

# IMPOTENCE/ERECTILE DYSFUNCTION

The consistent inability to achieve adequate penile rigidity for penetration or adequate duration of rigidity for completion of sexual performance

## Treatment Options

### Oral Medication

Sildenafil, vardenafil, and tadalafil (marketed as Viagra®, Levitra, and Cialis) – pill taken approx. 1 hour before intercourse to achieve an erection

#### How Does it Work?

The medications work by bolstering the internal chemicals that allow the penis to become and remain erect.

Penile erection is caused by the engorgement of the penis with blood. This engorgement occurs when the blood vessels delivering blood to the penis increase the delivery of blood and the blood vessels carrying blood away from the penis decrease the removal of blood.

These drugs require stimulation to achieve an erection.

#### Side Effects/Risk

- Headache
- Flushing
- Indigestion
- Dizziness
- distorted (blue) vision
- increase risk of heart attack
- Nausea
- diarrhea
- nasal congestion
- stomach pain

**COST: \$10 per dose**

### Injection Therapy

The man directly injects the drugs into the side of his penis. The drugs relax muscles and increase blood flow to create an erection.

#### How Does it Work?

The patient injects a medication into the corpora cavernosa (the two chambers of the penis that are filled with spongy tissue).

This causes an erection by allowing the blood vessels within the penis to expand so that the penis first swells and then stiffens to create a fully rigid erection. The most common drugs are Papavarine, Phentolamine and alprostadil.

The doctor may combine two of these drugs (called a "bi-mix") or all three of the drugs (called a "tri-mix.") A firm erection develops in 10-15 minutes and lasts up to 60 minutes.

#### Side Effects/Risk

- Limited sexual spontaneity.
- Some men feel a sting from the needle.
- penile pain after injection.
- development of nodules in the penis
- scarring can occur with multiple use. This can further complicate the process of achieving an erection.
- prolonged erection can occur. Such an erection can turn into "priapism." This is a painful erection lasting more than four hours.

**COST: \$15-\$25 per injection**

### Intraurethral aprostadil

Small suppository placed into the distal urethra via a small applicator

#### How Does it Work?

A small pellet comes preloaded in an applicator. The urethra should be well lubricated before applicator is inserted in the tip of the penis.

Once inserted a small button at the other end of the applicator is pressed, thus releasing the suppository.

Gentle rubbing of the penis dissolves the suppository in the urethra and the medication is absorbed.

#### Side Effects/Risk

- pain in the penis and sometimes in the testicles, mild urethral bleeding, dizziness, and vaginal itching in the sex partner.
- Men also need to remain standing after inserting the pellet in order to increase blood flow to the penis, and it may take 15-30 minutes to attain an erection.

**COST: \$25 per dose**

### Vacuum device

an external pump with a band on it that a man with erectile dysfunction can use to get and maintain an erection.

#### How Does it Work?

- Place the pump, which can be pumped by hand or run on batteries, over the penis.
- Pump the air out of the cylinder so that a vacuum is created. The vacuum draws blood into the shaft of the penis and causes it to swell and become erect.
- Once the penis is erect, with the help of lubricant, slide the retaining band down onto the lower end of the penis.
- Remove the pump.
- The band is left on to keep blood in the penis during intercourse, it is removed after and should be removed within 30 minutes

#### Side Effects/Risk

- An erection obtained by the vacuum device is not the same as an erection achieved naturally. The penis tends to be purplish in color and can be cold or numb. Other side effects can include:
- A black and blue mark or small area of bleeding on the shaft of the penis.
- Decrease in the force of the ejaculation
- painful erection and ejaculation
- petechiae of the penis
- numbness
- cumbersome process
- requires manual dexterity

**COST: \$150- \$500**

### Penile prostheses

A permanent device that is surgically placed in the penis that allows an impotent man to have an erection. There are different types including a semirigid and inflatable prostheses.

#### How Does it Work?

##### Semi-Rigid

A semirigid prostheses remains the same width all the time. You bend the penis up when you want to have intercourse and then you bend it down to conceal the penis.

**ADVANTAGES:** easiest to have put in and has the lowest risk for mechanical failure

**DISADVANTAGES:** least natural looking result

##### Inflatable

A two or three-piece unit usually composed of two cylinders and a pump. The cylinders are placed on each side of the penis and the pump is placed in the scrotum. Squeezing the scrotal pump pushes fluid into the cylinders distending them to make the penis erect. The 3-piece unit also contains a reservoir which contains a larger amount of fluid which allows for a more rigid erection.

**ADVANTAGE:** natural looking: in the deflated state the penis is flaccid and in the inflated state the penis becomes rigid

**DISADVANTAGE:** Higher risk for mechanical malfunction

#### Side Effects/Risk

- Infection resulting in removal of the device
- tubing kinks
- fluid leaks
- aneurysm
- dilatation of the cylinders
- breakage of the wire
- silicone spillage
- loss of rigidity to the prosthesis
- erosion of the reservoir
- spontaneous deflation
- spontaneous inflation penile curvature, which is a variant of Peyronie's disease
- pump or pump reservoir migration
- phimosis or paraphimosis, both of which may require circumcision

**COST: \$8,000-\$15,000**