

How is erectile dysfunction (ED) surgically treated?

The past several decades have ushered in a new treatment era for ED. Because of the advent of many advances, today urologists are helping millions of impotent men perform better and longer.

Penile prostheses: Surgically implanted devices to ensure stiffness have become highly reliable therapeutic solutions. Vacuum erection devices have proven to be safe alternatives in stiffening the penis by drawing blood into the organ with a pump and holding it with an "occluding band." Penile injection therapy is a relatively quick and effective way to send vasoactive drugs directly into the corpora cavernosa where they expand the vessels, relax the tissue and increase blood flow for an erection. Furthermore, the pills: sildenafil, tadalafil and vardenafil have become the treatments of choice for millions of men who have experienced the drugs' ability to boost levels of cyclic guanosine monophosphate (cGMP), a chemical factor in metabolism responsible for relaxing blood vessels.

Vascular surgery: Although options are varied, not everything is for everyone. In fact, two vascular approaches developed over past decades to restore penile blood flow disrupted by disease or traumas are useful for only a select few.

Penile arterial revascularization: This procedure is designed to keep blood flowing by rerouting it around a blocked or injured vessel. Indicated only for young men (under 45) with no known risk factors for atherosclerosis, this procedure is aimed at correcting any vessel injury at the base of the penis caused by adverse events such as blunt trauma or pelvic fracture. When such an event leaves a penile vessel too injured or blocked to transfer blood, the surgeon may microscopically connect a nearby artery to get around the site, clearing the pathway so enough blood can be supplied to the penis to enable an erection.

Venous ligation surgery: This procedure focuses on binding leaky penile vessels that are causing penile rigidity to diminish during erection. Because venous occlusion, necessary for sufficient firmness, depends on arterial blood flow and relaxation of the spongy tissue in the penis, this approach is designed to intentionally block off problematic veins so that there is enough blood trapped in the penis to create an appropriate erection. Since long-term success rates are less than 50 percent, this technique is rarely a choice for correcting ED.

In fact, you are not a candidate for either penile vascular surgery if you have insulin-dependent diabetes or widespread atherosclerosis. You are also not suited if you still use tobacco or experience consistently high blood serum cholesterol levels. Neither of these surgeries will work if you have injured nerves or diseased and/or generalized damaged blood vessels. Also, if you are a candidate, be aware that vascular surgeries are still considered experimental by some urologists and may also not be covered by your insurance.

What can be expected after surgical treatment for erectile dysfunction (ED)?

Most of the best known treatments for ED have excellent track records for being both effective and safe. But in making your choice, make sure to discuss the potential complications of each option with your doctor.

For instance, the good news about a penile prosthesis is that it does not usually affect urination, sex drive, orgasm or ejaculation. But on rare occasions, these semi-rigid, silicone-covered metal rods or hydraulic devices can cause pain or reduced sensation. While injections can initiate erections within 15 minutes to several hours, be aware that they also can produce prolonged or painful ones, not to mention a scarring of penile connective tissue (fibrosis).

At the same time, a vacuum erection device should take only one to three minutes to give an erection, usually with no serious side effects if used properly. However, the use of the erection device to maintain the erection is limited to 30 minutes.

Sildenafil, tadalafil and vardenafil have 75 percent success rates, primarily because they are a subtle solution that works within the hour. But on rare occasions they can cause headaches, flushing, indigestion or muscle aches. Also, if you have heart disease or low blood pressure, the Food and Drug Administration (FDA) cautions a thorough examination before getting a prescription. You cannot take these drugs if you are taking nitroglycerine or any similar drug.

Penile arterial revascularization can restore function in men, although only a small percentage of them undergo the procedure. While few patients experience postoperative complications, side effects can include penile

scarring, numbness and shortening all of which can cause further impotence.

Venous ligation surgery, although rare, is also known to cause penile shortening, along with other problems. Also, improvements with venous ligation surgery may be temporary.

Frequently asked questions:

When is venous surgery for erectile dysfunction successful?

It has been most successful in young men with abnormally draining veins since birth who have never had a full erection. It has also been used in some patients with an injury to the covering tunica albuginea or the corpora cavernosa.

I am interested in vascular surgery, what should I be aware of?

Realize this is not a surgery for everyone. If you meet the criteria mentioned previously, you will want to find a specialist with a track record of having done these microsurgical techniques. Be aware, however, that penile vascular solutions are still experimental; few specialized urologists or vascular surgeons are trained to do either procedure. If your doctor is not one of them, you will need to ask for a referral. You will also want to get a second opinion if this treatment option is recommended, given that there are few patients who are good candidates.

If I choose vascular surgery, what should I ask my surgeon?

Once you have found a surgeon, ask about his or her experience and outcome record with penile arterial revascularization. Make sure that you understand the potential outcomes and possible complications. Also, ask how the particular approach stacks up against other treatment choices for you. For instance, vacuum devices and oral or injection therapies still work for some people. Penile prostheses, the most widely used surgical technique for ED, usually have a more favorable outcome than vascular techniques.

Is age a factor in impotence?

Yes. Data suggest that while not an inevitable part of aging, the risk of impotence increases as we grow older. About 5 percent of men at age 40 complain of the problem, while between 15 and 25 percent at age 65 experience it. Some experts suggest the numbers may be underreported since men are still embarrassed by this physical and psychological issue. However, the reassuring news is that it is treatable in all age groups.

What should I remember about erectile dysfunction?

Also called impotence, ED is the consistent inability to sustain and maintain an erection, is a widespread problem. It may affect as many as 50 percent of men between ages 40 and 70. Luckily, doctors can identify physical causes involving blood flow, nerves or other mechanical issues involving the penis, which can also be addressed with modern technology. In fact, oral drugs, vacuum devices, injectable medications, psychotherapy and even surgery have made impotence very treatable. The promising news is that new drugs are sure to join existing non-invasive treatments while other experimental options, such as gene therapy, are on the horizon. In addition, ongoing modifications of today's standard treatments will eventually