

Patient information

Erectile Dysfunction (Impotence)

Urology Department

Erectile dysfunction (ED) means that you cannot get an adequate erection. There may be a serious underlying cause and it is important to see your GP for investigation. Most cases of ED can be treated. The most common treatment is to take a tablet before you plan to have sex. There are also various other treatment options.

What is erectile dysfunction?

Erectile dysfunction (ED) means that you cannot get and/or maintain an erection. In some cases the penis becomes partly erect, but not hard enough to have sex satisfactorily. In some cases, there is no swelling or fullness of the penis at all. ED is sometimes called impotence.

How common is erectile dysfunction?

Most men have odd times when they cannot get an erection. For example, you may not get an erection so easily if you are tired, stressed, distracted, or have drunk too much alcohol. For most men it is only temporary, and an erection occurs most times when you are sexually aroused.

However, about one in ten men have persistent, or recurring, ED. It can occur at any age, but becomes more common with increasing age. At least one in five men in their 70s have persistent ED.

How does an erection normally occur?

When you are sexually aroused, messages from your brain travel down nerves to your penis. Chemicals called 'neurotransmitters' are then released from the ends of the nerves in the penis. Stimulation of the penis can also cause local nerve endings to release neurotransmitter chemicals.

The neurotransmitters which are released in the penis cause another chemical to be made called cyclic guanosine monophosphate (cGMP). An increase of cGMP causes the arteries in the penis to dilate (widen). This allows extra blood to flood into the penis.

The rapid inflow of blood causes the penis to swell into an erection. The swollen inner part of the penis also 'presses' on the veins nearer to the skin surface of the penis. These veins normally drain the penis of blood. So, the flow of blood out of the penis is also restricted, which enhances the erection.

The cGMP is soon converted into another inactive chemical. But as you remain sexually aroused while having sex, your brain keeps sending nerve messages to the penis which makes more cGMP to maintain the erection. When the level of cGMP falls, the blood flow to the penis returns to normal, and the penis gradually returns to the non-erect state.

What causes erectile dysfunction?

There are several causes which tend to be grouped into 'physical' and 'psychological'.

Physical causes

About eight in ten cases of ED are due to a physical cause. If the cause is due to a physical problem, you are likely to still have a normal sex drive (libido).

Causes include:

- Reduced blood flow to the penis. Like in other parts of the body, the arteries which take blood to the penis can become narrowed, and the blood flow may not be sufficient to cause an erection.
- There are a number of 'risk factors' which increase your chance of 'narrowing of the arteries'. These include: getting older; high blood pressure; high cholesterol; smoking; diabetes.
- Diseases which affect the nerves going to the penis. For example, multiple sclerosis, a stroke, etc.
- Diabetes. This is one of the commonest causes of ED. Diabetes can affect blood vessels and nerves.
- Injury to the nerves going to the penis. For example, spinal injury, following surgery to nearby structures, fractured pelvis, radiotherapy to the genital area, etc.
- Side-effect of certain medicines. The most common are: some antidepressants; betablockers such as propranolol, atenolol etc; some diuretics ('water tablets'); some statins given for raised cholesterol; cimetidine. Many other less commonly used tablets sometimes cause ED.
- Alcohol and drug abuse.
- Hormone causes are rare. For example, a lack of a hormone called testosterone which is made in the testes.
- Excessive outflow of blood from the penis through the veins ('venous leak'). This is rare but can be caused by various conditions of the penis.

In most cases due to physical causes (apart from injury or after pelvic surgery), the ED tends to develop slowly. So, you may have intermittent or partial ED for a while, which may gradually get worse. It is also common to lose night time and early morning erections. In some cases, ED causes poor self-esteem, anxiety, and even depression. These reactions to ED can make the problem worse.

Have you considered your other medication?

As mentioned, some medicines can cause ED. Check the leaflet that comes with any medication that you take to see if ED is a possible side-effect.

Do not stop any prescribed medication, but see your doctor if you suspect this as the cause. A switch to a different medicine may be possible, depending on what the medicine is for.

Mental health ('psychological') causes

Various mental health conditions may cause you to develop ED.

For example:

- Stress from a difficult work or home situation.
- Anxiety.
- Relationship difficulties.
- Depression.

Typically, the ED develops quite suddenly if it is a 'symptom' of a mental health problem. The ED may resolve when your mental state improves (e.g. if your anxiety or depression eases.) However, some people become worried and anxious about developing ED. They do not realise it is a reaction to their mental health problem. This can make matters worse as worry and anxiety about a temporary cause of ED can cause persisting ED.

As a rule, a psychological cause is more likely for the ED than a physical cause if there are times when you can get a good erection, even though most of the time you cannot (e.g. if you can get an erection by masturbating, or wake up in the morning with an erection.)

What should I do if I develop persistent erectile dysfunction?

Because ED can be a sign of an underlying problem with the blood vessels it is important to see your GP for further investigation even if you do not want to have erections any more.

There is good evidence to show that in people at risk ED develops two to three years before they have a heart attack. Your family doctor (GP) should check your blood pressure and examine you and should also take blood tests for cholesterol and diabetes.

A referral to a specialist is sometimes needed for further assessment and treatment. However, GPs are now treating more cases of ED than previously as the treatment options have improved in recent years.

What are the treatment options?

The following gives a brief summary of treatment options. There is a good chance of success with treatment. There are pros and cons of each treatment, and your doctor will advise further.

- **Medication (tablets taken by mouth)**

In 1998, the first tablet to treat ED was launched. This made a huge impact on the treatment of ED. There are now three different tablets licensed in the UK to treat ED.

All three of the tablets work by increasing the blood flow to your penis. They do this by affecting the chemicals involved in dilating (widening) the blood vessels when you are sexually aroused (described above). They are sildenafil (trade name Viagra), tadalafil (trade name Cialis), and vardenafil (trade name Levitra). You take a dose about an hour before you plan to have sex.

So, even if the nerves or blood vessels going to your penis are not working so well, a tablet may cause the blood flow to increase in your penis and cause an erection. Tablets can treat ED caused by various underlying conditions.

None of these tablets will cause an erection unless you are sexually aroused. There is a good chance that a medicine will work, but they do not work in every case. There are pros and cons for each of the above, and your doctor will advise. For example, you may not be able to take certain tablets for ED if you have certain other medical conditions, or take certain other medicines.

- **Injection treatment**

This was the most common treatment before tablets became available. It usually works very well. You are taught how to inject a medicine into the base of the penis. This causes increased blood flow, and an erection usually develops within 15 minutes. (Unlike with tablets, the erection occurs whether or not you are sexually aroused.)

- **Urethral medication**

You can place a small pellet into the end of the urethra (the tube which passes urine and opens at the end of the penis). The pellet contains a similar medicine to that used for the injection treatment. The medicine is quickly absorbed into the penis to cause an erection, usually within 10-15 minutes.

- **Vacuum devices**

There are several different devices. Basically, you place a plastic container over your penis. A pump then sucks out the air from the container to create a vacuum. This causes blood to be drawn into the penis and cause an erection. When erect, a rubber band is placed at the base of the penis to maintain the erection. The plastic container is then taken off the penis and the penis remains erect until the rubber band is removed (which must be removed within 30 minutes).

- **Penile prosthesis**

A surgeon can insert a 'rod' permanently into the penis. The most sophisticated type can be inflated with an inbuilt pump to cause an erection. The more basic type keeps the penis rigid all the time.

Other treatments

Treating an underlying cause

For example, treating depression, anxiety, changing medication, or treating certain rare hormone conditions may cure the associated ED.

Counselling

Sometimes 'couple counselling', or sex therapy is useful. These are most useful if certain psychological problems are the cause of, or the result of, ED. In some cases, sex therapy is used in addition to another treatment option.

Treatment for erectile dysfunction on the NHS

The Department of Health states:

"From 1 July 1999 only those patients suffering from one of the specified medical conditions are eligible to receive drug treatments for impotence on the NHS. Other men can receive a private prescription from their own GP."

The specified medical conditions are:

Diabetes; multiple sclerosis; Parkinson's disease; poliomyelitis; prostate cancer; prostatectomy; radical pelvic surgery; renal failure treated by dialysis or transplant; severe pelvic injury; single gene neurological disease; spinal cord injury and spina bifida.

Some men with severe mental distress directly related to the ED may also be eligible for prescription on the NHS. Only certain specialists can make the diagnosis and your GP should refer to a psychosexual specialist if they have excluded a physical cause.

Unless you have one of the above conditions, you have to pay the full cost of any tablets prescribed to treat ED. You will have to pay a prescription charge if you normally pay one.

Feedback

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Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

**For general queries about telephone the Urology Centre on
Tel: 0151 600 1564.**

Text phone number: 18001 0151 600 1564

**For clinical questions specific to your case, telephone the secretary of
your Urology Consultant**

**Sexual Dysfunction Association
Windmill Place Business Centre,
2-4 Windmill Lane,
Southall, Middlesex, UB2 4NJ
Helpline: 0870 7743571
www.sda.uk.net**

Offers information and support for those who suffer from erectile dysfunction. They also provide information on female sexual dysfunction, Peyronies disease and premature and delayed ejaculation.

All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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