



What is Prostate Cancer?

Symptoms

What Are the Symptoms of Prostate Cancer?

In its early stages, prostate cancer often has no symptoms. When symptoms do occur, they can be like those of an **enlarged prostate or BPH**. Prostate cancer can also cause symptoms unrelated to BPH. If you have urinary problems, talk with your healthcare provider about them.

Symptoms of prostate cancer can be:

- Dull pain in the lower pelvic area
- Frequent urinating
- Trouble urinating, pain, burning, or weak urine flow
- Blood in the urine (Hematuria)
- Painful ejaculation
- Pain in the lower back, hips or upper thighs
- Loss of appetite
- Loss of weight
- Bone pain

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Causes

What Causes Prostate Cancer?

No one knows why or how prostate cancer starts. Autopsy studies show 1 in 3 men over the age of 50 have some cancer cells in the prostate. Eight out of ten "autopsy cancers" found are small, with tumors that are not harmful.

Even though there is no known reason for prostate cancer, there are many risks associated with the disease.

What Are The Risk Factors for Prostate Cancer?

Age

As men age, their risk of getting prostate cancer goes up. It is rarely found in men younger than age 40. Damage to the genetic material (DNA) of prostate cells is more likely for men over the age of 55. Damaged or abnormal prostate cells can begin to grow out of control and form tumors.

Age is a well-known risk factor for prostate cancer. But, smoking and being overweight are more closely linked with dying from prostate cancer.

Ethnicity

African American men have, by far, the highest incidence of the disease. One in six African American men will get prostate cancer. African American men are more likely to get prostate cancer at an earlier age. They are also more likely to have aggressive tumors that grow quickly, spread and cause death. The reason why prostate cancer is more prevalent in African American men is unclear yet it may be due to socioeconomic, environmental, diet or other factors. Other ethnicities, such as Hispanic and Asian men, are less likely to get prostate cancer.

Family History

Men with a family history of prostate cancer also face a higher risk of also developing the disease. A man is 2 to 3 times more likely to get prostate cancer if his father, brother or son had it. This risk increases with the number of relatives diagnosed with prostate cancer. The age when a close relative was diagnosed is also an important factor.

Smoking

Studies show prostate cancer risk may double for heavy smokers. Smoking is also linked to a higher risk of dying from prostate cancer. However, within 10 years of quitting, your risk for prostate cancer goes down to that of a non-smoker the same age.

World Area

Prostate cancer numbers and deaths vary around the world but are higher in North America and Northern Europe. Higher rates may be due to better or more screening procedures, heredity, poor diets, lack of exercise habits, and environmental exposures.

Diet

Diet and lifestyle may affect the risk of prostate cancer. It isn't clear exactly how. Your risk may be higher if you eat more calories, animal fats, refined sugar and not enough fruits, vegetables. A lack of exercise is also linked to poor outcomes. Obesity (or being very overweight) is known to increase a man's risk of dying from prostate cancer. One way to decrease your risk is to lose weight, and keep it off.

Can Prostate Cancer Be Prevented?

Doing things that are "heart healthy", will also keep your prostate healthy. Eating right, exercising, watching your weight and not smoking can be good for your health and help you avoid prostate cancer.

Some healthcare providers believe drugs like finasteride (Proscar[®]) and dutasteride (Avodart[®]) can prevent prostate cancer. Others believe they only slow the development of prostate cancer. Studies do show that men taking these drugs were less likely to be diagnosed with prostate cancer. Still, it is not clear if these drugs are effective so you should talk to your doctor about the possible side effects.

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Diagnosis

How is Prostate Cancer Diagnosed?

Screening

"**Screening**" means testing for a disease even if you have no symptoms. The prostate specific antigen (PSA) blood test and digital rectal examination (DRE) are two tests that are used to screen for prostate cancer. Both are used to detect cancer early. However, these tests are not perfect. Abnormal results with either test may be due to benign prostatic enlargement (BPH) or infection, rather than cancer.

The American Urological Association (AUA) recommends talking with your healthcare provider about whether or no you should be screened. To find out if prostate cancer screening is a good idea, take our [**Know Your Stats Risk Assessment Test**](#). Tell your results to your healthcare provider when you talk about the benefits and risks of

screening.

The two main types of screenings are:

PSA Blood Test

The prostate-specific antigen (PSA) blood test is one way to screen for prostate cancer. This blood test measures the level of PSA in the blood. PSA is a protein made only by the prostate and prostate cancers. The test can be done in a lab, hospital or healthcare provider's office.

Very little PSA is found in the blood of a man with a healthy prostate. A low PSA is a sign of prostate health. A rapid rise in PSA may be a sign that something is wrong. Prostate cancer is the most serious cause of a high PSA result. Another reason for a high PSA can be benign (non-cancer) enlargement of the prostate. **Prostatitis**, inflammation of the prostate, can also cause high PSA results.

A rise in PSA level does not tell us the type of cancer cells present. The rise tells us that cancer may be present.

Talk with your healthcare provider about whether the PSA test is useful for you. If you decide to get tested, be sure to talk about changes in your PSA level with your provider. Make sure to **watch our video** on the PSA Blood test.

DRE

The digital rectal examination (DRE) helps your doctor find prostate problems. For this exam, the healthcare provider puts a lubricated gloved finger into the rectum. The man either bends over or lies curled on his side on a table. During this test, the doctor feels for an abnormal shape or thickness to the prostate. DRE is safe and easy to do. But the DRE by itself cannot detect early cancer. It should be done with a PSA test.

Who Should Get Screened?

Screening is recommended if you are a man:

- Between 55–69 years old
- African–American
- Have a family history of prostate cancer

What are the benefits and risks of screening?

The PSA test and DRE are very important tools. They help to find prostate cancer early, before it spreads. When found early, it can be treated early which helps stop or slow the spread of cancer. This is likely to help some men live longer.

A risk of a PSA test is that it may miss detecting cancer (a "false negative"). Or, the test may be a "false positive," suggesting something is wrong when you are actually healthy. A false positive result may lead to a biopsy that isn't needed. The test might also detect very slow growing cancer that will never cause problems if left untreated.

What is a Biopsy?

A **Biopsy** is a type of minor surgery. For a prostate biopsy, tiny pieces of tissue are removed from the prostate and looked at under a microscope. The pathologist is the doctor who will look carefully at the tissue samples to look for cancer cells. This is the only way to know for sure if you have prostate cancer.

The decision to have a biopsy is based on PSA and DRE results. Your doctor will also consider your family history of prostate cancer, ethnicity, biopsy history and other health factors.

Prostate biopsy is usually done using an ultrasound probe to look at the prostate and guide the biopsy. You may be given an enema and antibiotics to prevent infection. For the test, you will lie on your side as the probe goes into the rectum. First, your provider takes a picture of the prostate using ultrasound. Your healthcare provider will note the prostate gland's size, shape and any abnormalities. He/she will also look for shadows, which might signal cancer. Not all prostate cancers can be seen, and not all shadows are cancer. The prostate gland is then numbed (anesthetized) with a needle passed through the probe. Then, the provider removes very small pieces of your prostate using a biopsy device. The amount of tissue removed depends on the size of the gland, PSA results and past biopsies.

Make sure to watch our video on **Prostate Cancer Biopsy**.

If cancer cells are found, the pathologist will assign a "Gleason Score" which helps to determine the severity/risk of the disease (see **Stages** for more information).

After a biopsy, you may have blood in your ejaculate, urine and stool. This should go away fairly quickly. If not, or you get a fever, contact your doctor.

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Stages

Stages

How is Prostate Cancer Graded and Staged?

Grading (with the Gleason Score) and staging defines the progress of cancer and whether it has spread:

Grading

When prostate cancer cells are found in tissue from the core biopsies, the pathologist "grades" it. The grade is a measure of how quickly the cells are likely to grow and spread (how aggressive it is).

The most common grading system is called the Gleason grading system. With this system, each tissue piece is given a grade between three (3) and five (5). In the past, we assigned scores of one (1) and two (2). A grade of less than three (3) means the tissue is close to normal. A grade of three (3) suggests a slow growing tumor. A high grade of five (5) indicates a highly aggressive, high-risk form of prostate cancer.

The Gleason system then develops a "score" by combining the two most common grades found in biopsy samples. For example, a score of grades 3 + 3 = 6 suggests a slow growing cancer. The highest score of grades 5 + 5 = 10 means that cancer is present and extremely aggressive.

The Gleason score will help your doctor understand if the cancer is as a low-, intermediate- or high-risk disease. Generally, Gleason scores of 6 are treated as low risk cancers. Gleason scores of around 7 are treated as intermediate/mid-level cancers. Gleason scores of 8 and above are treated as high-risk cancers.

If you are diagnosed with prostate cancer, ask about your Gleason score and how it impacts your treatment decision:

Staging

Tumor stage is also measured. Staging describes where the cancer is within the prostate, how extensive it is, and if it has spread to other parts of the body. One can have low stage cancer that is very high risk. Staging the cancer is done by DRE and special imaging studies.

The system used for tumor staging is the TNM system. TNM stands for Tumor, Nodes and Metastasis. The "T" stage is found by DRE and other imaging tests such as an ultrasound, CT scan, MRI or bone scan. The imaging tests show if and where the cancer has spread, for example: to lymph nodes or bone.

These staging imaging tests are generally done for men with a Gleason grade of 7 or higher and a PSA higher than 10. Sometimes follow-up images are needed to evaluate changes seen on the bone scan.

Imaging Tests

Not all men need imaging tests. Your doctor may recommend imaging exams based on results from other tests.

Prostate cancer may spread from the prostate into other tissues. It may spread to the nearby seminal vesicles, the bladder, or further to the lymph nodes and the bones. Rarely, it spreads to the lungs and or other organs.

Your healthcare provider may recommend a pelvic **CT scan** , an **MRI scan** or a bone scan to check if your cancer has spread.

What Are The Survival Rates For Prostate Cancer?

Many men with prostate cancer will not die from it; they will die from other causes. For men who are diagnosed, it is better if it is caught early.

Survival rates for men with prostate cancer have increased over the years, thanks to better screening and treatment options. Today, 99% of men with prostate cancer will live for at least 5 years after diagnosis. Many men having treatment are cured. Most prostate cancer is slow-growing and takes many years to progress. One out of three men will survive after five years, even if the cancer has spread to other parts of the body.

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Treatment

How is Prostate Cancer Treated?

Some cancers grow so slowly that treatment may not be needed at all. Others grow fast and are life-threatening so **treatment** is usually necessary. Deciding what treatment you should get can be complex. Talk with your healthcare team about your options. Your treatment plan will depend on:

- The stage and grade of the cancer (Gleason score and TNM stage)
- Your risk category (whether the cancer is low, intermediate or high risk)
- Your age and health
- Your preferences with respect to side effects, long-term effects and treatment goals

Results from other diagnostic tests will help your provider understand if the cancer can spread or recur (return) after treatment.

Before you decide what to do, you should consider how immediate and long-term side effects from treatment will affect your life, and what you're willing to tolerate. Also, you should consider that you may try different things over time.

If you have time before you start treatment, consider your range of options. Get a second opinion from different prostate cancer experts. You may need to see another urologist, oncologist or radiation oncologist. Consider the expertise of your doctor before you begin. With more experienced surgeons, the risk of permanent side effects (like incontinence) is lower. Also, it helps to talk with other survivors and learn from their experiences.

In addition, try and get or stay healthy. Eating a well-balanced diet, maintaining a healthy weight, exercising and not smoking are all important factors when fighting prostate cancer..

Moreover, don't ignore your emotions. Think about how you're coping with this diagnosis. Many men who have prostate cancer feel worried, stressed and angry. You and those that care about you may need to consider professional counseling.

Treatment choices for prostate cancer include:

Surveillance

- **Active Surveillance**
- **Watchful Waiting**

Localized Therapy

- **Surgery**
- **Radiation Therapy**

- [Cryotherapy](#)
- [Focal Therapy](#)

Systemic Therapy

- [Hormonal Therapy](#)
- [Chemotherapy](#)
- [Immunotherapy](#)

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Clinical Trials

Clinical Trials

Clinical trials are research studies involving real patients to test if a new treatment or procedure is safe, effective and maybe better than established options. The goal is to learn which treatments work best for certain illnesses or group of people.

Clinical trials follow strict scientific standards. These standards help protect patients and produce more reliable study results.

Are you interested in participating in a clinical trial for prostate cancer? Ask your doctor if you qualify for a specific prostate cancer trial. Learn as much as you can about the benefits and risks of the study. To search for information on current clinical trials for the treatment of bladder cancer, visit the [UrologyHealth.org Clinical Trials Resource Center](#) you may also visit the National Institutes of Health website: www.clinicaltrials.gov.

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After Treatment

What Happens After Treatment?

Each year, more men are surviving prostate cancer and winning back their lives. Prostate cancer can be a manageable disease if caught early and treated appropriately.

Once you have finished treatment, it is time to manage your side effects. It is time to create a long-term schedule with your doctor for future tests. It's also time to go on with your life.

Talk to your healthcare provider about the side effects or problems you have after treatment. You and your healthcare provider can decide your best next steps.

If you haven't yet started treatment, consider the expertise of your doctor before you begin. With more experienced surgeons, the risk of permanent side effects, like incontinence, is lower.

What are the Emotional Effects Following Treatment?

After treatment, you may feel very emotional. You may also worry about cancer returning. Many men still feel anxious and unsure, or upset about treatment side effects.

Whatever you're feeling, it's important to tell your healthcare provider about it. Work together. Build a plan with your provider or a counselor to deal with your emotional health and general wellbeing.

What are The Physical Effects Following Treatment?

Erectile dysfunction and urinary incontinence are the side effects reported most often by men following prostate cancer treatment.

Erectile Dysfunction (ED) Issues After Prostate Cancer Treatment

After prostate cancer, many men experience erectile dysfunction (ED). An erection happens when sexual arousal causes nerves near the prostate to send signals. The signals cause the blood vessels in the penis to fill with blood. The blood in the vessels makes the penis erect. ED happens when this process doesn't work well (or is damaged from surgery or radiation) and a man cannot keep an erection long enough for sexual satisfaction. Your doctor can help you understand the causes of ED and therapies that could help you recover.

What Causes ED After Prostate Cancer Treatment?

Nerves involved in the erection process surround the prostate gland. Surgery may damage the nerve bundles that control blood flow to the penis, causing ED. Or, these nerves may be removed with the cancer. Radiation therapy also can damage the erectile nerves causing ED. In addition, the amount of blood flowing to the penis can decrease after treatment.

While most surgeons try to perform a nerve sparing procedure, it is not always possible.

The chance of ED after treatment depends on many things:

- Age
- Health
- Sexual function before treatment
- Stage of the cancer
- Whether the nerves that control erection were damaged after surgery or radiation.

How Long Can ED Last?

If treatment causes ED, there is still a chance for erectile function to come back over time (unless both nerves were destroyed). It may take up to 24 months or longer before you are able to have a full erection, but it is possible. Some men recover sooner. The average time for erections that allow intercourse is between 4 and 24 months. Men under age 60 have a better chance of regaining erections than older men. Even with nerve-sparing surgery, erections do not return right away or to full pre-surgery function. But, they may recover enough for sex. There are medicines and devices to treat ED.

Even with no erection, or a weak erection, men can orgasm.

Are There Treatments for ED After Prostate Cancer Treatment?

There are several treatments that can help ED. They include pills, vacuum pumps, urethral suppositories, penile injections and penile implants. Individual treatments don't work for every patient. They have their own set of side effects. A healthcare provider can talk with you about the pros and cons of each method. They can help you decide which individual or combination of treatments is right for you.

Incontinence Issues After Prostate Cancer Treatment

Incontinence can sometimes result from treatment. Incontinence is the inability to control the release of urine. After prostate cancer treatment, you may experience different types of **Incontinence**.

- **Stress Incontinence** — the most common. Urine leaks when coughing, laughing, sneezing or exercising.
- **Urge (OAB) Incontinence** — the sudden need to go to the bathroom even when the bladder is not full because the bladder is overly sensitive.
- **Mixed Incontinence** — a combination of stress and urge incontinence with symptoms from both types.

Because incontinence may affect your physical and emotional recovery, it is important to understand how to manage this problem.

How Long Will Incontinence Last?

Short-term incontinence after surgery is a common side effect. If you have stress incontinence (the most common type after surgery), you may need to wear a pad for a few weeks to months. Usually incontinence does not last long and urinary control will return. Still, it can last as long as 6 to 12 months.

Physical therapy focused on the pelvic floor may help you recover bladder control sooner. Your healthcare provider can write a prescription for the therapy. Most insurance plans will cover it.

Long-term (after 1 year) incontinence is rare. It happens in less than 5-10 percent of all surgical cases. When it does occur, there are ways to solve this problem.

Are there Treatments for Incontinence After Prostate Cancer Treatment?

Treatment for incontinence depends on the type and severity of the problem:

- Kegel Exercises - strengthen your bladder control muscles.
- Lifestyle Changes - include modifying your diet, no longer smoking, losing weight and timed visits to the bathroom can decrease urination frequency.
- Medication - affect the nerves and muscles around the bladder, helping to maintain better control.
- Neuromuscular Electrical Stimulation - strengthens bladder muscles.
- Surgery - to inject collagen to tighten the bladder sphincter, implanting a urethral sling to tighten the bladder neck, or an artificial sphincter device used to control urination.

Products - There are also many pads and products available that do not treat incontinence but help maintain a higher quality of life.

What if Prostate Cancer Returns?

Prostate cancer may return. Durable (or long-term) remission depends on the specifics of your cancer. If you'd like to learn more about how to manage advanced prostate cancer, read our [advanced prostate cancer article](#).

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More Information

More Information

Questions to Ask Your doctor

Diagnosis:

- What is my Gleason score, the grade and the stage of my cancer?
- How aggressive is this cancer? Is it likely that my cancer will spread? (Has it spread?)
 - If the cancer has spread, where?
- Do I need more tests now?
- What type of schedule should I be on to track changes with this cancer?

Treatment:

- What are my treatment choices (including surveillance, localized therapy or systemic therapy)?
 - What are the advantages and disadvantages of each?
 - What are the time considerations and costs for each?
 - What is your experience with each option?
 - Would I have to go somewhere special to get treatment?
- Why do you recommend one type of therapy over another?
- What are the chances for each treatment to manage my cancer and for how long?
- What are the chances of complications from each treatment?
 - What kinds of complications are likely from each?
 - When are they likely to occur?

- What if I choose no treatment (watchful waiting or active surveillance)?
 - How often will I need to take follow-up tests?
- If I use hormone therapy, what type do you suggest and why?
 - How would we manage potential side effects from hormone therapy?
- What are the chances that my cancer will return after treatment - and if it does, what options for treatment do I have then?
- Can we develop a short and long-term plan for my care?
- Is there someone you would recommend for another opinion?

Side Effects & Recovery:

- What are the potential side effects of the treatment you recommend: both immediately and in the long term?
- How can I manage side effects?
 - How would we manage potential urinary dysfunction and for how long?
 - How would we manage potential erectile dysfunction and for how long?
 - What other side effects should I consider?
- How much recovery time will be required after surgery?
- Will I need to take time off from work or other activities to manage treatment and treatment side effects?

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