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Patient Care + Research + Clinical Trials

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Erectile Dysfunction (ED)

Erectile dysfunction (or ED), the inability to achieve or maintain a satisfactory erection, is a common problem that can be successfully treated in the vast majority of cases.

Causes of ED

Normal erectile function requires three factors; male hormone (testosterone), a good blood supply and good nerve connections.

It is normal for an erection to subside after ejaculation.

Premature ejaculation: If your problem is that you ejaculate too quickly ("premature ejaculation") and therefore quickly lose your erection, you should talk to your family doctor about the medication paroxetine best known as a treatment for depression. The usual dose for premature ejaculation is one 20 mg tablet taken 4 hours before expected sexual activity (ie not every day). This treatment is moderately effective - if taken daily it is more effective.

Low testosterone: low testosterone level is an uncommon cause of ED. Men with low testosterone levels may notice that they are less interested in sex and/or have fewer sexual thoughts. They may notice that ejaculation takes much longer than before and that the volume of semen is much less. If you notice such symptoms, ask your family doctor for a blood test to measure your serum total testosterone level. If the level is low two other blood tests; FSH and prolactin are required to determine the cause of the low testosterone.

Low testosterone is best treated by taking injections of testosterone into the muscle every 2 weeks or so. Testosterone may also be given as a gel, cream or tablet. Testosterone treatment should not be started without the cause of low testosterone being determined.

Testosterone levels gradually fall with natural aging. Thus healthy older men have lower testosterone levels than healthy younger men. Studies suggest that levels fall by 50% between the age of 20 and 70. Lower testosterone levels lead to delayed ejaculation and to lower volumes of ejaculate.

Poor blood supply to the penis: this a fairly common cause of ED. Men who have poor circulation in their legs or who have a history of heart attack or stroke may have an element of

poor blood flow. Providing the blood supply is not severely decreased, the treatments mentioned below are often effective. Blood pressure lowering medication, particularly beta blockers, often worsen blood supply to the penis and exacerbate ED. Alternative blood-pressure lowering medication is usually available.

Damage to the nerve supply to the penis: This is the commonest cause of ED. Common causes of nerve damage ("neuropathy") are diabetes and alcohol excess. In individuals with diabetes, improving blood glucose control and controlling blood pressure & cholesterol may help to prevent worsening of ED (and will benefit overall health).

Oral medications for ED

There are three oral medications of the class "PDE5 inhibitors" that are moderately effective in treating ED caused by either poor blood flow or neuropathy. They are sildenafil (Viagra), tadalafil (Cialis) and vardenafil (Levitra). In maximal doses these three drugs are equivalent in their effects. You may ask "how likely would one of these treatments work for me". To answer that question I would ask you to ask yourself "what is the best erection you can get on a 1 to 10 point scale? (with 10 being a very hard teenage erection and 7 being required for usual vaginal sex). On average Viagra, Cialis and Levitra increase your score by 3. Thus if your best erection is a 5, you may get an 8 which would be very satisfactory. Even if your best erection is a 4 these agents may make vaginal intercourse possible.

Sildenafil/Viagra comes in 25, 50 and 100 mg tablets. Each tablet costs the same. By breaking higher strength tablets you can save if you find that a lower strength works for you. Viagra should be taken 60 minutes or more before sexual activity & on an empty stomach. 100 mg is the usual maximal dose. Don't give up until you have tried it at least 3 times. Duration of action is up to 4 hours.

Vardenafil/Levitra comes in 5, 10, and 20 mg pills. 20 mg is the usual maximal dose. Higher doses may be used. It works in 30-60 minutes, lasts up to 4 hours and does not need to be taken on an empty stomach.

Tadalafil/Cialis comes in 5 and 20 mg pills. 20 mg is the usual maximal dose. Cialis works in 60-120 minutes or so and lasts up to 36 hours and does not need to be taken on an empty stomach. The 5 mg dose is designed to be taken every day (like a vitamin), regardless of whether sexual activity is anticipated. If the daily 5 mg dose does not give optimal effects, an additional 10-20 mg can be taken 1-2 hours prior to anticipated sexual activity.

These drugs are expensive. Some BCDiabetes patients have bought them online cheaply & reliably from this source. They have reported that some shipments are intercepted by Customs & Excise Canada and returned - however refunds are given by the supplier.

All three agents should not be taken with nitrates or nitroglycerine (for angina) as severe low blood pressure may occur. Common side effects include stuffy nose and headache.

ED despite Viagra or Cialis

Men with ED for whom Viagra/Cialis-like drugs (PDE5 inhibitors including sildenafil, tadalafil & vardenafil) are ineffective should consider two additional treatments.

1) **penile vacuum pump**

This treatment is effective in >90% of cases and is highly recommended by BCDiabetes. The best penile vacuum device on the North American market is still the Osbon Erec-Aid "Esteem". Click here for an instructional video.

The only option for purchase in Canada is online through Osbon.ca. The base model with manual mode is $459 + tax and recommended. A battery powered unit is available at $589 + tax.

BCDiabetes has a loaner model which it is happy to lend to its patients for a week. Clients need to make a credit card deposit of $500 which is refunded when they return it. Patients are asked to run it through their dish washer before returning it.

Third Party Insurance: these devices are covered by DVA and RCMP but not by Pacific Blue Cross.

2) intracavernosal injection (injections into the penis)

This option is effective in most cases. It involves injection into the penis of medication(s) (alprostadil “Caverject” or trimix = phentolamine/papaverine/alprostadil) that results in increased blood flow into the penis. The injection is with either an insulin syringe or a custom device. Thus for individuals already taking shots of insulin for diabetes this may seem relatively straight-forward. Technique is shown in this video. One shot usually works for 30+ minutes. Side effects include pain at the injection site and occasionally priapism.

At BCDiabetes the starting drug is alprostadil prepared in a compounding pharmacy at 20 micrograms per ml in a 5 ml vial. The starting dose is 5 micrograms = 25 “units” on an insulin syringe. Only one shot should be attempted in any one 24 hour period. Instruction to the pharmacy are as follows: Supply 5 ml vial containing 20 micrograms per ml. Supply 100 unit insulin syringes. 5 micrograms is contained in 25 "units" in an insulin syringe. May increase dose to 10 micrograms (50 "units") and 20 micrograms (100 "units"). see https://bit.ly/IC_injection

Priapism is the development of an erection that will not subside on its own - it is painful and can occasionally lead to damage to the penis. Treatment is to go to the ER and to have a physician draw blood out of the penis with a syringe and needle. This complication is rare if care is taken in determining the optimal dose. Dr. Elliott will teach self-injection at the time of an appointment.

Short URL = http://bit.ly/BCD_ED