Do I Have Testicular Cancer?

Men who develop lumps, swelling, or pain in the groin or scrotal area may be worried they have testicular cancer. Here we will 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. Men having any testicular symptoms should see a doctor so that the cause can be found and treated, if needed.

What are 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 make male hormones, mostly testosterone. They also make sperm. Sperm cells go from the testicle to a coiled tube inside the scrotum (the epididymis) where they are stored. Sperm travel from the epididymis through the vas deferens to the seminal vesicles, where they are mixed with fluid from the prostate gland. During ejaculation, sperm cells, seminal vesicle fluid, and prostatic fluid enter the urethra and go out the tip of the penis. The urethra is the tube in the center of the penis through which urine or semen leaves the body.

**Signs and symptoms of testicular problems**

Like other parts of the body, the testicles can be affected by certain conditions and diseases, which can lead to symptoms. 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 is important to see a doctor about any changes you notice in your testicles as soon as possible. This way the cause can be found and treated, if needed. Other conditions (besides cancer) that affect the testicles can still be serious and need to be treated.
If you're reading this, your main concern is probably whether you have testicular cancer. This is why symptoms of testicular cancer will be discussed first. Then we will talk about some of the other, non-cancer causes of testicular symptoms.

**Common symptoms of early testicular cancer**

You can't be sure whether or not you have testicular cancer based on symptoms alone, so it is important to see a doctor about any testicular symptoms that bother you. Don't wait. (For more details on the tests doctors may use to diagnose testicular cancer, call us for a copy of our document called *Testicular Cancer* or find it on www.cancer.org.)

The most common symptom of testicular cancer is a painless lump on a testicle. In some cases the lump is uncomfortable, but severe pain is rare. Sometimes the testicle may be enlarged or swollen without a lump. Men with testicular cancer may also have a heavy or aching feeling in the lower belly or scrotum.

Each normal testicle has an epididymis, which feels like a small bump on the upper or middle outer side of the testis. Normal testicles also contain blood vessels, supporting tissues, and tubes that carry sperm (see the drawing in the section, “What are testicles?”). All these things can feel bumpy, and sometimes men confuse these structures with cancer. If you have any doubts, ask a doctor. The doctor may get an ultrasound test to look inside the scrotum. (To learn more, see our document called *Testicular Cancer*) This is an easy and painless way of finding out whether there is a tumor.

**Symptoms of testicular cancer that has spread (advanced cancer)**

Even when testicular cancer has spread outside the testicle (called metastasis), many men have no symptoms from the metastases before the cancer is diagnosed. If the cancer has spread to the lymph nodes in back of the belly (called retroperitoneal lymph nodes), it may cause low back pain or belly pain. Normally, lymph nodes are small, bean-shaped collections of immune system tissue. Cancer can spread to lymph nodes and cause them to enlarge. If the cancer has spread to the lungs, problems like shortness of breath, chest pain, or cough (even coughing up blood) may develop. In rare cases, testicular cancer spreads to the brain and can cause headaches or confusion.

**Types of testicular cancer and the symptoms they can cause**

There are different types of testicular cancer. Certain types can cause symptoms in other parts of the body, too.

**Germ cell tumors**

Germ cell tumors are the most common type of testicular cancer. They start in the cells that make sperm. The 2 main types of male germ cell cancers are seminoma and non-seminoma. There are many sub-types of non-seminoma. Often, tumors contain a mixture of both seminoma and non-seminoma. The most common symptom of a testicular germ
cell tumor is a lump on the testicle. These tumors sometimes make a hormone called human chorionic gonadotropin (HCG). A very high level of HCG can cause a man’s breasts to grow larger or become tender.

**Stromal tumors**

Cancer can also develop in the supportive and hormone-producing tissues, or stroma, of the testicles. These tumors are known as gonadal stromal tumors. These are much less common than testicular germ cell tumors. The 2 main types are Leydig cell tumors and Sertoli cell tumors.

Leydig cell tumors start in the Leydig cells that normally make male sex hormones. This type of tumor can make androgens (male sex hormones) or estrogens (female sex hormones) leading to certain symptoms:

- **Estrogen-producing tumors**: In men these tumors can cause loss of sexual desire or make the breasts grow.
- **Androgen-producing tumors**: These might not cause symptoms in men, but in boys they can cause growth of facial and body hair at an abnormally early age.

Sertoli cell tumors develop from normal Sertoli cells, which support and nourish the sperm-producing germ cells. These tumors do not make hormones, and again the main symptom is a testicular lump.

**Other causes of testicular or scrotal symptoms**

Problems other than cancer may also cause symptoms in the testicles or scrotum. Once again, it is important to see a doctor if you have changes in your testicles.

**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 symptoms of sudden, severe pain in the scrotum along with swelling and redness. Some men also have belly pain or nausea and vomiting. Testicular torsion is an emergency that needs to be treated right away. This condition is diagnosed by ultrasound of the scrotum. Treatment is surgery to untwist the testicle, which restores the blood supply. If the torsion isn’t treated right away (within the first 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. Testicular torsion occurs most often in teen boys, but may occur later in life.

**Injury**

Physical injury can cause pain to the area right way, or may cause slowly worsening pain and swelling later on as the scrotum fills with blood (this is known as a hematocoele). 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 is most often caused by an infection, such as those which are transmitted through sex, but it can also be caused by other types of infection, as well. Slowly developing pain and swelling on one side of the scrotum are common. The pain may spread to the side or back. Pain when passing urine is also common. You may notice fever and a milky discharge from the penis. If the infection is caused by bacteria, treatment with antibiotics will cause the pain, swelling, and other symptoms to go away completely. If these problems last, 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 gets mumps as an adult will have orchitis in one or both testicles, which can lead to problems with fertility. 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 is usually painless unless it grows too large. Sometimes the pain can spread to the lower belly or back. Hydroceles are usually harmless and rarely need to be treated.

**Varicocele**

In this condition, the veins within the scrotum can 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 is usually painless, but 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 is 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 allow structures in the belly (abdomen), such as a piece 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 the man stands up or lifts something heavy. It is sometimes painful, especially when the man strains to pass urine or have bowel movement.
Most of the time a hernia isn't dangerous, but it becomes more serious if a problem called *strangulation* develops. 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. Surgery is needed to correct this right away to prevent much more serious problems.

**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 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 may not be seen with the naked eye. Large stones may need to be removed using surgery or other procedures.

These are the more common causes of testicular symptoms, but they are not the only ones. Because it is hard to figure out the cause based on symptoms alone, it is important to have any testicular or scrotal change looked at by a health care professional.

**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 is found early. If you have any of the signs or symptoms described above, see a doctor right away. You may 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 called *Testicular Cancer*.

**What factors increase 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. For example, exposing skin to strong sunlight is a risk factor for skin cancer. Smoking is a risk factor for many cancers. Age is also a risk factor for many cancers. 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. But because this cancer is rare, even a small increase in risk still makes the chance of ever getting it low. And if a man has one or more risk factors for this disease, there is no way to know for sure how much they contributed to developing the cancer. Most 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 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 into the scrotum before birth. But in about 3% of boys (1 in 33), 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.

Men who have had an undescended testicle have a higher risk of testicular cancer. 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. Most cancers develop in the undescended testicle, but about 1 out of 4 cases occur in the normally descended testicle. Based on these observations, some doctors conclude that cryptorchidism doesn't actually cause testicular cancer but that there is something else that leads to both testicular cancer and abnormal positioning of one or both testicles.

Orchiopexy done when a child is younger may be more likely to reduce the risk of testicular cancer than surgery that is done when the child is older. Still, the best time to do this surgery to reduce the risk of testicular cancer 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 only about 3% of testicular cancer cases are actually found to run in families, so most men are unlikely to pass this disorder on to their children. 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 an overgrowth of cells that may progress to cancer. This condition does not usually produce a tumor or cause any symptoms. It isn't clear how often carcinoma in situ (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 United States than in parts of Europe. Since we don’t know how often CIS becomes true (invasive) cancer, it isn’t clear that treating CIS is a good idea. Some experts think that it may 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. Radiation or surgery (to remove the testicle) is used to treat CIS.

**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 5 times that of black men, and more than 3 times that of Asian Americans and American Indians. The risk for Latinos 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 is 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**

Some studies have found that the risk of testicular cancer is somewhat higher in tall men, but other studies have not.
Testicular self-exam

Who should do testicular exams?

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 a lump is found. Regular testicular self-exams have not been studied enough to show if they reduce the death rate from this cancer. This is why the ACS does not make recommendations about regular testicular self-exams for all men. Still, some doctors recommend that all men do monthly testicular self-exams 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 risks, 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 it's 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 testes.

You should know that each normal testis has an epididymis, which feels like a small "bump" on the upper or middle outer side of the testis. Normal testicles also contain blood vessels, supporting tissues, and tubes that conduct sperm. 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 cancer. If you have any doubts, see a doctor.

If you choose to check your testicles, you will learn what is normal for you and be able to tell when something is different. Always report any changes to a doctor right away.
Additional resources

More American Cancer Society information

The following information may also be helpful to you. These materials may be ordered from our toll-free number, 1-800-227-2345.

Prevention Checklist for Men

Testicular Cancer Detailed Guide (also available in Spanish)

Testicular Cancer Overview (also available in Spanish)

National organizations and Web sites*

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)
Web site: www.cancer.gov

For accurate, up-to-date information about cancer for patients, their families, and others

**Planned Parenthood Federation of America, Inc. (PPFA)**
Toll-free number: 1-800-230-7526
Web site: 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**
Toll-free number: 1-800-227-2732
Web site: www.preventcancer.org

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

**The Testicular Cancer Resource Center**
Web site: 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.
References


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