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# Prostate cancer

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## Overview

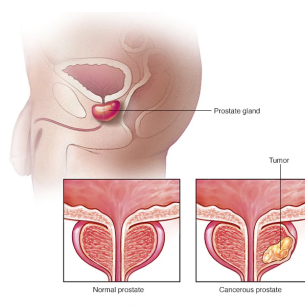
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Prostate cancer is cancer that occurs in the prostate — a small walnut-shaped gland in men that produces the seminal fluid that nourishes and transports sperm.

Prostate cancer is one of the most common types of cancer in men. Usually prostate cancer grows slowly and is initially confined to the prostate gland, where it may not cause serious harm. However, while some types of prostate cancer grow slowly and may need minimal or even no treatment, other types are aggressive and can spread quickly.

Prostate cancer that's detected early — when it's still confined to the prostate gland— has a better chance of successful treatment.



### Prostate cancer

Prostate cancer occurs in the prostate gland, which is located just below a male's bladder and surrounds the top portion of the tube that drains urine from the bladder (urethra). This illustration shows a normal prostate gland and a prostate with a tumor.

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## Symptoms

Prostate cancer may cause no signs or symptoms in its early stages.

Prostate cancer that's more advanced may cause signs and symptoms such as:

- Trouble urinating
- Decreased force in the stream of urine
- Blood in semen
- Discomfort in the pelvic area
- Bone pain
- Erectile dysfunction

## When to see a doctor

Make an appointment with your doctor if you have any signs or symptoms that worry you.

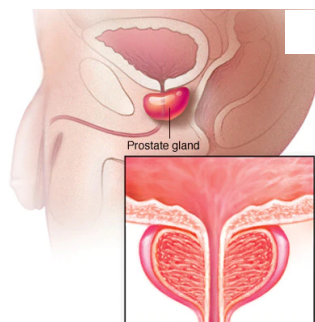
Debate continues regarding the risks and benefits of prostate cancer screening, and medical organizations differ on their recommendations. Discuss prostate cancer screening with your doctor. Together, you can decide what's best for you.

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## Causes

It's not clear what causes prostate cancer.

Doctors know that prostate cancer begins when some cells in your prostate become abnormal. Mutations in the abnormal cells' DNA cause the cells to grow and divide more rapidly than normal cells do. The abnormal cells continue living, when other cells would die. The accumulating abnormal cells form a tumor that can grow to invade nearby tissue. Some abnormal cells can also break off and spread (metastasize) to other parts of the body.



### Prostate gland

The prostate gland is located just below the bladder in men and surrounds the top portion of the tube that drains urine from the bladder (urethra).

The prostate's primary function is to produce the fluid that nourishes and transports sperm (seminal fluid).

## Risk factors

Factors that can increase your risk of prostate cancer include:

- **Age.** Your risk of prostate cancer increases as you age.

- **Race.** For reasons not yet determined, black men carry a greater risk of prostate cancer than do men of other races. In black men, prostate cancer is also more likely to be aggressive or advanced.
- **Family history.** If men in your family have had prostate cancer, your risk may be increased. Also, if you have a family history of genes that increase the risk of breast cancer (BRCA1 or BRCA2) or a very strong family history of breast cancer, your risk of prostate cancer may be higher.
- **Obesity.** Obese men diagnosed with prostate cancer may be more likely to have advanced disease that's more difficult to treat.

## Complications

Complications of prostate cancer and its treatments include:

- **Cancer that spreads (metastasizes).** Prostate cancer can spread to nearby organs, such as your bladder, or travel through your bloodstream or lymphatic system to your bones or other organs. Prostate cancer that spreads to the bones can cause pain and broken bones. Once prostate cancer has spread to other areas of the body, it may still respond to treatment and may be controlled, but it's unlikely to be cured.
- **Incontinence.** Both prostate cancer and its treatment can cause urinary incontinence. Treatment for incontinence depends on the type you have, how severe it is and the likelihood it will improve over time. Treatment options may include medications, catheters and surgery.
- **Erectile dysfunction.** Erectile dysfunction can result from prostate cancer or its treatment, including surgery, radiation or hormone treatments. Medications, vacuum devices that assist in achieving erection and surgery are available to treat erectile dysfunction.

## Prevention

You can reduce your risk of prostate cancer if you:

- **Choose a healthy diet full of fruits and vegetables.** Avoid high-fat foods and instead focus on choosing a variety of fruits, vegetables and whole grains. Fruits and vegetables contain many vitamins and nutrients that can contribute to your health.

Whether you can prevent prostate cancer through diet has yet to be conclusively proved. But eating a healthy diet with a variety of fruits and vegetables can improve your overall health.

- **Choose healthy foods over supplements.** No studies have shown that supplements play a role in reducing your risk of prostate cancer. Instead, choose foods that are rich in vitamins and minerals so that you can maintain healthy levels of vitamins in your body.
- **Exercise most days of the week.** Exercise improves your overall health, helps you maintain your weight and improves your mood. There is some evidence that men who don't exercise have higher PSA levels, while men who exercise may have a lower risk of prostate cancer.

Try to exercise most days of the week. If you're new to exercise, start slow and work your way up to more exercise time each day.

- **Maintain a healthy weight.** If your current weight is healthy, work to maintain it by exercising most days of the week. If you need to lose weight, add more exercise and reduce the number of calories you eat each day. Ask your doctor for help creating a plan for healthy weight loss.
- **Talk to your doctor about increased risk of prostate cancer.** Men with a high risk of prostate cancer may consider medications or other treatments to reduce their risk. Some studies suggest that taking 5-alpha reductase inhibitors, including finasteride (Propecia, Proscar) and dutasteride (Avodart), may reduce the overall risk of developing prostate cancer. These drugs are used to control prostate gland enlargement and hair loss in men.

However, some evidence indicates that men taking these medications may have an increased risk of getting a more serious form of prostate cancer (high-grade prostate cancer). If you're concerned about your risk of developing prostate cancer, talk with your doctor.

By Mayo Clinic Staff

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Diagnosis & treatment

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