You have been diagnosed of

PEYRONIE'S DISEASE

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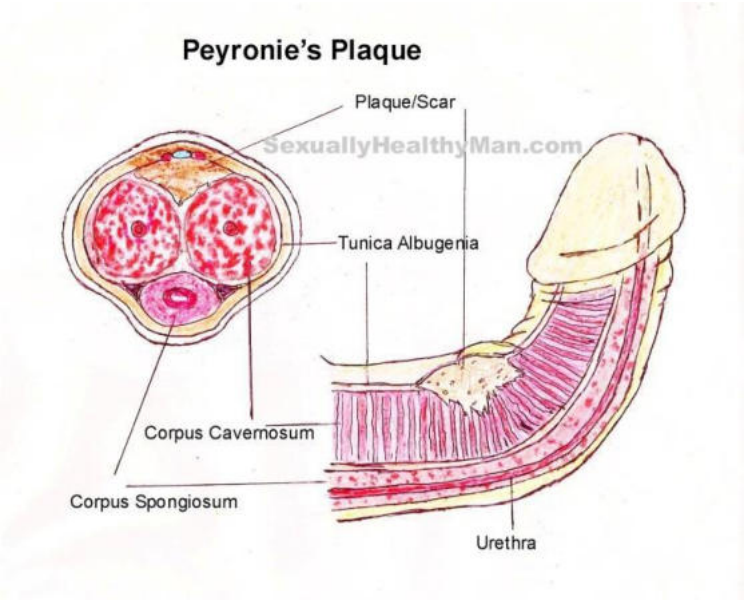
INTRODUCTION

Peyronie's disease, also known as induration penis plastia, is the development of fibrous scar tissue inside the penis that causes curved, painful erections. It affects an estimated 3-9 % of men. Can affect men of any race and age.

Men's penises vary in shape and size. Having a curved erection is common and isn't necessarily a cause for concern. However, in some men, Peyronie's disease causes a significant bend or pain. This can prevent a man from having sex or might make it difficult to get or maintain an erection (erectile dysfunction). For many men, Peyronie's disease also causes stress and anxiety.



In this booklet we try to make you understand about this disease and the possible treatment options.

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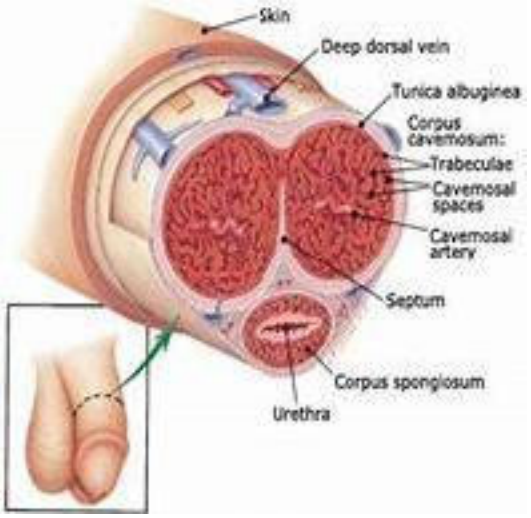
ANATOMY OF THE PENIS

The penis is the male sex organ, reaching its full-size during puberty. In addition to its sexual function, the penis acts as a conduit for urine to leave the body.

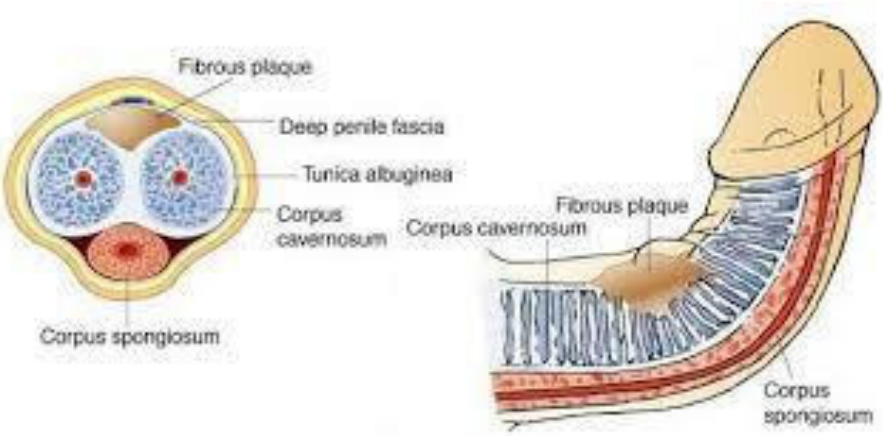
The penis is a cylindrical organ which consists of 3 separate parts. The upper portion consists of 2 cylindrical bodies which lie side by side (corpora cavernosa) and are surrounded by a layer of connective tissue called the tunica albuginea. The third chamber is a column of connective tissue which covers the urethra.



An erection results from changes in blood flow in the penis. When a man becomes sexually aroused, nerves cause penis blood vessels to expand. More blood flows in and less flows out of the penis, hardening the tissue in the corpus cavernosum

INTRODUCTION TO PEYRONIE'S DISEASE

Peyronie's disease is a localized connective tissue disorder involving the growth of fibrous plaque sin the soft tissue of the penis, Specifically, scar tissue forms in the tunica albuginea, the thick sheath of tissue surrounding the corpora cavernosa, characterised by changes in collagen composition in the tunica albuginea.



These changes cause an abnormal scar formation known as Peyronie's plaque, which is typically a palpable bump under the skin. This plaque can produce a penile curvature deformity, and other types of deformity, including indentation, loss of girth and shortening of the penis, can also produce pain and erectile dysfunction.

In a small percentage of men, Peryronie's disease goes away on its own, without causing pain or permanent bending. But in most cases, it will remain stable or worsen; treatment might be needed if the curvature is severe enough that it prevents successful intercourse.

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SINGS AND SYMPTOMS

A certain degree of curvature of the penis is considered normal, as many men are born with this benign condition, commonly referred to as congenital curvature.

Peyronie's disease signs and symptoms may appear suddenly or develop gradually. When the penis is soft, most of the times you can't see the problem, but in severe cases, the hardened plaque hampers flexibility, causing pain and forcing the penis to be bent or arc when erect.

The most common signs and symptoms include:

Pain. You might have penile pain, with or without erection. In most cases, the pain eases over time. This period of pain with erection usually lasts 18-24 months and is known as the inflammatory phase. This is followed by a fibrotic stage in which the pain settles but scaring continues to develop and the distortion of the penis continues. The condition may also make sexual intercourse painful and/or difficult.

Scar tissue. The scar tissue (plaques) associated with Peyronie's disease can be felt under the skin of the penis as a flat lump or a band of hard tissue.

Curvature of the penis. You can have an abnormal curvature of the penis when erect, can be curved upward, downward or bent to one side. The scar tissue sometimes causes narrowing, indentations or an hourglass appearance, with a tight, narrow band around the shaft rather than curvature. The change in shape is usually obvious when the penis is erect.

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Erection problems, Peyronie's disease might cause problems getting or maintaining an erection (erectile dysfunction).

Shortening of the penis.

Depression. About half the men who develop Peyronie's disease also develop depression.

The curvature associated with Peyronie's disease might gradually worsen. At some point, however, it stabilized in most men.

DIAGNOSIS

The typical symptoms of painful erections and curvature, angulation or deformity of the shaft are usually enough for a doctor to suspect that you have the disease. The doctor usually wants to measure the bend or distortion of the penis whist it is erect, the location of scar tissue and other details that might help identify the best treatment approach. This can be assessed by either of three methods:

Photographs you have taken at home (Front, up and side).

An ultrasound and a Doppler ultrasound can provide conclusive evidence of Peyronie's disease, ruling out congenital curvature or other disorders.

You doctor gives you an injection directly into the penis that causes it to become erect to locate the plaque at the point of maximum concavity in the bend of the penis, to mark the target area in the plaque for treatment.

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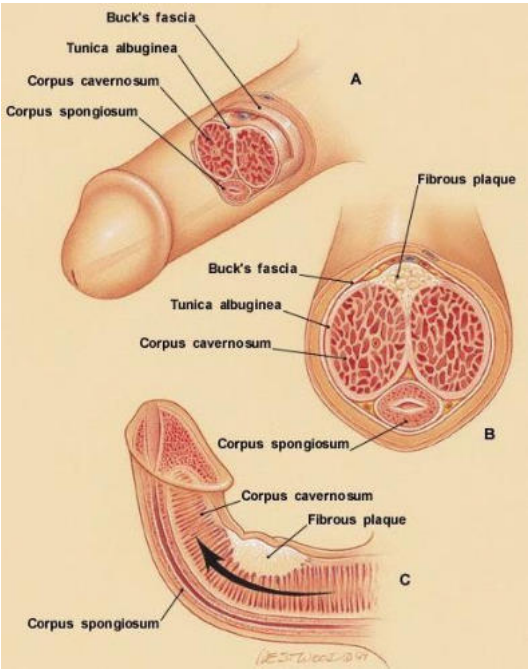
WHAT CAUSES PEYRONIE'S DISEASE?

The underlying cause of Peyronie's disease is not well understood but is thought to be caused by trauma or injury to the penis, usually through sexual intercourse or physical activity although many patients are often unaware of any traumatic event or injury. The repeated damage to blood vessels can cause leakage into areas of the penis which do not usually meet blood. This triggers an attack by the body's immune system, resulting in scaring. The Peyronie's plaque is composed predominantly by collagen and replaces the normally elastic Fibers of the tunica albuginea.



Genetic predisposition and autoimmunity may also play a role in its development.

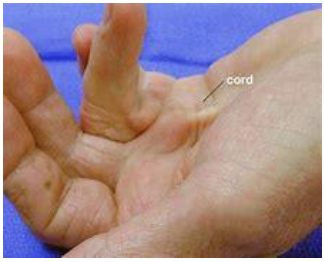
WHO DEVELOPS PEYRONIE'S DISEASE

The exact number of men who develop Peyrnonie's disease is not known, as some may be too embarrassed to see their doctor about the condition. However, it is thought that it affects between 3-9% of men. It usually appears in men in their fifties.

Minor injury to the penis doesn't always lead to Peyronie's disease. However, various factors can contribute to poor wound healing and scar tissue buildup that might play role in Peyronie's disease.

Heredity. If your father or brother has Peyronie's disease, you have an increased risk of the condition.

Connective tissue disorders. Men who have connective tissue disorder appear to have an increased risk of developing Peyronie's disease. This disorder is confined to the penis, although a substantial number of men with Peyronie's exhibit concurrent connective tissue disorders in the hand and to a lesser degree in the feet. About 30 percent of men with Peyronie's Disease develop fibrosis in other elastic tissues of the body, such as on the hand or foot, including Dupuytren's contracture of the hand (a cord-like thickening across the palm that causes the fingers to pull inward). An increased incidence in genetically related males suggest genetic component.



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Age. The prevalence of Peyronie's disease increases with age. Age related changes in tissues might cause them to be more easily injured and less likely to heal well.

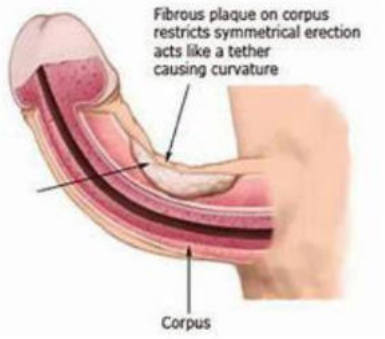
Some **beta blocker drugs** list Peyronie's disease as a possible side effect.

Other factors- Including certain health conditions, smoking and some types of prostate surgery- might be linked to Peyronie's disease.

Peyronie's disease is seen more frequently in people who have diabetes, high blood pressure (hypertension), Hyperlipidaemia, conditions affecting the heart muscle and Dupuytren's contracture. It is more commonly in people who smoke or drink a lot.

MECHANISM OF THE BENDING

Each side of the penis contains a sponge-like tube (corpus cavernosum) that contains many tiny blood vessels. Each of the corpus cavernosa are encase in a sheath of elastic tissue called the tunica albuginea which stretches during an erection. When you become sexually aroused, blood flow to these chambers increases. As the cambers fill with blood, the penis expands, straightens and stiffens into an erection. In Peyronie's disease, when the penis becomes erect, the region with the scar tissue doesn't stretch, and the penis bends or becomes disfigured an possibly painful.



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COMPLICATIONS OF PEYRONIE DISEASE

Might include:

Inability to have sexual intercourse.

Difficulty achieving or maintaining an erection (erectile dysfunction.

Anxiety or stress about sexual abilities or appearance of your penis.

Stresses on the relationship with your sexual partner.

Difficulty fathering a child, because intercourse is difficult or impossible.

WHAT TO EXPECT FROM YOUR DOCTOR

Your doctor is likely to ask you several questions:

-When did you first notice a curve in your penis or scar tissue under the skin of your penis?

-Has the curvature of your penis worsened over time?

-Do you have pain during erections, and if so, has it gotten worse or improved over time?

-Do you recall having an injury to your penis.

-Do your symptoms limit your ability to have sex?

Your doctor might also ask you to complete a survey, such as the International Index of Erectile Function, to help to identify how the condition affects your ability to have sex. Another possible survey is the Peyronie's Disease bother calculator to assess you before any treatment.

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TREATMENT

Without treatment, about 12-13% of patients will spontaneously improve over time, 40-50% will get worse and the rest will be relatively stable. Since the condition can improve without treatment in some men, you could be suggested to wait 6 months to a year before try to correct it.

Your doctor might recommend a wait-and-see (watchful waiting) approach if the curvature of your penis isn't severe and is no longer worsening and you can still have sex without pain or you are not sexually active.

The goals of treatment include reducing the plaque formation and pain, as well as minimize the curvature of the penis. There are many non-surgical treatments available for Peyronie's disease, but research has so far failed to prove that they are guaranteed to work in all people.

STRETCHING

The technical name for this is an external penile traction. It involves wearing a device which stretches the penis. It has shown some effect in improving the length of the penis and lessening deformity.

There is moderately strong evidence that Penile Traction Therapy is well-tolerated, minimally invasive treatment for Peyronie's disease but there is uncertainty about the optimal duration of stretching per day and per course of treatment and the treatment course is difficult.

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Vacuum devices: these work in a similar way to traction devices by creating a vacuum around the penis, which stretches the shaft.

ORAL MEDICATION

Vitamin E supplementation has been used for decades with controversial effect. The reason of his use is decreasing the scaring due to increase the free oxygen radicals.

Medicines tried in the past for the condition include para-aminobenzoate (Potaba), colchicine, propoleum, pentoxifyline, Vitamin E, tamoxifen and acetyl-L carnitine.

TOPICAL MEDICATION

Medicines applied to the surface of the penis. Topical Verapamil and Diltiazem has been used with some success in reducing the amount of curvature and thickening of the fibrous tissue. However, it needs to be sued for about nine months to have any significant effect.

RADIATION

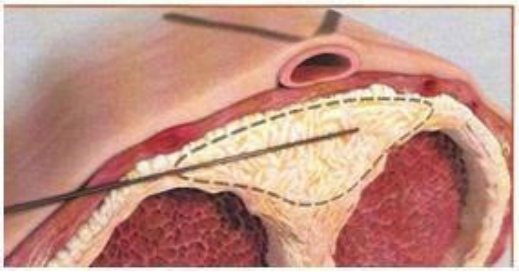
Radiation into the plaque has been used as a treatment. But because radiation therapy can only relieve pain associated with Peyronie's disease and pain often stops without treatment, it's rarely done.

IONTOFORESIS

Electrical currents: a medicine is applied to the surface of the penis and a mild electrical current is applied. The idea behind this is to help the

medicine penetrate the deeper tissues of the penis, where they will have the greatest effect. Some studies report that this method has some benefits whilst others say it has little effect. Usually is used Verapamil and Dexamethasone.

INJECTION



Medicines injected into the scar tissue (fibrous plaques): various medicines have been tried included Steroids, Orgotein, Verapamil, Interferon-alpha-2b and Xiaflex (Collagenase Clostridium histolyticum). Research studies have reported some improvement in pain, the size of the plaques and the amount of bend of the penis after these injections.

The efficacy of Interferon-alpha-2b in the early stages of the disease has been reported in recent publications but it has found to be less effective in cases where calcification of the plaque had occurred in common with many treatments.

Collagenase clostridium histolyticum (marketed as **Xiaflex**) a drug originally approved by the FDA to treat Dupuytren's contracture is now, and FDA approved injectable drug for treatment of Peyronie's disease. The drug is reported to work by breaking down the excess collage in the penis that causes Peyronie's disease

NEW NON-INVASIVE TREATMENTS FOR PEYRONIE'S

PRP (platelet-rich plasma) therapy for Peyronie's disease involves injecting the patient's own plasma into the plaque to reduce curvature and improve erectile function, though official guidelines still consider it experimental. Studies suggest the treatment is safe with minor side effects like pain or bruising, and preliminary data show potential benefits, such as a significant reduction in penile curvature and improved pain

Platelet Rich Plasma is an autologous biological therapy containing a supraphysiological concentration of platelets, proteins, growth factors (derived from vascular endothelial growth factor (VEGF), platelets growth factor (PDGF), fibroblast growth factor (FGF), and transforming growth factor-β (TGF-β)); and other components of plasma that stimulate growth and repair in various target tissues. These growth factors affect stem cells recruitment, inflammatory reaction response, angiogenesis, and wound healing.

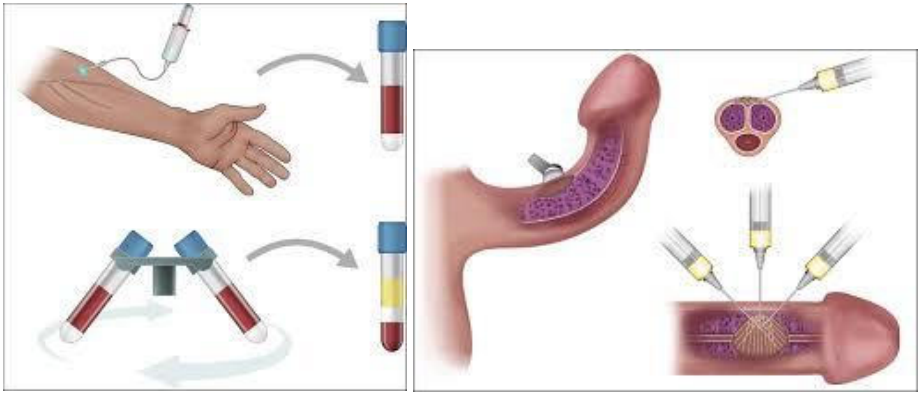
How it works

- PRP contains growth factors that may promote tissue repair and regeneration.
- It is injected directly into the penile plaque.
- The goal is to reduce the size of the plaque, which can decrease the penile curvature caused by Peyronie's disease.

Potential benefits

- **Reduced curvature:** Some studies indicate a significant reduction in penile curvature after PRP injections.
- **Improved erectile function:** Studies have shown improvements in erectile function in some patients receiving PRP injections.
- **Pain reduction:** Several studies noted a decrease in pain during sex for patients treated with PRP.

Safety and side effects. The procedure is generally considered safe, with a low risk of serious complications. Mild side effects like pain or bruising at the injection site are possible. **We offer PRP for Peyrone's disease in our clinic with promising results.** Can be as a single therapy or in combination with other procedures.



EXTRACORPOREAL SHOCKWAVE THERAPY

Extracorporeal shock-wave therapy. This uses vibrations from sound waves to break down the tough fibrous plaques.

Shock wave therapy for Peyronie's disease may help reduce penile pain and plaque size and can be considered for patients who are not keen on surgery, although it is not consistently effective for curvature or length. The American Urological Association has a low-utility recommendation for its use on curvature or plaques but suggests it may be offered for pain. Key findings show potential for improved sexual function in some patients, but results can vary, and a significant financial cost may be incurred.

Benefits

Pain reduction: Many studies show a significant reduction in penile pain.

Plaque size reduction: The therapy may lead to a decrease in the size of the plaque.

Improved sexual function: Some patients report improvement in erectile function.

Minimally invasive: It is a less invasive option compared to surgery

Limitations and considerations

Variable effectiveness: Results for reducing penile curvature and improving length are inconsistent.

Financial cost: the treatment is not covered by insurance.

Side effects: Potential side effects include pain, swelling, bruising, and numbness during or after treatment.

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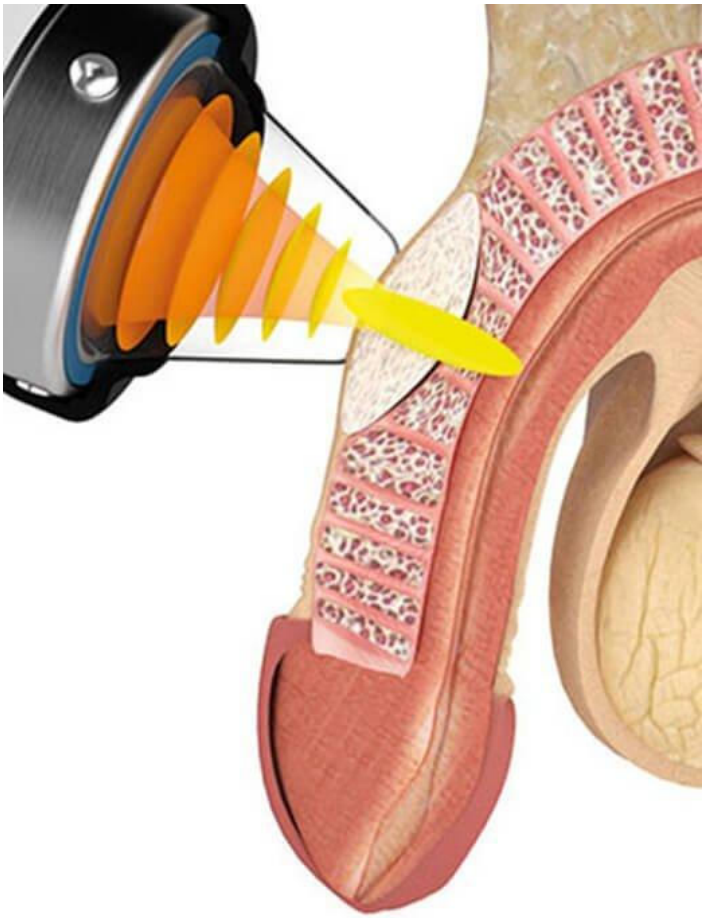
HOW IT WORKS

The therapy, specifically low-intensity extracorporeal shock wave therapy (LiESWT), uses shock waves to stimulate blood flow and promote tissue healing and revascularization.

The goal is to break down the scar tissue, or plaque, that causes the penile curvature.



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BTL (BTL Industries) shockwave therapy for Peyronie's disease is a non-invasive treatment that uses low-intensity shock waves to break down fibrous plaques, reduce pain, and potentially improve penile curvature and erectile function. Research indicates it can be a safe and effective first-line therapy, especially for patients with pain, though its effectiveness can vary, and it may not significantly improve penile curvature and sexual function in all cases

Potential benefits

Pain relief: Statistically significant reduction in penile pain has been observed in multiple studies.

Plaque reduction: Studies show that shockwave therapy can lead to a significant reduction in the size of penile plaques.

Improved curvature: Some studies have found improvements in penile curvature after treatment, but this is not a consistent outcome across all research.

Erectile function: Some patients have reported improvements in erectile function, but studies have not shown a consistent, significant improvement in sexual function compared to placebo groups.

What to consider

Effectiveness varies: Results can vary depending on the patient's specific characteristics and the stage of the disease.

Stage of disease: The therapy appears most effective for patients in the early, inflammatory phase of the disease.

No guaranteed results: While promising, it may not work for everyone, and some research suggests it is more effective for pain than for improving curvature or sexual function.

Financial cost: The therapy can be a significant financial burden.

Risks and side effects

Generally safe: Overall, shockwave therapy is considered a safe treatment with a low risk of side effects.

Reported complications: Sporadic complications have been reported but did not typically require further treatment beyond conservative observation.

BTL shockwave therapy: This likely refers to their extracorporeal shockwave therapy (ESWT) systems. For Peyronie's, ESWT would be directed at the penile plaque to alleviate pain and potentially shrink the plaque.

Summary for patients

For individuals considering BTL shockwave therapy for Peyronie's disease, here is what the current evidence suggests:

Most promising benefit: Short-term relief of pain during erections.

Less proven benefits: Reduction in plaque size and improved erectile function have mixed results and less conclusive evidence.

Not proven effective for: Correcting penile curvature.

Safety: The procedure is generally considered safe, with side effects typically limited to minor bruising.

Expert guidance is essential: Any decision on treatment should involve a thorough discussion with a urologist or men's health specialist. They can provide an accurate assessment of the condition and discuss evidence-based treatment options, which may include surgery or injectable medications for appropriate candidates.

IN CASE OF PROBLEMS

NOTIFY THE UROLOGIST OR ATTEND TO THE EMERGENCY DEPARTMENT

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