BC Diabetes Foundation

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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,PE") and therefore quickly lose your erection, you should talk to your family doctor about the medication paroxetine commonly used for depression if taken daily but also effective for PE when taken 4 hours before expected sexual activity, typically in a dose of 20 mg. This treatment is moderately 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 best 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 individuals purchase them online cheaply & reliably.

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 is almost all cases and is recommended by most diabetes specialists and urologists. At the time of the most recent revision the best penile vacuum device on the North American market is the Osbon Erec-Aid "Esteem". Click here for an instructional video.

These devices can be purchased online from Osbon.ca. Prices start at $350 (manual system - recommended), and $250 (battery-powered pump, cheaper but does NOT have the option of manual pump). Devices can also be purchased at Davies Prescription Pharmacy 604-985-8771 located at 1401 St. Georges Ave, North Vancouver, BC V7J 2C1 as well as Wilson Pharmacy.

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. One shot usually works for 30+ minutes. Side effects include pain at the injection site and occasionally priapism. 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. Most urologists and some diabetes specialists will teach you such injections.