

# Peyronie's disease

Peyronie's disease	
Classification and external resources	
ICD-10	N48.6 <sup>[1]</sup>
ICD-9	607.85 <sup>[2]</sup>
OMIM	171000 <sup>[3]</sup>
DiseasesDB	29308 <sup>[4]</sup>
MedlinePlus	001278 <sup>[5]</sup>
eMedicine	derm/851 <sup>[6]</sup>
MeSH	D010411 <sup>[7]</sup>

**Peyronie's Disease** (also known as "Induratio penis plastica"<sup>[8]</sup>, or more recently Chronic Inflammation of the Tunica Albuginea (CITA), is a connective tissue disorder involving the growth of fibrous plaques<sup>[9]</sup> in the soft tissue of the penis affecting up to 10% of men. Specifically, scar tissue forms in the tunica albuginea, the thick sheath of tissue surrounding the corpora cavernosa causing pain, abnormal curvature, erectile dysfunction, indentation, loss of girth and shortening.<sup>[10][11][12][13]</sup> A variety of treatments have been used, but none have been especially effective.

## Exception

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.



The disease may cause pain; hardened, big, cord-like lesions (scar tissue known as "plaques"); or abnormal curvature of the penis when erect due to chronic inflammation of the tunica albuginea (CITA). Although the popular conception of Peyronie's Disease is that it always involves curvature of the penis, the scar tissue sometimes causes divots or indentations rather than curvature. The condition may also make sexual intercourse painful and/or difficult, though many men report satisfactory intercourse in spite of the disorder. Although it can affect men of any race and age, it is most commonly seen in Caucasian males above the age of 40, especially those of blood type A+, but has been seen in men as young as 18. The 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. An increased incidence in genetically related males suggests a genetic component.<sup>[14]</sup>

## Diagnosis

A urologist can diagnose the disease and suggest treatment, although it is easily diagnosed by general practitioners or family doctors.

## Causes

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 activity although many patients often are unaware of any traumatic event or injury.<sup>[15]</sup>

There is also an association that a class of anti-hypertensive drugs known as calcium channel blockers may be a possible cause of or exacerbate the disease, although it has not been proven. However, all beta blocker drugs list Peyronie's disease as a possible side effect.<sup>[15]</sup>

## 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.

## Medication and supplements

Many oral treatments have been studied, but results so far have been mixed.<sup>[16]</sup> Some consider the use of non-surgical approaches to be "controversial".<sup>[17]</sup>

Vitamin E supplementation has been studied for decades, and some success has been reported in older trials, but those successes have not been reliably repeated in larger, newer studies.<sup>[18]</sup> A combination of Vitamin E and colchicine has shown some promise in delaying progression of the condition.<sup>[19]</sup>

Some newer agents targeting the basic mechanisms of inflammation have been studied in larger clinical trials. These include potassium para-aminobenzoate (Potaba),<sup>[20]</sup> pentoxifylline (acting through TGFβ1 inhibition),<sup>[21]</sup> and Coenzyme Q10,<sup>[22]</sup>. Other newer agents of interest include acetyl L-carnitine, propionyl L-carnitine, L-arginine, and sildenafil (acting through phosphodiesterase-5 inhibition).

Interferon-alpha-2b has been proposed in recent publications.<sup>[23][24]</sup>

Formulations of superoxide dismutase are also reported to be effective in Peyronie's disease.<sup>[25]</sup>

Injections to plaques (scar tissue formed by the inflammation) with Verapamil may be effective in some patients, but a recent placebo controlled trial failed to show a significant improvement. Use of iontophoresis with Verapamil and Dexamethasone, applied to the affected areas has been studied<sup>[26]</sup> but the latest placebo controlled trial also failed to show a significant improvement. There are no clinical trials listed in the NIH trial registry. Topical Verapamil cream is also another option for patients who are unwilling to undergo penile injections.

Collagenase clostridium histolyticum (marketed as Xiaflex by Auxilium), a drug approved by the FDA to treat Dupuytren's contracture, has been reported to break down the excess collagen that causes Peyronie's disease. According to Auxilium, "the first phase II trials...showed promising results."<sup>[27]</sup> The drug has not been approved by the manufacturer or the FDA for the treatment of Peyronie's disease, and such treatments are currently considered off-label use, and are discouraged.<sup>[28]</sup>

## Surgery

Surgery, such as the "Nesbit operation",<sup>[29]</sup> is considered a last resort and should only be performed by highly skilled urological surgeons knowledgeable in specialized corrective surgical techniques. A penile prosthesis may be appropriate in advanced cases.<sup>[30]</sup> A European surgery called the Leriche technique, in which an 18 gauge needle is used to lacerate the plaque, has shown effectiveness at reducing curvature and returning sexual function.<sup>[31]</sup>

## Physical therapy and devices

Self-administered manual stretching techniques, as well as a number of devices which exert gentle longitudinal forces on the plaque, are currently being studied in clinical trials. However, these penis extenders are controversial and most doctors recommend staying away from them due to their unknown and potentially harmful side-effects. But there are a controversial minority who have endorsed such products.

Doctors are starting to look into less intrusive forms of therapy as an alternative to surgery, which is becoming increasingly unpopular amongst both doctors and patients. Due to the very intrusive nature of penile curvature correction surgery, and the arguably **scarce results** that it provides at a very high economical, emotional, and physical cost, patient dissatisfaction post surgery is very high. Most patients were unhappy with the results of the intervention due mostly to the penile shortening that happens after the surgery. As the scar retracts, the penis is pulled deeper into the body, eventually resulting in penile shortening. This was recorded in nearly 100% of the cases studied.<sup>[32]</sup>

Although there is no cure for Peyronie's Disease or fibrotic disorders that are localized in different areas of the body (Fibrosis), several clinical studies such as the one mentioned above point to penis extenders as the best treatment to correct curvature, or at the very least to impede the curvature from getting worse. According to Doctor Gontero, the leading Doctor of the above mentioned study which was published in the Journal of Sexual Medicine in 2009, "Overall results were self-reported as "acceptable", making this minimally invasive treatment modality a potential new treatment option in selected Peyronie's Disease patients." Several other studies exist reaffirming these types of results.<sup>[33][34][35]</sup>

In 2009 Dr. Timothy Abreu of the Gush Institute and Dr. Keith Kwon Nguyen of the Eastern Australian Men's Health and Fitness Association debuted a new suction-based treatment that shows promise in reducing the severity and discomfort of Peyronie's disease. Unfortunately the clinical trials were cut short after over 30 cases of necrosis.

## Counseling

Peyronie's Disease can be a physically and psychologically devastating disease. While most men will continue to be able to have sexual relations, they are likely to experience some degree of deformity and erectile dysfunction in the wake of the disease process. It is not uncommon for men afflicted with Peyronie's Disease to exhibit depression or withdrawal from their sexual partners.

## History

One of the most famous historic characters that suffered from Peyronie's Disease was the mythological Greek character Seilinus, a sculpture of which is in the Athens National Museum.

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- [3] <http://omim.org/entry/171000>
- [4] <http://www.diseasesdatabase.com/ddb29308.htm>
- [5] <http://www.nlm.nih.gov/medlineplus/ency/article/001278.htm>
- [6] <http://www.emedicine.com/derm/topic851.htm>
- [7] [http://www.nlm.nih.gov/cgi/mesh/2011/MB\\_cgi?field=uid&term=D010411](http://www.nlm.nih.gov/cgi/mesh/2011/MB_cgi?field=uid&term=D010411)
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## External links

- The Peyronie's Disease Society (<http://www.peyroniessociety.org/>)
- The Association of Peyronies's Disease Advocates (<http://www.peyroniesassoc.org/>)
- Medscape Urology overview of Peyronie's disease (<http://emedicine.medscape.com/article/456574-overview>)

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