



ERECTILE DYSFUNCTION (ED)

What is Erectile Dysfunction?

Erectile dysfunction (ED) is the inability of a man to achieve or maintain an erection sufficient for his sexual needs or the needs of his partner. Most men experience this inability at some point in their lives, usually by age 40, and are not psychologically affected by it. Some men experience chronic, complete erectile dysfunction (impotence), and others achieve partial or brief erections. Frequent erectile dysfunction can cause emotional and relationship problems, and often leads to diminished self-esteem. It has many causes, most of which are treatable, and is not an inevitable consequence of aging.

The internal structure of the penis consists of two cylinder-shaped vascular tissue bodies that run throughout the penis; the urethra; erectile tissue surrounding the urethra; two main arteries; and several veins and nerves. The longest part of the penis is the shaft, at the end of which is the head, or glans penis. The opening at the tip of the glans, which allows for urination and ejaculation, is the meatus.

The physiological process of erection begins in the brain and involves the nervous and vascular systems. Neurotransmitters in the brain are some of the chemicals that initiate it. Physical or psychological stimulation (arousal) causes nerves to send messages to the vascular system, which results in significant blood flow to the penis. Because blood must stay in the penis to maintain rigidity, erectile tissue is enclosed by fibrous elastic sheaths that cinch to prevent blood from leaving the penis during erection. When stimulation ends, or following ejaculation, pressure in the penis decreases, blood is released, and the penis resumes its normal shape.

TREATMENT OPTIONS

There are several treatment options available to men with ED. Our office utilizes the following methods:

Viagra and other similar oral medication

Viagra is an oral medication. Viagra improves partial erections by inhibiting the enzyme that facilitates their reduction. The ingredients in Viagra are absorbed and processed rapidly by the body and Viagra is usually taken 30 minutes to 1 hour before intercourse.

Self-injection

There is also a method of self-injection for men suffering from ED. Self-injection involves using a short needle to inject medication through the side of the penis directly into the corpus cavernosum, which produces an erection that lasts from 30 minutes to several hours. These medications produce results similar to Viagra but are localized in the penis after injection. They cause vascular dilation and a relaxation of smooth muscle.

These drugs have been shown to produce erections in 80% of men who inject them. Some men claim that they produce erections that feel natural and improve sex. The injections are relatively painless and create an erection that begins about 5 to 15 minutes after the injection.

Urethral Suppositories

Urethral suppositories containing prostaglandin, like Muse® (Medicated Urethral System for Erections), may be an alternative to injection. Using a hand-held delivery device, a man inserts a prostaglandin pellet through the meatus (penis opening) into the urethra. Prostaglandin is absorbed through the urethral mucosa and into the surrounding erectile tissue. It is available with a prescription, is well tolerated, and may improve erections in 60% of men who use it.

Vacuum Devices

Vacuum devices work by manually creating an erection. The penis is inserted into a plastic tube, which is pressed against the body to form a seal. A hand pump attached to the tube is used to create a vacuum that draws blood into the penis, causing the penis to become engorged. After 1 to 3 minutes in the vacuum, an adequate erection is created. The penis is removed from the tube and a soft rubber O-ring is placed around the base of the penis to trap blood and maintain the erection until removed. The ring can be left in place for 25 to 30 minutes.

Vacuum devices work best in men who are able to achieve partial erections on their own. They are easy to use at home, require no other procedure, and typically improve erections regardless of the cause of impotence. Some men experience a numbing feeling after placing the O-ring. Since the penis is flaccid between the ring and the body, the erection may be somewhat floppy.

Surgical Penile Implants

Coastal Urology Associates also utilizes surgical penile implants. Penile implants involve surgical insertion of malleable or inflatable rods or tubes into the penis.

A semi-rigid prosthesis is a silicon-covered flexible metal rod. Once inserted, it provides the rigidity necessary for intercourse and can be curved slightly for concealment. It

requires the simplest surgical procedure of all the prostheses. Its main disadvantage is that concealment can be difficult with certain types of clothing.

An inflatable penile prosthesis consists of two soft silicone or bioflex (plastic) tubes inserted in the penis, a small reservoir implanted in the abdomen, and a small pump implanted in the scrotum. To produce an erection, a man pumps sterile liquid from the reservoir into the tubes by squeezing the pump in the scrotum. The tubes act as erectile tissue and expand to form an erection. When the erection is no longer desired, a valve allows the fluid to return to the reservoir. Inflatable prostheses are the most natural feeling of the penile implants and they allow for control of rigidity and size.

The surgical procedure to implant the inflatable prosthesis is slightly more complicated than for a semi-rigid implant. Also, because there are more mechanical parts, there is a higher risk for mechanical failure requiring repair or adjustment.

A self-contained inflatable prosthesis is similar but has fewer parts. It consists of a pair of inflatable tubes in the penis with a pump attached directly to the end of the implant. The reservoir is also located in the shaft of the penis. Its compact design allows for simpler implantation, but because it takes up more space in the penis, there is less room for expansion.

Coastal Urology Associates understand how our patients feel about erectile dysfunction and we strive to maintain the patients dignity at all times. If you would like to discuss erectile dysfunction with a caring and compassionate physician, please call our office to arrange for an appointment.