urology associates

Information for Patients

Erectile Dysfunction

What is erectile dysfunction?

Erectile dysfunction (ED) used to be called impotence. Erectile dysfunction is the inability to attain and maintain an erection sufficient for satisfactory sexual performance. Although a benign disorder, it can have a significant impact on the quality of sex life of their partners and families.

How common is erectile dysfunction?

- There is a steep increase with age.
- Accurate estimates are difficult to obtain, as many men fail to seek any medical help. The best available data indicate that 52% of men between 40 and 70 years of age suffer from erectile dysfunction. In can occur in men as young as twenties, especially where there are contributing medical factors.

Risk factors for erectile dysfunction

ED shares risk factors with cardiovascular disease (CVD). Screening for CVD is an effective method of secondary prevention for CVD in men presenting with ED. The following are all associated with both CVD and ED:

- Lack of exercise
- Obesity
- Smoking
- High cholesterol
- High blood pressure
- Metabolic syndrome
- Diabetes mellitus
- Surgery or radiation to the pelvis or retroperitoneum, radical prostatectomy (25-75% of these men have ED)
- Trauma
- Alcohol use
- Peyronie's disease

Drugs

- Antihypertensives
- Beta-blockers
- Diuretics
- Antidepressants: both tricyclics and selective serotonin reuptake inhibitors (SSRIs)
- Antipsychotics eg phenothiazines, risperidone
- Hormonal agents: cyproterone, luteinising hormone-releasing hormone analogues eg goserelin used in the treatment of prostate cancer
- Anticonvulsants: phenytoin, carbamazepine
- Antihistamines
- Recreational drugs eg cannabis, tobacco, alcohol
- H2 antagonists eg cimetidine and ranitidine

Psychosexual factors

- General (disorders of sexual intimacy, lack of arousability)
- Situational (partner, performance or stress)
- One study found that maintaining a regular frequency of intercourse can reduce the risk of ED for males aged 30-75 years.
- Generalised anxiety states.
- Depression.

Erectile dysfunction treatment and management

- The main aim of ED management is to diagnose and treat the cause of ED when possible.
- Associated modifiable or reversible factors (lifestyle, drug-related factors) should be considered as well as specific therapies.
- Most often it cannot be cured but, where appropriate, curative therapies should be offered.
- ED treatments will be selected, therefore, according to how effective they are, their safety, invasiveness, cost and men's preference.

FIRST-LINE THERAPY FOR ED

Oral agents

Phosphodiesterase inhibitors (sildenafil, tadalafil, vardenafil) improve the relaxation of smooth muscle. Efficacy of the drug is dependent on release of nitric oxide from the nerve terminals of the cavernosal nerve.

Use of high-dose sildenafil after radical prostatectomy (RP) has been suggested to be associated with preservation of smooth muscle within the corpora cavernosa and daily use results in a greater return of spontaneous normal erectile function after RP.

- **Sildenafil (Viagra, Silvasta, Vedafil)**
  - Improves erectile function and is generally well tolerated.
  - Efficacy is reduced after fatty meals.
  - 25-50 mg is the recommended starting dose (change according to response).
- **Tadalafil (Cialis)**
  - Has a longer half-life: therefore, a longer action and greater spontaneity (effective after 30 minutes, with peak efficacy at two hours and lasting up to 36 hours).
  - Start at 20 mg (change according to response).
  - Can also be given as a regular daily dose of 5 mg every day.
- **Vardenafil (Levitra)**
  - Effective after 30 minutes.
  - Useful in subgroups which are difficult to treat.
  - Its effect is reduced by a fatty meal, but it has less interaction with food.

Side effects of these drugs can include headache, facial flushing, blurred vision, backache, indigestion, stuffy nose, feeling dizzy. If you do suffer from these side effects, they are not permanent and will go away if you no longer use the drug.

Vacuum devices

- An external cylinder is fitted over the penis to allow air to be pumped out, resulting in engorgement of the penis with blood.
- A ring is then fitted over the base of the penis to hold the erection.
- Studies suggest that whilst two thirds of patients are unable to achieve ejaculation, 74% are able to achieve orgasm.

- They work best when there is a motivated, interested and understanding partner. They may be the treatment of choice in well-informed older patients and in those with co-morbidities precluding use of drugs or invasive methods.
- Adverse events include pain, bruising and numbness.
- Offer the advantage of being non-medical, without the need for drugs.

SECOND-LINE THERAPY FOR ED

Intracavernosal alprostadil (prostaglandin E1) - Caverject

- As injection of alprostadil is given into the side of the penis (corpus cavernosum) to produce an erection. The duration of erection depends on the dose.
- Effectiveness rates for alprostadil of > 70% in the general population have been reported and it is often effective for those men who do not respond to oral drug treatment.
- Penile pain (50% of patients) is usually mild, but a significant number of men stop using this method because of this side-effect.
- For men with diabetes, injecting with Caverject is very similar to injecting insulin.
- Warning: too high a dose of Caverject can cause a problem where the erection lasts too long, which is painful. This is known as priapism.

THIRD-LINE THERAPY FOR ED

Penile prosthesis

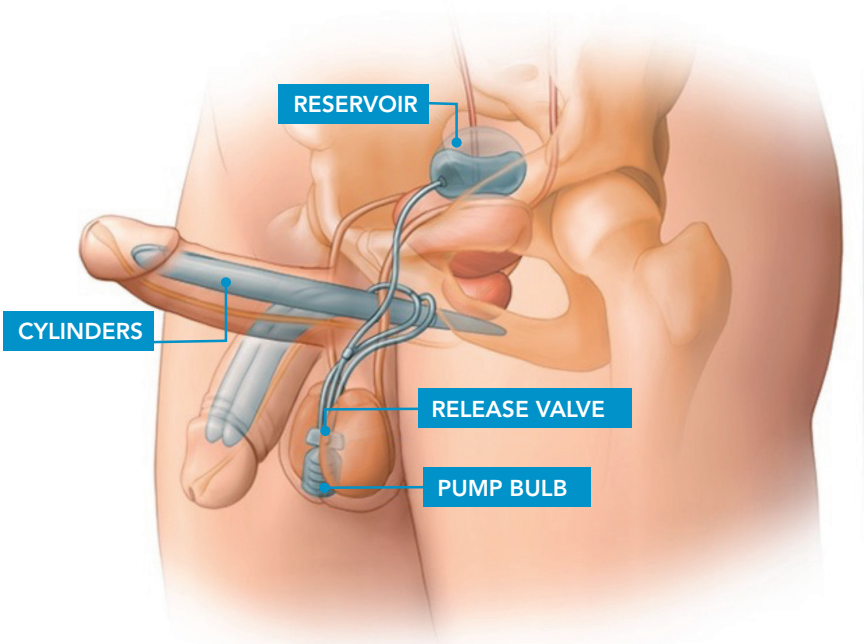
- Semi-rigid, malleable or inflatable devices are surgically inserted to produce an erection. Most patients prefer the three-piece inflatable penile prosthesis which includes a separate reservoir placed in the abdominal cavity.

  Prostheses should be considered in patients whose ED who are unwilling to consider, fail to respond to, or are unable to continue with medical treatment or external devices.

Prostheses provide the most reliable erection with the greatest control over spontaneity. They do not require pre-planning or the use of drugs/medications. Placement is a surgical procedure

There are two main types of penile implants:

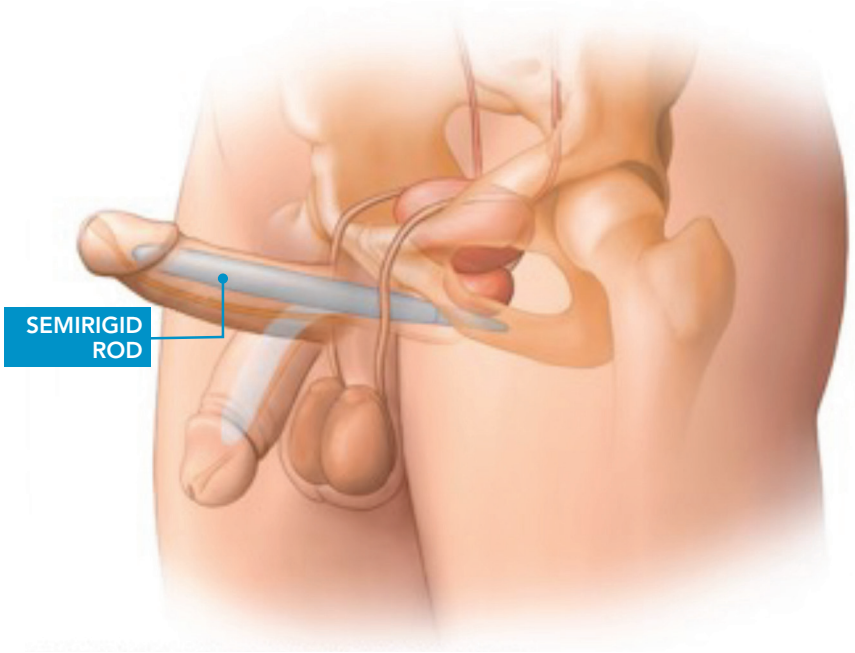
- **Inflatable implants**



Inflatable devices, the most common type of penile implant, can be inflated to create an erection and deflated at other times. Three-piece inflatable implants use a fluid-filled reservoir implanted under the abdominal wall, a pump and a release valve placed inside the scrotum, and two inflatable cylinders inside the penis.

To achieve an erection, you pump the fluid, which is salt water, from the reservoir into the cylinders. Afterward, you release the valve inside the scrotum to drain the fluid back into the reservoir.

- **Semirigid rods**



Semirigid devices are always firm. The penis can be bent away from the body for sexual activity and toward the body for concealment.

Both operations require an overnight stay in hospital and a 6-week healing period before it is ready to use for sexual intercourse. Our nurse specialist and your urologist can give you more information about these procedures.

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Version 1