimide, hydrocortisone, and progesterone.

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Possible Side Effects

Surgery:

Transurethral resection of the prostate (TURP)

- Recurring urinary tract infections
- Kidney or bladder damage
- Inability to control urination or an inability to urinate at all
- Bladder stones
- Blood in your urine (*Mayo*)

Radical prostatectomy

- Impotence
- Heart attack / stroke
- Bladder spasms
- Blood clot in the legs
- Leakage of urine from the bladder or stool from the rectum.
- Shortening of the penis (1 to 2 centimeters). The exact reason for this is not known.
- Inguinal hernia (bulging of fat or part of the small intestine through weak muscles into the groin).
 - Inguinal hernia may occur more often in men treated with radical prostatectomy than in men who have some other types of prostate surgery, radiation therapy, or prostate biopsy alone.
 - It is most likely to occur within the first 2 years after radical prostatectomy.

Pelvic lymphadenectomy: If lymph nodes are removed, there may be additional side effects:

- Lymphedema
- Seroma
- Infection
- Nerve damage

Bone Pain: Prostate cancer that has spread to the bone and certain types of hormone therapy can weaken bones and lead to bone pain.

Treatments for bone pain include the following:

- Pain medicine.
- External radiation therapy.
- Strontium-89 (a radioisotope).
- Targeted therapy with a monoclonal antibody, such as denosumab.
- Bisphosphonate therapy.
- Corticosteroids.

Radiation therapy: Increased risk of bladder and/or gastrointestinal cancer. Can also cause impotence and urinary problems that may get worse with age.

Hormone therapy: Hot flashes, impaired sexual function, loss of desire for sex, and weakened bones

Cryosurgery: Can cause impotence and leakage of urine from the bladder or stool from the rectum

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<p>Recovery after surgery</p> <p><i>Information from CETI- Cancer Exercise Training Institute</i></p> <p>Please follow MD/surgeon protocol, as every situation is unique.</p>	<p>Radical prostatectomy</p> <ul style="list-style-type: none"> ➤ Hospital Stay: 2-3 days ➤ Full Recovery: 3 months ➤ Other: May have a catheter up to 3 weeks after surgery. Can use a leg bag for walking during this time. ➤ Restrictions: No heavy lifting or straining for one month or bicycle for 12 weeks. ➤ Exercise: Walking. Pelvic floor exercise after catheter is removed. <i>(See Kegel after Bladder section)</i> <p>Transurethral resection of the prostate (TURP)</p> <ul style="list-style-type: none"> ➤ Hospital Stay: 1-2 days ➤ Full Recovery: 1-2 weeks ➤ Other: Catheter for 1-3 days. ➤ Restrictions: Avoid strenuous activity, such as heavy lifting, for four to six weeks or until your doctor says it's OK. Hold off on sex for four to six weeks. <i>(Mayo Clinic - Transurethral resection of the prostate (TURP)</i> ➤ Exercise: Walking. Pelvic floor exercise after catheter is removed. <i>(See Kegel after Bladder section)</i>
<p>References</p>	<p>CETI- Cancer Exercise Training Institute https://www.thecancerspecialist.com/</p> <p>Genetics of Prostate Cancer (PDQ®)—Health Professional Version - National Cancer Institute https://www.cancer.gov/types/prostate/hp/prostate-genetics-pdq</p> <p>Mayo Clinic - Transurethral resection of the prostate (TURP) https://www.mayoclinic.org/tests-procedures/turp/about/pac-20384880</p> <p>Prostate Cancer - National Cancer Institute https://www.cancer.gov/types/prostate</p> <p>Prostate Cancer Prevention (PDQ®)—Health Professional Version - National Cancer Institute https://www.cancer.gov/types/prostate/hp/prostate-prevention-pdq</p>