

ERECTILE DYSFUNCTION



A Guide for Patients

THEUROLOGY
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ABOUT THIS GUIDEBOOK

Facing a medical condition can often feel overwhelming and sometimes even scary. At The Urology Group we want you to know that you are not alone and that we have a caring team ready to help you.

This guidebook provides information on erectile dysfunction (ED) so that you understand more about the condition and treatment options.

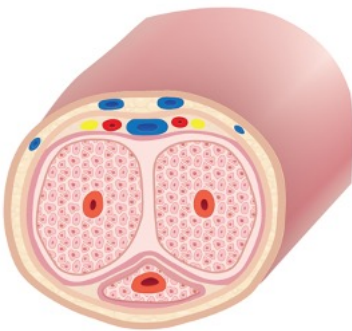
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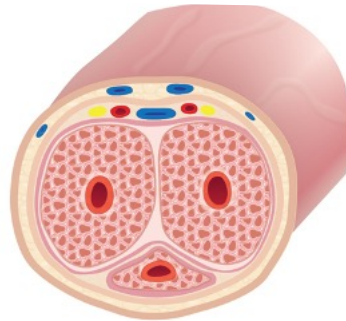
How an Erection Works

Here's what happens during an erection:

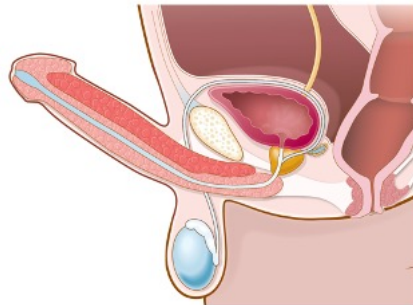
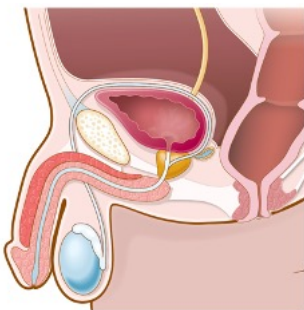
1. Arousal stimulates the nerves in your penis.
2. This causes the smooth muscles of the penile arteries to relax, thereby increasing the blood flow through them.
3. The rush of blood makes the penis stiff, hard, and erect.
4. The blood is trapped in the two erectile chambers of the penis, creating the mechanical rigidity for an erection.
5. When you are no longer aroused, the muscles in your penis contract, the trapped blood flows back out of your penis, and you no longer have an erection.



Limp

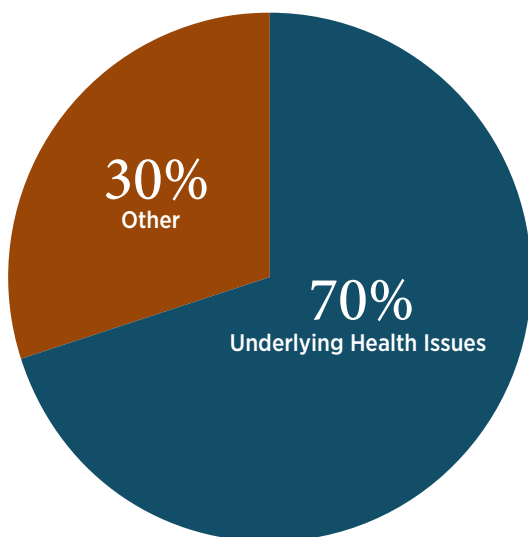


Erect



What Causes Erectile Dysfunction (ED)?

Erectile dysfunction (ED) is very common; more than half of men older than 50 have some degree of ED. ED is often associated with aging and/or poor overall health, but is also common in men with good health. In fact, many men in their 20s and 30s have ED.



Seventy percent of men with ED have underlying health issues such as:

- Vascular disease
- High blood pressure
- High cholesterol
- Diabetes
- Obesity
- Low testosterone
- Lack of exercise
- Smoking
- Alcohol and drug abuse

Other causes, found in 30 percent of men with ED, include:

- Medications
- Pelvic surgery
- Peyronie's disease
- Penile trauma
- Pelvic radiation
- Depression
- Anxiety
- Neurological diseases

ED can be one of the earliest warning signs of underlying heart disease and a future heart attack. If you have ED, talk to your primary care doctor about being screened for heart disease and other risk factors.

How is ED Diagnosed?

Your urologist will perform a physical exam and talk with you about your stress levels. It is essential to provide a detailed history of your medication and drug use, as ED can be caused by medications you take for other conditions.

Additional testing may be completed to help your urologist with a proper diagnosis:



Blood test: Detects testosterone and cholesterol levels.



Urinalysis: Provides a reading of protein and sugar in your urine. Abnormal measurements of these substances can indicate diabetes or kidney disease, which can cause ED.



Lifestyle Modifications

One of the best ways to treat a chronic condition is to see if making changes in your everyday life will help. Lifestyle modifications are less invasive, less costly, and may solve your ED. Many men are able to improve sexual function by improving their overall health.

Consider these steps:

- **Eat a healthy diet:** Emphasize vegetables, fruits, nuts, legumes, and fish. Avoid red and processed meat.
- **Exercise regularly:** 40 minutes of moderate to vigorous aerobic exercise four times a week has been shown to decrease erectile dysfunction.
- **Lose weight:** Extra weight can affect your hormones, blood pressure, and other body functions. Ridding yourself of excess weight can help restore sexual function.
- **Limit alcohol:** When consumed in excess, alcohol has shown to increase ED.
- **Quit smoking:** Studies indicate that tobacco worsens ED, and that sexual function improves in men who quit smoking.
- **Get enough sleep:** ED is often associated with sleep disorders. Aim for 7-9 hours of sleep per night.

PSYCHOTHERAPY AND/OR BEHAVIORAL THERAPY

If your ED is the result of performance anxiety, depression, or other psychosocial issues, your urologist can refer you to a specialist. These specialists are professionals at discussing strategies with you, or you and your partner, to reduce sexual anxiety and encourage communication around sexual issues. Such therapy is verbal counseling and does not involve sexual contact between you and your partner or you and your therapist.

Treatment Options

There are numerous options for treating ED. Each of these options is described here.

ORAL MEDICATIONS

Most men with ED often start with pills as their first treatment. Phosphodiesterase type 5 inhibitors (PDE5i)* are oral drugs (Viagra, Cialis, Levitra, Stendra) that can improve your ability to obtain and maintain an erection. PDE5i medications increase nitric oxide, which allows the penile muscles to better relax and blood to flow into the tissue. Once aroused, this allows for a longer, more rigid erection. Although some patients may prefer one oral medication to another, there is no evidence that one option is more effective than another.

Overall benefits of oral medications:

- Increases blood flow to the penis (this still requires sexual stimulation)
- Effective for 70–85% of men
- Less effective for men with diabetes or who have had prostate surgery
- Insurance rarely covers these medications

Potential side effects:

- Headaches
- Face turns red
- Nasal congestion
- Vision changes
- Prolonged erections

*PDE5i medication cannot be taken with isosorbide mononitrate, which are part of a group of medications called nitrates or nitroglycerins. Doing so can be fatal. If you use these drugs or have chest pain at any time, please discuss with your provider.

Viagra/Sildenafil

Takes about 1 hour to work

Lasts up to 4 hours

Must be taken 2 hours after a meal, or 30 minutes prior to a meal

20-100 mg as needed, options available

Cialis/Tadalafil

Takes about 2 hours to work

Lasts up to 36 hours

May be taken with or without food

Daily (5 mg) and as needed (20 mg) options are available



Treatment Options

VACUUM ERECTION DEVICES

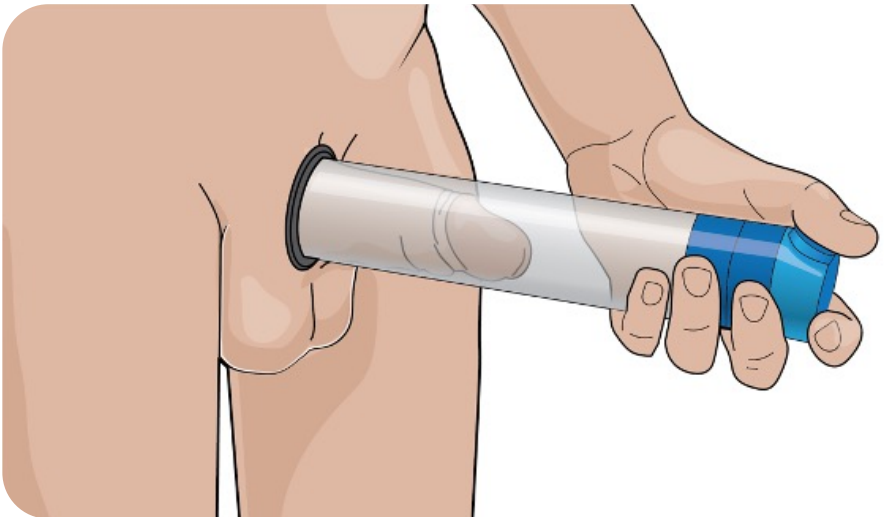
To use a vacuum device, you place a cylinder over your penis. You'll use a hand- or battery-powered pump to create a vacuum that draws blood into your penis for an erection. Once erect, you place a rubber ring around the base of your penis to maintain the erection.

Benefits

- Effective for 68-80% of men
- Very low risk
- Once purchased, no additional associated cost

Drawbacks

- Lack of spontaneity
- Possible penile discomfort
- May not provide sufficient rigidity
- 86% of men ultimately decide to try other treatments



ULTRASOUND WAVE THERAPY

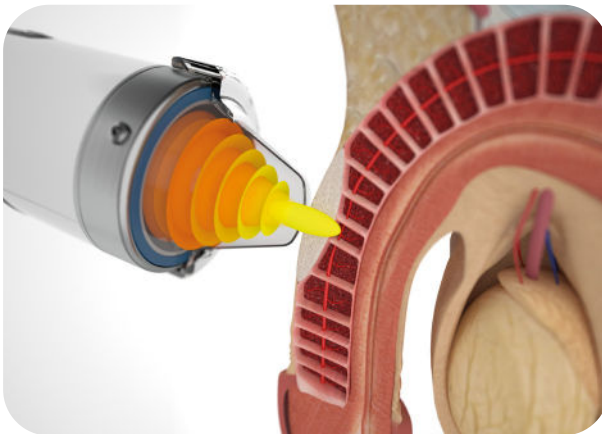
A painless ultrasound wave therapy that helps restore natural function by improving blood flow to your penis. During each 15-minute in-office treatment session (6 treatments are typically recommended), the therapist will place an ultrasound wand on multiple areas of your penis. Low-intensity shock waves, which feel like light tapping, will stimulate increased blood flow in your penis.

Benefits

- No expected side effects
- No downtime
- No pain; feels like a light tapping
- Potential to eliminate or reduce the need for ED medications
- Addresses the cause of many forms of ED, not just the symptoms

Drawbacks

- Ultrasound wave therapy is not covered by insurance, but it does qualify for HSA (health savings account) reimbursement.
- You may still need some level of medication.



Treatment Options

PENILE INJECTIONS

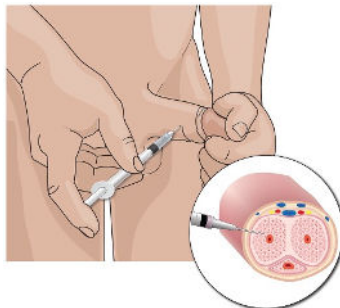
Medications are self-injected (with a needle and syringe) into the shaft of your penis to increase blood flow. These medications (including alprostadil, papaverine, and phentolamine, which can be combined to create “Trimix” and “Bimix”) relax the smooth muscle and increase the blood flow into the penis. Your doctor will determine the dosage of the medication needed. You administer the medication yourself at the time you desire to have an erection. An erection typically begins within 5 to 20 minutes after the injection and lasts about one hour.

Benefits

- Successful in about 85% of men
- Quick acting

Drawbacks

- Possible pain, but often described as a pin prick
- Possible development of scar tissue over time
- Priapism*, or prolonged erection
- Bruising or blood collection under the skin
- Requires refrigeration and has a shorter expiration date than most medication
- Availability can be limited to specialized pharmacies or mail order

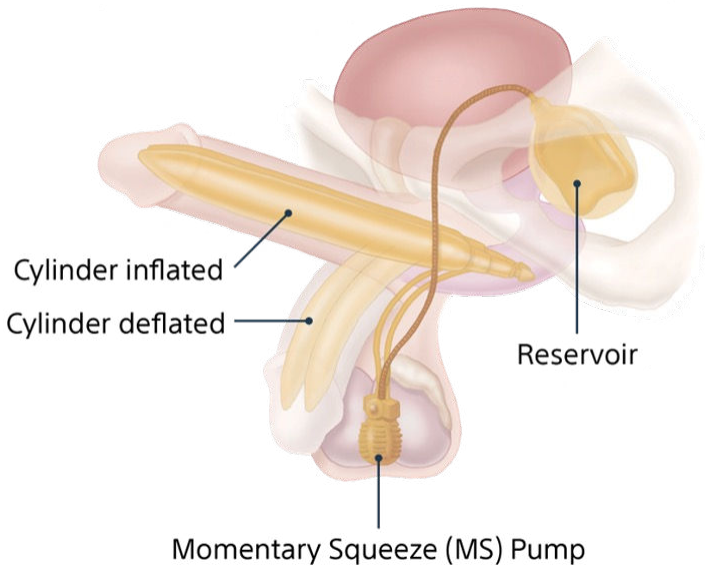


*Priapism is an erection that lasts for 4 hours or longer and is associated with pain. If not treated quickly, it can lead to permanent damage to the penile tissue and worsen erectile dysfunction. Please call your urologist or go to the emergency room if you experience this for any reason.

PENILE IMPLANTS

This is a surgically implanted device that allows you to permanently control the timing and duration of your erections. There are both inflatable and malleable (bendable) implants available.

These devices require an outpatient surgical procedure. The procedure typically requires just one small incision. The device is completely concealed and appears natural while providing reliable rigidity.



Treatment Options

PENILE IMPLANTS CONTINUED

3-piece Inflatable Implant: This device includes fluid-filled, expandable cylinders, a pump, and a fluid reservoir. The cylinders are placed in the penis and the pump is placed in the scrotum. A reservoir of fluid is typically placed in the pelvis or in the abdominal wall. To obtain an erection, the pump is squeezed, allowing fluid to be transferred from the fluid reservoir into the cylinders. To deflate the device, a small button located on the pump is pushed.

2-piece Inflatable Implant: This device is similar to a 3-piece device, but does not have a reservoir, making the surgical placement somewhat easier. The fluid is stored in the cylinders only. This is a good option if prior abdominal or pelvic surgeries have caused excess scar tissue that may prevent placement of a reservoir.

Malleable/Bendable Implant: Two firm but flexible rods are surgically placed into the shaft of your penis. To have an erection, you move your penis into the desired position with your hand. When an erection is no longer desired, you bend it back down. This is a good option for those with limited dexterity and strength in their hands, limiting their ability to successfully squeeze a pump.



Benefits

- Over 90% patient and partner overall satisfaction rates
- No longer requires any medications, injections, or devices
- Good for spontaneity
- No side effects as noted with medications
- Reliable

Drawbacks

- Typical risks as with any surgery
- Possible infection, which would require implant removal
- Potential device failure that may require re-operation

Things To Know

- The penile implant only replaces the mechanical ability to obtain an erection. It does not affect penile sensation, ability to orgasm, and ability to urinate.
- Once healed, it is not painful to inflate the device.
- Heavy lifting must be avoided for 4 weeks after surgery.
- Roughly 80% of penile implants will still be functional 10 years following implantation.
- Inflatable devices do not typically set off airport security.
- MRIs are safe if you have an implant.
- Medicare and commercial insurance usually cover implants. The Urology Group's benefits specialists will help determine your out-of-pocket costs, if any.

Low Testosterone (Low T)

Having low testosterone can decrease your ability to get high-quality erections.

Testosterone is the hormone required to make sperm and therefore is important to sexual development, function, and interest. Testosterone also contributes to the growth of muscles and bones.

As men age, testosterone levels tend to decline, which is normal. In fact, after age 30, most men begin to experience the symptoms associated with this gradual decrease. However, men of all ages may experience low testosterone due to other causes.

When testosterone levels decline, the effects can be both physical and mental. Here are some of the most common signs:

- Diminished sex drive
- Erectile dysfunction
- Depression
- Fatigue and/or trouble concentrating
- A decrease in muscle mass with an increase in body fat
- Loss of body hair
- Weakening bones
- A change in cholesterol levels

Many Low T patients are prescribed testosterone therapy, or medications designed to elevate hormone levels. It can take two to three months for the benefits of these medications to take full effect.

Therapies may include:

- **Topical creams and gels** – Typically applied to the upper body every morning. Often formulated for you at a compounding pharmacy.
- **Oral testosterone** – newer options allowed to be taken orally twice per day.
- **Clomiphene oral pill** – Often taken three days of the week. This is not a testosterone replacement but encourages your body to increase the production of its own testosterone. This is best if someone wants to maintain fertility and is still planning a family.
- **Injection** – A subcutaneous or intra-muscular injection that slowly releases testosterone and is administered either weekly, biweekly, or every 10 weeks.
- **Pellets** – A small pellet that is inserted under the skin of the upper hip or buttocks, under a local anesthesia such as Lidocaine. The medication is slowly released over three to six months, before the next pellets are implanted.

Pharmacy at The Urology Group

Get your prescriptions filled at our Norwood campus or Northern Kentucky office.

Did you know that The Urology Group offers an onsite pharmacy? We can fill prescriptions written by both The Urology Group physicians as well as other physicians outside of our group. We offer lower costs for certain prescriptions.

Why fill your prescription at The Urology Group's pharmacy?

- No waiting in a public line at your local pharmacy
- Some prescriptions can be mailed right to your home
- Confidential answers to your specific health questions
- No membership costs

Most prescriptions filled by The Urology Group can be picked up at our Norwood location: 2000 Joseph E. Sanker Blvd., Norwood, OH 45212.

If our Northern Kentucky location is more convenient for you, many of our ED medications can be dispensed from our office in Crestview Hills: 350 Thomas More Parkway, Suite 200, Crestview Hills, KY 41017.

In some cases, your prescription can be mailed. Additional charges apply. Be sure to ask the pharmacist.

Call: (513) 841-7508

Visit: pharmacy.urologygroup.com

Hours: Mon – Fri: 7:30 a.m. to 4:30 p.m.
Closed Sat. and Sun.

THE PHARMACY AT





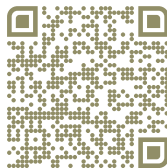
The Urology Group is one of the largest single specialty groups of urologists in the United States.

Our group consists of more than 35 board-certified urologists with convenient neighborhood offices and a state-of-the-art outpatient surgery center in Norwood.

Together, we offer our patients a comprehensive team of urologic healthcare providers – Greater Cincinnati’s and Northern Kentucky’s premier healthcare resource in this specialty.



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