

# Injection, urethral and topical treatments for erectile dysfunction

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## What is erectile dysfunction?

Erectile dysfunction (ED) is when you are unable to get or keep an erection suitable for sexual intercourse or another chosen sexual activity (see our factsheet '[Erectile dysfunction](#)'). This factsheet explains how injection, urethral and topical treatments can help men with ED. These are used when oral treatments (tablets) do not work or are not suitable.

## What is injection treatment?

The first injectable drugs commonly used in the UK for erection problems were papaverine and phentolamine, but these were not licensed for ED and have now been replaced by alprostadil. This is the same as a chemical that the penis produces naturally when it becomes erect.

Alprostadil has been used as an injection for the treatment of erection problems in the UK since 1994. It does not work as a tablet but can also be used as a pellet (MUSE®) or a cream (Vitaros®). In injection form, alprostadil relaxes the penile muscles and blood vessels. This allows more blood to flow into the penis and get trapped there, which helps you get and keep an erection. Alprostadil injections work in more than 80% of men who do not respond to tablets.



Two alprostadil products are currently available for injection – Caverject® and Viridal®. They are available in a variety of dose strengths. The starting dose should be decided by your doctor. The usual dose is between 10 and 20 micrograms (mcg). These products are only available on prescription.

The patient (or his partner) is taught by a nurse or doctor how to inject the drug directly into the shaft of the penis when he wants an erection (up to a maximum of 3 times per week and not more than once daily). An erection usually follows within 20 minutes of the injection. Even though the thought of this brings tears to the eyes of some of the strongest men, the procedure is easy to learn and, surprisingly, it is not too uncomfortable. The erection should last up to an hour; although very occasionally, it will last longer if the dose of alprostadil is too large (see the section below ‘What if my erection lasts too long?’).

Other possible side effects include occasional pain, a burning sensation, or a small nodule in the shaft of the penis which disappears if you change the injection site (it is best to change sides regularly). Men are advised to use a condom when using Viridal® if their partner is, may be, or could become pregnant. You should not use alprostadil injections if you have Peyronie’s disease (see our factsheet ‘[Peyronie’s disease](#)’), or if you have sickle cell anaemia, leukaemia, or multiple myeloma, as these may cause a prolonged erection.

Invicorp is another type of injection therapy used to treat ED. It contains two active ingredients (aviptadil and phentolamine mesilate); one increases blood flow to the penis to help get an erection while the other helps trap the increased amount of blood in the penis to keep the erection. Invicorp may work well for men who have found little success with other ED treatments and some may find it less uncomfortable to use than alprostadil injections.

## What is urethral treatment?

This treatment is based on the discovery that the urethra (the tube through which urine is passed) can absorb certain medications. The active ingredient in the ‘medicated urethral system for erection’ (MUSE®) is alprostadil, which has been used as an injection for many years (see the previous section).

For use in the urethra, alprostadil is made into a very small pellet, which is inserted using a special applicator. It should not be painful. It is best used just after passing urine, as the extra moisture helps the drug to be absorbed. The alprostadil then passes into the surrounding tissues of the penis, creating an erection. When MUSE® works, it takes between 5-10 minutes for an erection to occur and it should last for between 30-60 minutes. It can be used twice a day but not more than 7 times a week.

MUSE® comes in a variety of dose strengths. The initial dose should be decided by you and your doctor. Patients usually start off on 500 micrograms (mcg), increasing to 1000



mcg. This treatment works in up to two-thirds of men and seems particularly suitable for people with diabetes.

MUSE® has few side effects. If you are rough when inserting the applicator, you can scratch the lining of the urethra, which may cause pain or even a spot of blood. This is not harmful. Other possible side effects include headache, dizziness, and more rarely fainting - usually at the thought of sticking something up one's urethra! Some men may feel a burning sensation that can last for an hour or two, but this should not interfere with intercourse. Very occasionally, your partner may have some internal itching or burning. If she is, or may be pregnant, you should use a condom. Rarely, your erection may last too long (see the section below 'What if my erection lasts too long?') You should not use MUSE® if you have Peyronie's disease (see our factsheet '[Peyronie's disease](#)'), or if you have sickle cell anaemia, leukaemia, or multiple myeloma, as these may cause a prolonged erection.

## What is topical treatment?

Alprostadil is also available as a cream called Vitaros®. This is applied to the opening (meatus) of the penis with a special applicator. It should be used 5 to 30 minutes before intercourse and improvements in erection should last between 1 and 2 hours. It should be used no more than 2-3 times a week and only once a day.

Rarely your erection may last too long (see the section below 'What if my erection lasts too long?'). Other possible side effects include rash and discomfort. Occasionally your partner may have some internal itching or burning. If they are pregnant, breastfeeding or of childbearing age, it is advised that you use a condom. You should not use Vitaros® if you have Peyronie's disease (see our factsheet '[Peyronie's disease](#)'), or if you have sickle cell anaemia, leukaemia, or multiple myeloma, as these may cause a prolonged erection.

## What should you do if your erection lasts too long?

Following the use of these products, the erection usually goes down with ejaculation. If this does not happen, it may become uncomfortable and you will need to reduce it as soon as possible. Exercise such as running up and down stairs or cycling vigorously will usually work, or try taking a cold shower. An ice bag (such as frozen peas) wrapped around the penis for a short time may also be effective (but don't overdo this - you want to cool the area not freeze it!). Otherwise, taking an over-the-counter decongestant medicine called Sudafed® (pseudoephedrine HCl) in tablet form may help. But check with the pharmacist that it is ok for you to take this if you have other health problems or are taking other medications. If your erection lasts longer than 4 hours, you should go to a hospital casualty unit or Accident and Emergency Department as soon as you can, because a long delay may damage the penis.

## Where can you get more information?

The Sexual Advice Association is here to help. We cannot give individual medical advice, but we can answer your questions on any sexual problems and put you in touch with local specialist practitioners. We also have a number of factsheets and booklets on sexual problems and related issues for men and women that can be downloaded from our website or requested. Please feel free to email us or phone our Helpline (our contact details are at the bottom of this page).

You can also visit the NHS Choices website at [www.nhs.uk](http://www.nhs.uk) for information and advice on many different health and lifestyle topics.

## What is the Take Home Message?

**Some treatments for ED are applied to the penis itself - they may be a good alternative if tablets do not work or are not suitable**

## Further reading

Download or request our factsheet '[Oral treatment for erectile dysfunction](#)' and/or our booklet '[Sex and growing older - Men](#)'

## Donate

By donating to the Sexual Advice Association, you will know that you are helping improve the lives of people living with sexual problems. If you are interested in donating, please click [here](#) or contact us for more information (details at the bottom of this page).

## Thinking About Sex Day: February 14th

Launched by the Sexual Advice Association, Thinking About Sex Day (TASD) is designed to encourage everyone to think about the physical and psychological issues surrounding sexual activity.

