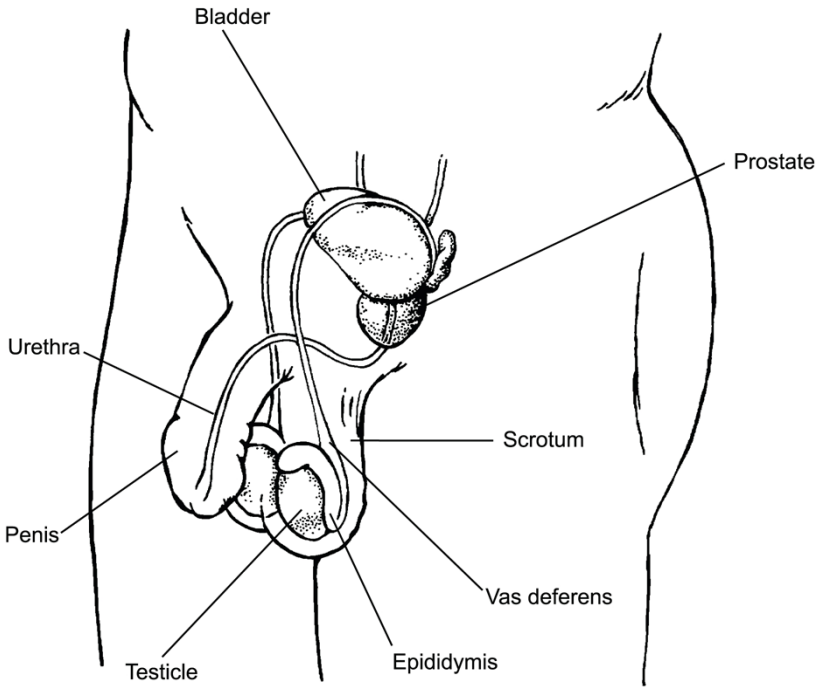
Do I Have Testicular Cancer?

Men who develop lumps, swelling, or pain in their groin or scrotum may be worried they have testicular cancer. Here we describe the symptoms of testicular cancer and some other problems that may cause symptoms in this part of the body. We also include information on how to do a testicular self-exam for men who want to do so.

This is not meant to be a complete guide to testicular symptoms, nor is it meant to give medical advice or replace the expertise and judgment of a doctor. If you notice any changes in your testicles, you should see a doctor so that the cause can be found and treated, if needed.

The testicles

The testicles are a part of the male reproductive system. They are also called the *testes*; one testicle is called a *testis*. In adult males, these 2 organs are each normally somewhat smaller than a golf ball. They are contained within a sac of skin called the *scrotum*, which hangs beneath the base of the penis.



The testicles have 2 main functions:

- They make male hormones (androgens) such as testosterone.
- They make sperm, the male cells needed to fertilize a female's egg to start a pregnancy.

Sperm cells form inside the testicle and are then stored in the *epididymis*, a small coiled tube behind each testicle, where they mature.

During ejaculation (orgasm), sperm cells travel from the epididymis through the *vas deferens* to the *seminal vesicles*, where they mix with fluids made by the vesicles, the prostate gland, and other glands to form semen. This fluid then travels through the *urethra* and out of the body through the tip of the penis.

Signs and symptoms of testicular problems

Like other parts of the body, testicles can be affected by certain conditions and diseases, which can lead to symptoms (changes that you notice). The most common signs and symptoms in the testicles and scrotum are:

- Lumps (masses)
- Swelling
- Pain

Some conditions that affect the testicles can also cause a heavy or aching feeling in the lower belly (abdomen), or can even cause nausea and vomiting.

Cancer is one possible cause of testicular symptoms, but more often these symptoms are caused by infection, injury, or something else. It's important to see a doctor about any changes you notice in your testicles as soon as possible. Even conditions other than cancer can still be serious and may need to be treated.

Possible symptoms of testicular cancer

You can't be sure you have testicular cancer based on symptoms alone, so it's important to see a doctor about any testicular symptoms that concern you. Don't wait.

Symptoms in the testicles

The most common symptom of testicular cancer is a painless lump on a testicle. Sometimes the testicle may become swollen or larger, without a lump. (It's normal for one testicle to be slightly larger than the other, and for one to hang lower than the other.) Some testicular tumors might cause pain, but most of the time they do not. Men with testicular cancer may also have a heavy or aching feeling in the lower belly or scrotum.

Each normal testicle has an epididymis, a small, coiled tube that can feel like a small bump on the upper or middle outer side of the testicle. Normal testicles also contain blood vessels, supporting tissues, and tubes that carry sperm. All these things can feel bumpy, and sometimes men confuse these normal structures with cancer. If you have any doubts, ask a doctor.

Symptoms in other parts of the body

Breast growth or soreness: In rare cases, testicular cancers can cause men's breasts to grow or become sore. This is because certain types of testicular cancer can make high levels of hormones that develop the breasts. Some men might also notice a loss of sexual desire.

Early signs of puberty in boys: Some testicular cancers make androgens (male sex hormones). This may not cause any specific symptoms in men, but in boys it can cause signs of puberty, such as a deepening of the voice and the growth of facial and body hair, abnormally early.

Symptoms of testicular cancer that has spread (advanced cancer)

If testicular cancer is not found early, it can spread to other parts of the body. Even when testicular cancer has spread, many men still have no symptoms. But some men might have some of the following symptoms:

- If the cancer has spread to the lymph nodes (bean-sized collections of immune cells) in back of the belly, they can grow larger and press on nearby structures, which might cause low back pain.
- If the cancer has spread to the lungs, problems like shortness of breath, chest pain, or a cough (even coughing up blood) may develop.
- Some cancers might cause belly pain, either from enlarged lymph nodes or because it has spread to the liver.
- In rare cases, testicular cancer spreads to the brain and can cause headaches or confusion.

Other causes of testicular or scrotal symptoms

Problems other than cancer can also cause symptoms in the testicles or scrotum. Here are some of the more common causes of testicular symptoms, but they are not the only ones. Because it's hard to figure out the cause based on symptoms alone, it's important to have any testicular or scrotal change looked at by a health care professional.

Torsion of the testicle

In this condition, one of the testicles gets twisted inside the scrotum. This cuts off the blood supply to the testicle, epididymis, and other structures, leading to sudden, severe pain in the scrotum along with swelling and redness. It can also cause belly pain or nausea and vomiting.

Testicular torsion occurs most often in teen boys, but may occur later in life.

Testicular torsion is an emergency that needs to be treated right away. Treatment is surgery to untwist the testicle, which restores the blood supply. If the torsion isn't treated right away (within about 6 hours), the testicle can die and will have to be removed. If it isn't removed soon enough, it can even cause problems with the other testicle.

Injury

Physical injury can cause pain to the area right way, or it may cause slowly worsening pain and swelling later on as the scrotum swells or fills with blood (known as a *hematocele*). Sometimes treatment may be needed to stop the bleeding, but the problem may get better on its own.

A testicular injury can be very painful, but it does not cause cancer.

Infection

Infections in the scrotal area are usually caused by bacteria or viruses.

Epididymitis is inflammation of the epididymis, the coiled tube next to each testicle that stores sperm. This can be caused by a sexually transmitted infection, but it can also be caused by other types of infection. Slowly developing pain and swelling on one side of the scrotum are common symptoms. The pain may spread to the side or back. Pain when passing urine is also common. You may have a fever and a milky discharge from the penis. If the infection is caused by bacteria, treatment with antibiotics will cause the symptoms to go away completely. But if these problems last after you have taken antibiotics, you need to go back to the doctor.

Orchitis happens when the testicle(s) becomes inflamed. It can cause painful swelling in one or both testicles. Viral infections (like mumps) are common causes of orchitis. About 1 in 5 men who has mumps as an adult will have orchitis in one or both testicles. This was much more common before children started getting a vaccine against the mumps virus.

Hydrocele

Sometimes a testicle can become enlarged because fluid has collected around it. This is called a *hydrocele*. It's usually painless unless it grows too large. Sometimes the pain can spread to the lower belly or back. Hydroceles can have many causes. They are usually harmless and rarely need to be treated.

Varicocele

In this condition, the veins within the scrotum get very large (*dilate*). This can cause swelling and lumpiness around the testicle. It has been described as the scrotum feeling like a "bag of worms." It's usually painless, but it may cause a feeling of heaviness in the scrotum. Varicoceles do not usually need to be treated.

Epididymal cyst/spermatocele

This is a fluid-filled sac much like a hydrocele, but the fluid inside contains sperm cells. It's usually a small, painless lump in the scrotum that is not connected to the testicle. These cysts are very common, and rarely need to be treated.

Inguinal hernia

Hernias are caused by defects in the muscles of the lower belly (the abdominal wall). These defects can allow structures in the belly, such as a loop of intestine, to enter the scrotum. There may be a slight lump or bulge in the groin or scrotum. The lump from a hernia may be easier to see or feel when standing up. It's sometimes painful, especially when bending over, lifting something heavy, coughing, or straining to pass urine or have a bowel movement.

Most of the time a hernia isn't dangerous, but your doctor might recommend surgery to repair it, especially if it is painful or getting larger. Surgery can help prevent a problem called *strangulation*. This is when a part of the intestine gets trapped in the groin, cutting

off its blood supply. This causes severe pain, nausea, and vomiting, and needs to be treated right away because it can be life threatening.

Kidney stones

Kidney stones are small crystals that form in the kidneys and can become lodged in the tubes leading to the bladder (the *ureters*). They can cause severe pain, most often in the back or belly. This pain can extend down to the scrotum. Many men also have nausea and vomiting. Blood is often found in the urine, but it might not be seen with the naked eye. Large stones may need to be removed using surgery or other procedures.

Some facts about testicular cancer

Cancer of the testicle can develop in one or both testicles in males of any age, including infants and elderly men. Almost half of all cases of testicular cancer are in men between the ages of 20 and 34.

Testicular cancer is not common; a man's lifetime chance of getting it is about 1 in 270. The risk of dying from this cancer is about 1 in 5,000.

Testicular cancer can be treated and usually cured, especially when it's found early. If you have any possible signs or symptoms of testicular cancer, see a doctor right away. You might not have testicular cancer, but if you do, the sooner you start treatment, the more likely it is to work. For more information, see our document *Testicular Cancer*.

What increases your risk for testicular cancer?

A *risk factor* is anything that affects your chance of getting a disease such as cancer. Different cancers have different risk factors. Some risk factors, like smoking, can be changed. Others, like a person's age or family history, can't be changed. But having a risk factor, or even many, does not mean that you will get the disease.

Scientists have found few risk factors that are linked to a higher risk of testicular cancer. Because this cancer is not common, a small increase in risk still makes the chance of ever getting it low. Even if a man has one or more risk factors for this disease, there's no way to know for sure how much they contributed to developing the cancer. Most boys and men with testicular cancer do not have any known risk factors.

Undescended testicle

One of the main risk factors for testicular cancer is a condition called *cryptorchidism*, or undescended testicle(s). This means that one or both testicles fail to move from the abdomen (belly) into the scrotum before birth. Males with cryptorchidism are several times more likely to get testicular cancer than those with normally descended testicles.

Normally, the testicles develop inside the belly of the fetus, and move down into the scrotum before birth. But in about 3% of boys, the testicles do not make it all the way

down before the child is born. Sometimes the testicle stays in the belly. In other cases, the testicle starts to descend but gets stuck in the groin area.

Most of the time, undescended testicles keep moving down into the scrotum during the child's first year of life. If the testicle has not fully descended by the time a child is a year old, it probably won't go down on its own. Sometimes a surgery called *orchiopexy* is needed to bring the testicle down into the scrotum.

The risk of testicular cancer may be somewhat higher for men whose testicle stayed in the abdomen as opposed to one that has descended at least partway. If cancer does develop, it's usually in the undescended testicle, but about 1 out of 4 cases occur in the normally descended testicle. Because of this, some doctors conclude that cryptorchidism doesn't actually cause testicular cancer but that there's something else that leads to both testicular cancer and abnormal positioning of one or both testicles.

Orchiopexy may reduce the risk of testicular cancer if it's done when a child is younger, but it's not as clear if it helps if the child is older. The best time to do this surgery is not clear. Experts in the United States recommend that orchiopexy be done soon after the child's first birthday for reasons (such as fertility) that are not related to cancer.

Family history

Men with testicular cancer in their families have a higher risk. If a man has the disease, there is an increased risk that his brothers or sons will also develop it. But this covers only a small portion of cases. Most men with testicular cancer don't have it in the family.

Cancer of the other testicle

A man who has had testicular cancer is at higher risk of having it again. About 3% or 4% of men who have been cured of cancer in one testicle will at some time develop cancer in the other testicle.

Carcinoma in situ

Carcinoma in situ (CIS) of the testicles is a non-invasive overgrowth of cells in the testicle that may progress to cancer. CIS does not usually cause a lump in the testicles or any other symptoms.

It isn't clear how often CIS in the testicles progresses to cancer. In some cases, CIS is found in men who have a testicular biopsy to evaluate infertility or have a testicle removed because of cryptorchidism. Doctors in Europe are more likely than the doctors in this country to look for CIS. This may be why the figures for diagnosis and progression of CIS to cancer are lower in the US than in parts of Europe.

Since we don't know how often CIS becomes true (invasive) cancer, it isn't clear if treating CIS is a good idea. Some experts think it might be better to wait and see if the disease gets worse or becomes a true cancer. This could allow many men with CIS to

avoid the risks and side effects of treatment. When CIS is treated, radiation or surgery (to remove the testicle) is used.

Age

Testicular cancer can affect males of any age, but almost half of cases of are found in men between the ages of 20 and 34.

Race and ethnicity

The risk of testicular cancer among white men is about 4 to 5 times that of black men, and more than 3 times that of Asian American men. The risk for Latinos and American Indians falls between that of Asian and white men. The reason for these differences is not known. Worldwide, the risk of developing this disease is highest among men living in the United States and Europe. It's lowest among men living in Africa or Asia.

HIV infection

Some research has shown that men infected with the human immunodeficiency virus (HIV), particularly those with AIDS, have an increased risk. No other infections have been shown to increase testicular cancer risk.

Body size

Several studies have found that the risk of testicular cancer is somewhat higher in tall men, but some other studies have not. Most studies have not found a link between testicular cancer and body weight.

Unproven or controversial risk factors

Prior injury to the testicles and repetitive actions such as horseback riding do not appear to be related to the development of testicular cancer.

Most studies have not found that strenuous physical activity increases testicular cancer risk. Being physically active has been linked with a lower risk of several other forms of cancer as well as a lower risk of many other health problems.

Testicular self-exam

Most testicular cancers can be found at an early stage. In some men, early testicular cancers cause symptoms that lead them to seek medical attention. Most of the time a lump on the testicle is the first sign or the testicle might be swollen or larger than normal. But some testicular cancers might not cause symptoms until they have grown quite large and/or have spread to other parts of the body.

Most doctors agree that checking a man's testicles should be part of a general physical exam. The American Cancer Society (ACS) recommends a testicular exam by a doctor as part of a routine cancer-related check-up.

The ACS advises men to be aware of testicular cancer and to see a doctor right away if they find a lump on a testicle. Regular testicular self-exams have not been studied enough to show if they lower the risk of dying from this cancer. This is why the ACS does not have a recommendation about regular testicular self-exams for all men. Still, some doctors recommend that all men examine their testicles monthly after puberty.

Men with risk factors, such as an undescended testicle, previous testicular cancer, or a family member who has had this cancer should seriously think about monthly self-exams. If you have risk factors, talk it over with a doctor. Each man has to decide for himself whether to examine his testicles each month.

Here are instructions on how to do it if you decide self-exam is right for you.

How to do testicular self-exam

The best time to do the self-exam is during or after a bath or shower, when the skin of the scrotum is relaxed. To do a testicular self-exam:

- Hold your penis out of the way and check one testicle at a time.
- Hold the testicle between your thumbs and fingers of both hands and roll it gently between your fingers.
- Look and feel for any hard lumps or smooth rounded bumps or any change in the size, shape, or consistency of the testicles.

It's normal for one testicle to be slightly larger than the other, and for one to hang lower than the other. You should also know that each normal testicle has an epididymis, a small, coiled tube that can feel like a small bump on the upper or middle outer side of the testicle. Normal testicles also have blood vessels, supporting tissues, and tubes that carry sperm. Some men may confuse these with abnormal lumps at first. If you have any concerns, ask your doctor.

A testicle can get larger for many reasons other than cancer. Other non-cancerous problems, such as hydroceles and varicoceles (described in the section, "Other causes of testicular or scrotal symptoms"), can sometimes cause swellings or lumps around a testicle. It's easy to confuse these with a tumor. If you have any doubts, see a doctor.

If you choose to check your testicles, in time you will learn what's normal for you and will be able to tell when something is different.

What if you find something different?

If you find something unusual or something you're not sure about, either during a self-exam or at any other time, see a doctor right away.

The doctor will ask if you're having any symptoms (such as pain) and how long you've had them. During a physical exam, the doctor will feel the testicles for swelling or tenderness and for the size and location of any lumps. The doctor might also examine your abdomen (belly), groin area, and other parts of your body, looking for any possible signs of cancer spread.

If anything abnormal is found, the doctor may use an ultrasound to look inside the scrotum. This is an easy and painless way of finding out whether there's a tumor or another problem in the testicles. Other tests might be done as well. (For more details on the tests doctors use to diagnose testicular cancer, see our document *Testicular Cancer*.)

Additional resources

More American Cancer Society information

Here is more information you might find helpful. You also can order free copies of our documents from our toll-free number, 1-800-227-2345, or read them on our website, www.cancer.org.

Prevention Checklist for Men

Testicular Cancer Detailed Guide (also in Spanish)

Testicular Cancer Overview (also in Spanish)

Your American Cancer Society also has books that you might find helpful. Call us at 1-800-227-2345 or visit our bookstore online at cancer.org/bookstore to find out about costs or to place an order.

National organizations and websites*

Along with the American Cancer Society, other sources of information and support include:

National Cancer Institute
Toll-free number: 1-800-422-6237 (1-800-4-CANCER)
TTY: 1-800-332-8615
Website: www.cancer.gov

> Offers a wide variety of free, accurate, up-to-date information about cancer to patients, their families, and the general public

Planned Parenthood Federation of America, Inc. (PPFA)
Toll-free number: 1-800-230-7526
Website: www.plannedparenthood.org

> Offers information on how to do testicular self-exams, signs and symptoms of problems, and treatment of testicular cancer

Prevent Cancer Foundation (PCF)
Toll-free number: 1-800-227-2732
Website: www.preventcancer.org

> Provides easy-to-understand information about testicular cancer and suggests ways to lower cancer risk

The Testicular Cancer Resource Center
Website: http://tcrc.acor.org

> Offers general information and support, lists testicular cancer experts, and posts research and study opportunities

**Inclusion on this list does not imply endorsement by the American Cancer Society.*

No matter who you are, we can help. Contact us anytime, day or night, for information and support. Call us at **1-800-227-2345** or visit www.cancer.org.

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