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Urology Care FOUNDATION™

Peyronie's Disease

What is Peyronie's Disease?

Peyronie's disease is where plaques (segments of flat scar tissue) form under the skin of the penis. These plaques can cause the penis to bend or become indented during erections. The plaques can often be felt through the skin and can be painful.

How Does the Penis Normally Work?

The main roles of the penis are to carry urine and sperm out of the body. There are 3 tubes inside the penis. One is called the *urethra*. It is hollow and carries urine from the bladder through the penis to the outside. The other 2 tubes are called the *corpora cavernosa*. These are soft, spongy tubes that fill with blood to make the penis stiff during an erection. The 3 tubes are wrapped together by a very tough fibrous sheath called the *tunica albuginea*. During sex, the stiffness of the penis makes it hard enough for sex. Then the urethra acts as a channel to carry semen into the vagina.

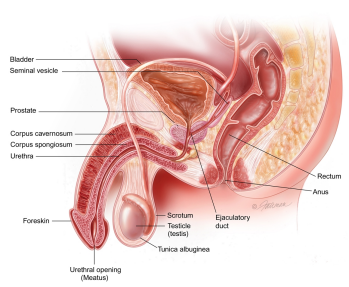

Diagram of the Male Reproductive System

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Symptoms

Peyronie's disease plaques mostly (70% of the time) form on the top (or dorsal side) of the penis. The plaques make the tunica albuginea less flexible and may cause the penis to bend upwards when it stiffens. When plaques form on the bottom or side of the penis, the bend will be downward or sideways. Some men have more than one plaque, which may cause complex curves.

Sometimes plaques form that go all the way around the penis. These plaques most often do not cause curving but may cause the shaft of the penis to narrow like the neck of a bottle. This is sometimes called "bottle-necking" or "waisting". In bad cases, the plaque may collect calcium and become very hard, almost like a bone. Men may also notice their penis has shrunk or gotten shorter.

Other signs that you may have Peyronie's disease are:

- bent/curved penis
- lumps in the penis
- painful erections
- soft erections
- having trouble with sex because of a bent/curved penis

Peyronie's disease can make your quality of life worse. Over 75 out of 100 men with Peyronie's disease are stressed and depressed because of it. Unfortunately, many men with Peyronie's disease are embarrassed and choose to suffer in silence rather than get help.

How Common is Peyronie's Disease?

Peyronie's disease is thought to happen in about 4 out of 100 men between the ages of 40 and 70. It is rare in young men but has been seen in men in their 30s. The number of cases may be higher than the estimates because many men may be embarrassed and choose not to see their health care provider.

Interestingly, more Peyronie's disease cases have been noted in recent years. This may be because new drugs for erectile dysfunction (ED) have come to market and health care providers may notice Peyronie's disease in men seeking help for ED. For this reason, the number of Peyronie's disease cases reported may keep growing.

Causes

Peyronie's disease is likely caused by minor injury to the penis. (See penile trauma.) This type of damage is most often caused by vigorous sex (such as bending the penis during penetration or pressure from a partner's pubic bone), though it can also be caused by sports or other accidents. Injury to the tunica albuginea may result in scar tissue forming in the cells (fibrosis). This scar tissue then forms the plaque of Peyronie's disease. Peyronie's disease is the result of a problem in the way the body heals wounds.

Stages of Peyronie's

Peyronie's disease is often split into 2 stages: the **acute phase** and the **chronic phase.** During both phases, the bent/curved penis may cause problems with sex. You also may have ED.

Acute Phase: The acute phase usually lasts for 5 to 7 months but can last up to 18 months in rare cases. During this time, the plaques form in the penis, the bending/curving of the penis gets worse and you may feel pain when your penis gets hard.

Chronic Phase: The chronic phase is when the plaque stops growing and the penis doesn't bend any further. If there was pain with erection during the acute phase, it often will have ended by this time.

Other Factors

Not all men who suffer mild trauma to the penis get Peyronie's disease. For this reason, most researchers believe there must be genetic or environmental reasons Peyronie's disease plaques form. Men with certain connective tissue disorders (such as Dupuytren's contractures or tympanosclerosis) and men who have a close family member with Peyronie's disease have a greater risk of getting it. Certain health issues, such as high blood sugar, tobacco use, or past pelvic trauma, may also lead to wound healing problems and may help cause Peyronie's disease.

Diagnosis

Your health care provider may be able to tell if you have Peyronie's disease with only a physical exam. The hard plaques can most often be felt whether the penis is stiff or not. To check how the penis curves, your health care provider may inject a drug into your penis to make it stiff and may take pictures to study. In some cases, dynamic ultrasound, which uses sound waves to get a picture of what is in your body, is used to see where the plaque is, check for calcium buildup and show how the blood flows in your penis.

Treatment

In a very few cases (about 13 out of 100), Peyronie's disease goes away without being treated. Most health care experts suggest treating the disease without surgery for the first 12 months after the disease is first noticed. Men with small plaques, not much curving of the penis, no pain and no problems with sex may not need to be treated. If you need to be treated, there are many choices.

Oral Drugs

Drug therapy may help men who are badly affected by the disease during the acute phase. Most society guidelines do not recommend oral drugs because long-term studies have not shown convincing benefit.

Oral vitamin E

Vitamin E is an antioxidant that is popular because of its mild side effects and low cost. Studies as far back as 1948 show that taking vitamin E may make plaques smaller and help straighten the penis. But most of these studies did not compare a group of people using vitamin E to a group of people who did not (a control group). A few studies of vitamin E that used a control group suggest that vitamin E doesn't work better than placebo. (A placebo is a pill with no drugs in it - a "sugar pill.")

Potassium amino-benzoate

Small studies with placebo controls show that this vitamin B-complex helps reduce plaque size, but not the curve. Unfortunately, it is costly and patients need to take 24 pills per day for 3 to 6 months. It also can upset your stomach, so many men stop taking it.

Tamoxifen

This non-steroidal, anti-estrogen drug has been used to treat desmoid tumors, which are like the plaques in Peyronie's disease. There are only a few controlled studies of this drug and they haven't shown that tamoxifen works better than placebo.

Colchicine

Colchicine is an anti-swelling agent that has been shown to be slightly helpful in a few small studies without controls. Many patients taking colchicine get stomach problems and stop taking the drug. It hasn't been proven to work better than placebo.

Carnitine

Carnitine is an antioxidant drug that lowers swelling to help wounds heal. Studies without controls show some benefit. But a recent controlled study didn't show it to work better than placebo.

Penile Injections

Injecting a drug right into the plaque brings higher doses of the drug to the problem than when a drug is taken by mouth. Plaque injection is often used for men with early Peyronie’s disease or those who aren't sure they want to have surgery. The skin is often numbed before the shot to reduce pain.

Verapamil injections

Verapamil is mostly used to treat high blood pressure. Some studies suggest that verapamil injection may work for penile pain and curving. Verapamil appears to be a good, low-cost option for the treatment of Peyronie's disease. More controlled studies are needed to prove how well it works.

Interferon injections

Interferon is a protein made in the body that helps control swelling. It has been shown to help control scarring, perhaps by slowing down the rate that scar tissue builds and by making an enzyme that breaks down the scar tissue. A large-scale test of interferon injection for Peyronie's disease showed that this treatment might help.

Collagenase injections

Collagenase is made in the body and breaks down certain scar tissues. Studies have shown that injecting collagenase into plaques helped fix Peyronie's disease. This drug is now approved in the U.S. by the FDA for treatment of men with penises curving more than 30 degrees.

Other Treatments

Other ways to treat Peyronie's disease are being studied. But there isn't enough data on them yet to prove they work.

Some small studies have shown that stretching the penis daily for at least 6 months may help restore length and curving.

Treating the penis with ultrasound, radiation, shockwaves, heat and verapamil on the skin are also being studied. These, for the most part, are not proven and are not recommended by experts in the field.

Surgery for Peyronie's Disease

Surgery is reserved for men with more severe, disabling penile deformities that make it hard to have sex. Most health care providers suggest putting off surgery until the plaque and curving have stopped getting worse and the patient has shown no worsening for at least 9 to 12 months.

Before surgery, your health care provider may check the blood flow in the penis by injecting a drug that will make it stiff and may also look at the inside of the penis using ultrasound. These tests help show what is going on inside your penis (such as whether there is also ED) so your health care provider can decide which type of surgery is best for you.

There are 3 basic ways to fix Peyronie's disease with surgery:

- making the side of the penis opposite the plaque shorter
- making the side of the penis that curves longer
- placing a prosthetic device inside the penis if the man has both Peyronie’s disease and erectile dysfunction

Surgery to Shorten the Side of the Penis Opposite the Plaque/Curve

This type of surgery can be done either by cutting out small pieces of tissue on the outside of the curve and sewing it closed or by folding the tissue and pulling it together with surgical thread. The surgery is most often safe, easy for the surgeon to do and has a low risk of problems (such as bleeding or making ED worse). A drawback is that this type of surgery can make the penis shorter. This surgery is better for men with mild or no ED, mild-to-moderate penile curving and a long penis.

Surgery to Make the Side of the Penis that is Curved Longer

This type of surgery is used when the penile curve is severe, the plaque becomes calcified or the shaft has become very narrow. The surgeon cuts the plaque to ease tension and may remove some of the plaque. The space that is left is then filled with a graft. In most cases, this surgery will not make the penis much shorter. But it is harder for the surgeon to do and there is a risk it could make ED worse. This surgery is often only recommended for cases of severe deformity in men who are able to get erections hard enough for sex.

Penile Prosthetic Devices

An inflatable pump or malleable silicone rods placed inside the penis are good options for men with Peyronie's disease and moderate-to-severe ED. In most cases, this will straighten the penis and allow it to get stiff enough for sex. If the device doesn't straighten the penis enough, the surgeon may straighten it more by modeling the plaque against the stiff prosthesis or by cutting the plaque and using a graft to cover the opening.

After Treatment

A light pressure dressing is often left on the penis for 24 to 48 hours after surgery to help with the healing process. During surgery, a tube (catheter) will have been placed through the end of the penis into the bladder and this may still be in place when you wake up. The tube is often removed in the recovery room if leaving that day or at discharge the following morning. You may be given antibiotics to take for a few days to lower the risk of infection and help keep swelling down, as well as pain meds. You should not have sex for at least 6 weeks after surgery.

Frequently Asked Questions

Are Men with Peyronie's Disease More Likely to Get Other Illnesses?

Some men with Peyronie's disease (about 13 out of 100) get fibrosis in other parts of the body. The most common sites are the hands and feet. Dupuytren's contracture, in which fibrosis occurs in the tissue of the palm, is one health problem linked to Peyronie's disease. Dupuytren's contracture may lead to permanent bending of the outer fingers. It is not clear what causes plaque to form in either disease, or why men with Peyronie's disease are more likely to get Dupuytren's contracture.

Does Peyronie's Disease Turn into Cancer?

Cells taken from Peyronie's plaques may act like cancer cells in some ways, such as not dying normally and forming tumors. But there has never been a case of Peyronie's disease that has turned into a cancer in a human. If you have other symptoms that are not often seen with Peyronie's disease, such as external bleeding, trouble peeing, or penile pain that lasts for a long time, your health care provider may take a sample of the tissue (biopsy) for further study.

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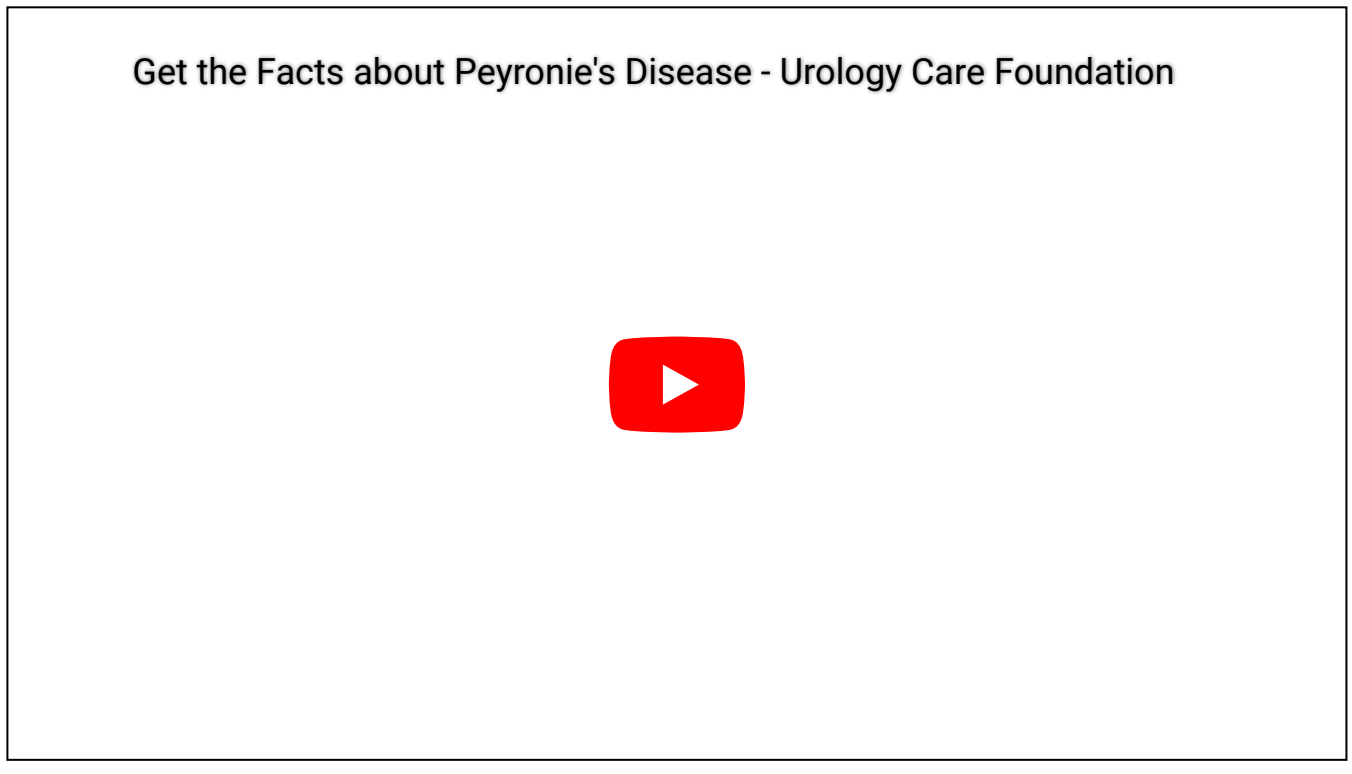
Get the Facts about Peyronie's Disease



Peyronie’s Disease Facts with Dr. Wayne Hellstrom

On this episode of the Urology Care Podcast, Dr. Wayne Hellstrom discusses Peyronie's Disease. Dr. Hellstrom is Professor of Urology and Chief of Andrology at Tulane University School of Medicine in New Orleans.

Crucial Facts about the Phallus

The main roles of the penis are to carry urine out of the body and sperm into the woman's vagina. There are 3 tubes inside the penis. One is called the urethra. It's hollow and carries urine from the bladder through the penis to the outside.

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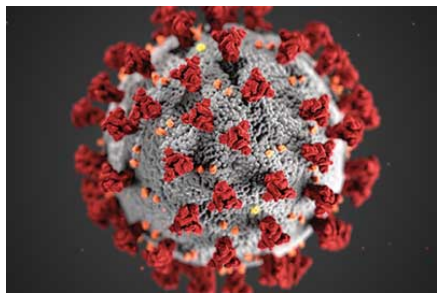

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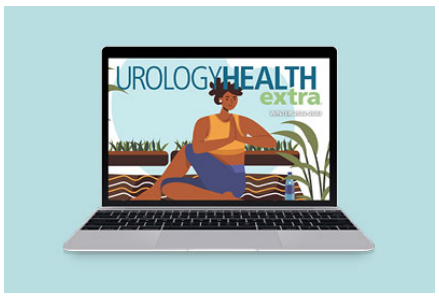

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