

## What is erectile dysfunction?

Erectile Dysfunction (ED) is an inability of the male to attain and/or maintain penile erection sufficient for satisfactory sexual performance.<sup>1</sup>

## How an erection works

When a man is sexually aroused, the arteries in the penis relax and widen, allowing more blood to flow in. As those arteries expand and harden, the veins that normally carry blood away from the penis become compressed, restricting the blood flow out. With more blood flowing in and less flowing out, the penis gets bigger, resulting in an erection.<sup>2</sup>

### The soft (flaccid) penis

Without arousal, the amount of blood going into the penis equals the amount flowing out and the penis remains soft.<sup>2-4</sup>

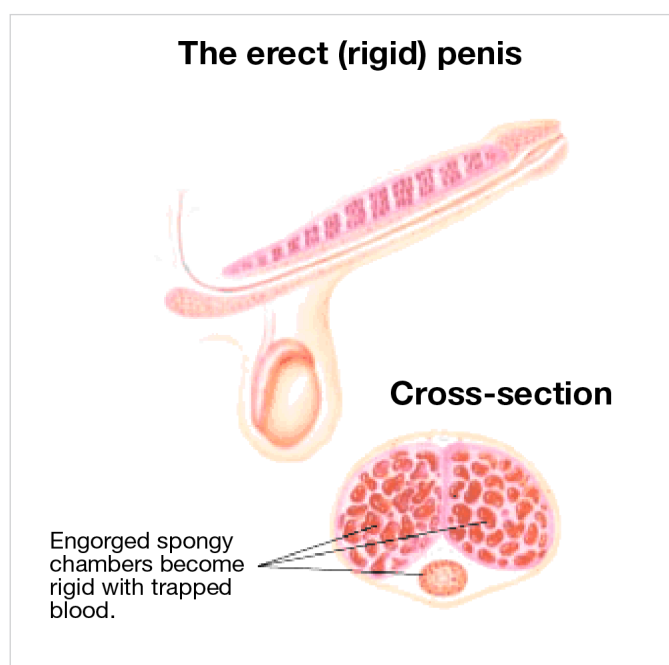
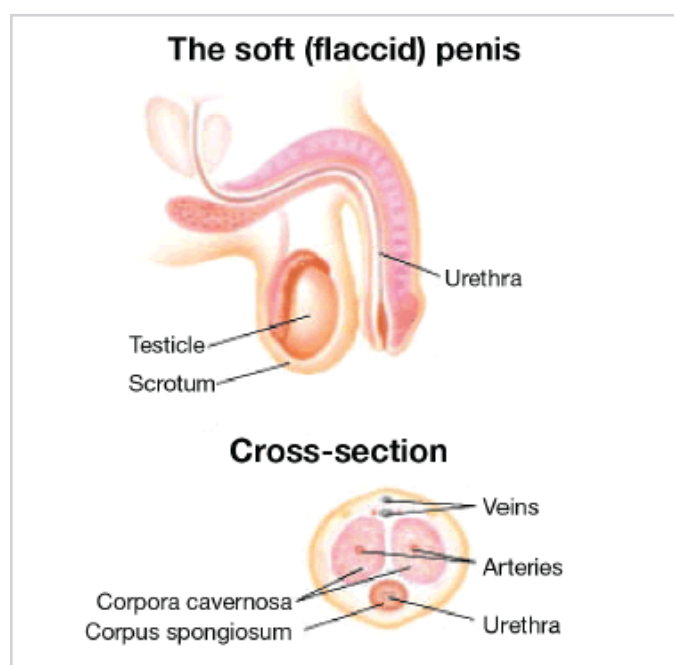
### Aroused penis

With arousal, the nerves stimulate the blood vessels and spongy chambers in the penis to expand to make room for more blood.<sup>2-4</sup>

### The erect penis

As arousal continues, blood keeps moving into the penis and some is prevented from flowing back out. When filled with blood, the penis becomes rigid and intercourse is possible.<sup>2-4</sup>

For an erection to occur, it is best if the **nervous system**, **blood vessels** and **muscles in the penis** are all **functioning normally**.<sup>3</sup>



Adapted from Lue et al., National Institutes of Health (USA) and National Geographic Society<sup>2,3,5</sup>

## Causes of ED

While it may sound simple, an erection is the result of a delicate but perfectly balanced process that involves the brain, blood vessels, nerves and hormones. If any one of those elements isn't working properly, it can cause a problem with the events that enable the penis to fill with blood. The result is called erectile dysfunction (ED).<sup>2,3</sup>

### Disease

Damage to nerves, arteries, smooth muscles, and fibrous tissues, often as a result of disease, is the most common cause of ED.<sup>3</sup>

#### These diseases include:<sup>3</sup>

- Diabetes (between 35 and 50 percent of men with diabetes experience ED)
- Kidney disease
- Chronic alcoholism
- Multiple sclerosis
- Atherosclerosis
- Vascular disease
- Neurologic disease
- Hormonal abnormalities (e.g. low levels of testosterone).<sup>3</sup>

Altogether, diseases account for about 70% of ED cases. Removal of the prostate and spinal cord injury can also cause ED.<sup>3</sup>

### Lifestyle choices

Certain lifestyle choices that increase the risk of heart disease and vascular problems also raise the risk of erectile dysfunction. Smoking, which affects blood flow in veins and arteries, being overweight, and avoiding exercise are all potential causes of ED.<sup>3</sup> Overweight and obese men may be 30% to 90% more likely to experience ED compared to normal weight men.<sup>6</sup> Some studies have suggested that prolonged cycling can lead to ED.<sup>7</sup>

### Surgery

Surgery (especially removal of the prostate for cancer) can injure nerves and arteries near the penis, causing ED. Injury to the penis, spinal cord, prostate, bladder, and pelvis can lead to ED.<sup>3</sup>

### Drugs

In addition, many common medicines—blood pressure drugs, antidepressants, tranquilizers, appetite suppressants, and cimetidine (an ulcer drug)—may lead to ED as a side effect. Please consult your physician about side effects and never stop taking your medication without a physician's advice.

### Psychological factors

Experts believe that psychological factors (e.g., stress, anxiety, guilt, depression, low self-esteem, and fear of sexual failure) may cause 10 to 20 percent of ED cases.<sup>3</sup> Men with ED due to a physical cause frequently experience the same sort of psychological reactions.<sup>3</sup> Other possible causes include smoking.

## How common is erectile dysfunction?

ED is a widespread condition that affects about half of all Canadian men over 40 years of age<sup>8†</sup>. Complete (severe), moderate and minimal ED occurred in 10%, 25% and 17% of the men in a US survey of men aged 40-70, respectively. Incidence of moderate to severe ED more than doubled between the ages of 40 and 70 years.<sup>4</sup>

### Is ED part of aging?

**No**...although it is related to certain age-related body changes, ED is not considered to be a normal part of the aging process.<sup>4</sup>

**However**...ED is commonly associated with aging. Incidence increases with age; about 5% of 40-year-old men vs. 15% to 25% of 65-year-old men experience ED. In older men, ED generally has a physical cause, such as disease, injury, or side effects of drugs. In fact, any disorder that injures the nerves or impairs blood flow in the penis can lead to ED.<sup>3,4,9</sup>

† A survey of a cross-sectional sample of 3921 Canadian men aged 40 to 88 years seen by primary care physicians. The study was designed to estimate the prevalence of ED among Canadian men and to determine the impact of vascular and nonvascular risk factors and comorbidities on the prevalence of ED.<sup>8</sup>

## Who gets erectile dysfunction?

A variety of risk factors predict a man's likelihood of developing ED. Most of these are problems that interfere with the blood supply to the penis, or involve nerve function.<sup>3,4</sup>

### The most common risk factors for ED include:

Certain medical conditions:

- Diabetes mellitus<sup>4</sup>
- Heart disease<sup>4</sup>
- Hypertension<sup>4</sup>
- Decreased high density lipoprotein (HDL)—the “good cholesterol”<sup>4</sup>
- Multiple sclerosis<sup>3</sup>

Other factors:

- Cigarette smoking, obesity, alcohol abuse and drug use<sup>3,4</sup>
- Medications used to treat diabetes, cardiovascular disease and other conditions<sup>4</sup>
- Radiation or surgery for prostate cancer<sup>4</sup>
- Lower spinal cord injury<sup>4</sup>

## How to prevent erectile dysfunction?

There are many things you can do to help prevent ED:

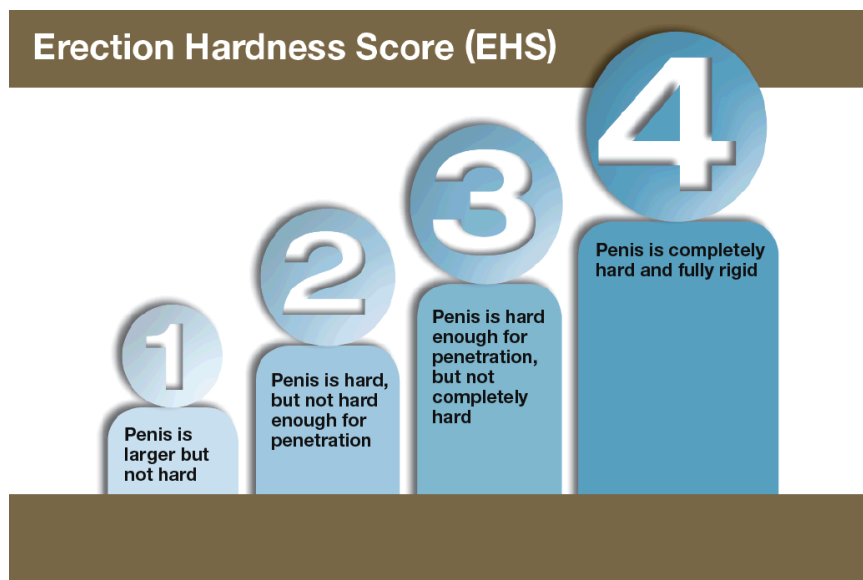
- Talk with your doctor about preventing and managing conditions that can lead to erectile dysfunction, such as diabetes and heart disease<sup>10</sup>
- Limit or avoid the use of alcohol<sup>11</sup>
- Avoid illegal drugs such as marijuana<sup>11</sup>
- Keep your environment smoke free<sup>10</sup>
- Exercise regularly<sup>10</sup>
- Reduce stress<sup>11</sup>
- Get enough sleep<sup>11</sup>
- Get help for anxiety or depression<sup>11</sup>
- See your doctor for regular checkups and medical screening tests<sup>11</sup>

## What are the signs and symptoms?

By definition, ED is the inability of the male to attain and/or maintain penile erection sufficient for satisfactory sexual performance.<sup>1</sup>

The symptoms for erectile dysfunction may include the following:<sup>12,13</sup>

- Inability to get an erection
- Inability to keep an erection after penetration
- Inability to keep an erection long enough to complete intercourse
- Erections that are not hard enough for penetration



## The Erection Hardness Score

Evaluation of ED takes into consideration the hardness of an erection and how it may affect sex. The Erection Hardness Score has been created to help assess your ED.<sup>14</sup>

## How is ED diagnosed?

According to the Canadian Urological Association, the diagnosis of ED proceeds as follows:<sup>12</sup>

1. Confirmation that the problem is ED by ruling out premature ejaculation or sexual dysfunction from other causes (e.g., low levels of desire).
2. Determination of when the ED started, the nature of the problem and significance to the couple.
3. Evaluation of any potentially reversible causes of the ED (medication, stress, depression, hormonal, tobacco, alcohol, drugs, partner-specific issues).
4. Determination of the cause of ED based on the history, physical exam and lab testing.

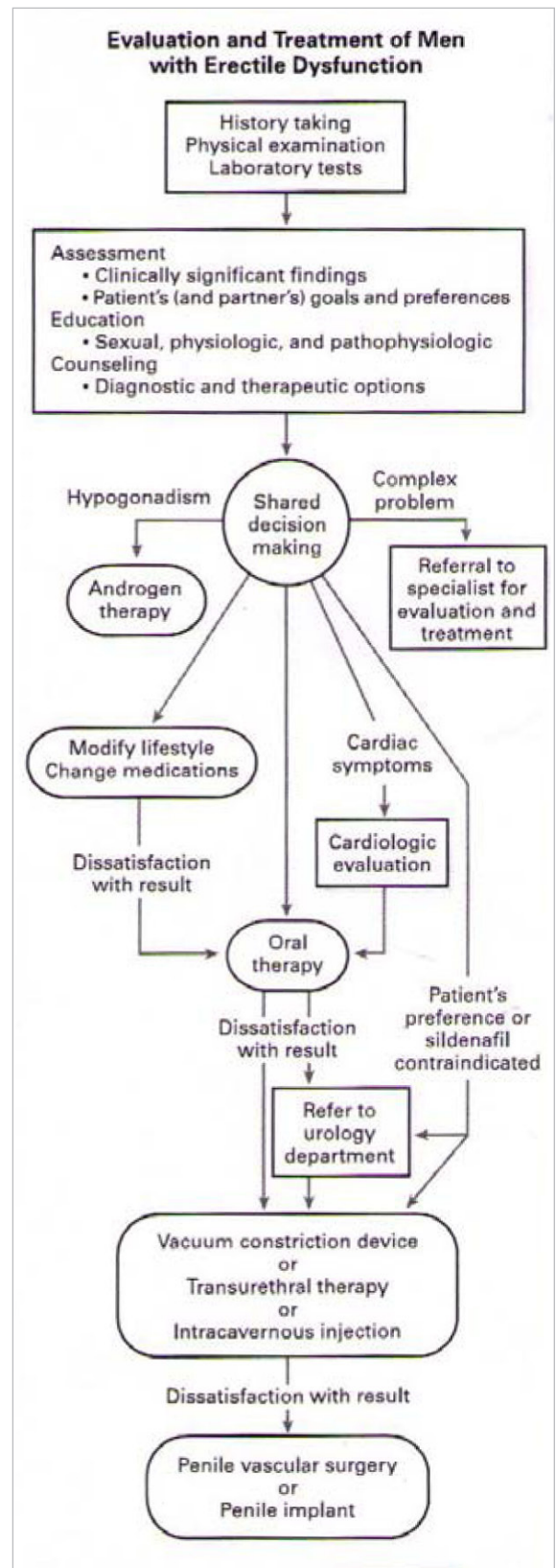
The physician will probably do the following:<sup>12</sup>

1. History and clinical questioning (this is the most important component of the ED evaluation).
2. Physical examination (directed at nerve-related and blood vessel systems essential for erections).
3. Ask the patient to fill out a questionnaire.
4. Prescribe blood tests (glucose, hormones, cholesterol).
5. Advise (if necessary) consultation with subspecialists (endocrinology, psychology, cardiology).
6. Specialized tests (if necessary).

## How is erectile dysfunction treated?

An overview of evaluation and treatment of men with ED is presented in the flow diagram on the right.

There are a variety of ED treatment options to meet your needs and preferences and, like any therapy, each has its own advantages and disadvantages. So get familiar with your options, and your physician can help you choose the one that works best for you and your partner.



Adapted from Lue et al, 2000<sup>2</sup>

## Oral Therapy

There are pills that work for most men... depending on the underlying cause of ED.<sup>4,15</sup> As with any medication, there are side effects. Speak with your doctor or pharmacist to learn more about these. With oral drugs, the man still requires sexual stimulation to allow the natural erection process to take place.

## Vacuum Therapy

This treatment involves the use of a vacuum constriction device (VCD), the components of which are a vacuum pump, a closed plastic cylinder and a constriction ring. Placing the penis in the cylinder and pumping out the air produces a vacuum which draws blood into the erectile tissues, causing an erection that is then maintained by a constriction band placed at the base of the penis.<sup>4</sup>

## Transurethral Therapy

This treatment involves using an applicator to insert a tiny suppository into the tip of the penis. The drug relaxes the muscles of the erectile tissue, increasing blood flow.<sup>13</sup>

## Penile Injection Therapy

Penile injection therapy involves self-injecting a drug with a fine needle directly into the side of the penis prior to attempting intercourse. Similar to transurethral therapy, the drug relaxes the muscles of the erectile tissue, increasing blood flow.<sup>13</sup>

## Penile Implants

This treatment involves replacing erectile tissue in the penis with a prosthesis. There are two basic types of implants: semi-rigid malleable prosthesis and inflatable (hydraulic) devices with one, two or three components. Both types require surgery and, for this reason, are generally considered only after other options fail.<sup>4</sup>

## Vascular surgery

This treatment is generally for men whose blood flow has been blocked by an injury to the penis or pelvic area. Surgery corrects erectile dysfunction caused by vascular blockages. The goal of this treatment is to treat blockage of blood flow to the penis so that erections can occur naturally.<sup>13</sup>

## Professional Counseling

Psychotherapy and/or behavioural therapy alone may be helpful for some patients in whom no physical cause of ED is detected, or for patients who refuse medical and surgical interventions. Counseling is also often beneficial in combination with other treatments.<sup>15</sup>

## Psychological counseling and sex therapy

If stress, anxiety or depression is the cause of erectile dysfunction, the doctor may recommend that, you or you and your partner, see a psychologist or counselor with experience in treating sexual problems. Even if your ED is caused by something physical, the condition can cause stress and relationship tension.<sup>4</sup>



## If one ED treatment doesn't work, will the others?

As with any therapy, there is no such thing as “one-treatment-works-for-all”. If you don't immediately get the results you expect, you have to be patient. If after trying a couple of times you and your partner still aren't satisfied with the results, talk to your doctor.

## How do I know which option is best for me?

When your doctor makes recommendations for treating ED, consider:

- What you're most comfortable with (based on what you expect).
- What you think will work best for you and your partner (they're involved too!).
- No matter which option you choose, you'll probably find that treating ED can make a world of difference in how you feel about yourself and how you connect with your partner. But you also have to be realistic.
- Treating ED will not increase libido. If you think libido is playing a part in your ED, mention it to your doctor so it can be properly treated.
- The treatment option you choose might not work the first time or every time.
- People are different. What works best for you might not work for someone else and your dose may be different than someone else's. Never take a medication that has been prescribed for someone else.
- Successful treatment of your ED will not fix a broken relationship.

## Exactly what is libido?

Libido can play a role in ED treatment to succeed, but it's a term that is sometimes misunderstood. Libido is conscious or unconscious sexual desire.<sup>16</sup>

## Living with erectile dysfunction

It's easy to see how ED might become a problem if you consider the following:

- When men cannot get or keep an erection, many think it's 'their fault'.<sup>17\*\*</sup> As a result, they may hesitate to try again. And that just makes things worse—in some cases men may avoid any sexual situations even kissing and hugging.<sup>18</sup>
- Partners may also feel at fault for the erectile difficulties. They may suspect that the ED-affected man is no longer attracted to them.<sup>18</sup>
- For men, ED can be way past embarrassing. It can seriously affect self-confidence and self-image.<sup>18</sup> With all that going on, it's no surprise that talking about it may be one of the last things you want to do. But it doesn't have to be that way.

\*\*A 27-country international consumer survey designed to explore sexual habits and behaviours, particularly aspirations and unmet needs. Among men usually, sometimes or never able to get and keep an erection (n = 2816), 67% felt that it was their fault.<sup>17</sup>

## Positive steps

There are a few positive steps you can take to learn more about ED. After all, you want to make an informed decision—what works best for you.

1. Make an appointment with your doctor—the best way to get a professional opinion on all of your options.
2. Gather information about ED and treatment options so that you are prepared for your visit.

## If you are in a relationship

For those of you in a relationship...repeat this sentence aloud twice: ED doesn't have to affect a relationship—especially if my partner and I are willing to do something about it.

When it comes to relationships and sex, one of the most potentially damaging things is what isn't said. Why? Because both partners are trying to second-guess what the other is thinking and feeling. Eventually one of you is going to have to break the ice. What are you waiting for?<sup>18</sup>

Some of you may have trouble talking about ED. Once you start to share your thoughts and feelings, you're on your way to clearing up all the assumptions or misunderstandings that may have been gnawing away at both of you—and eating away at your relationship.<sup>18</sup>

## Communicating with your partner

Here are some things to consider when you are communicating with your partner about sex:

- Talking about sexual issues should NOT be done after an unsuccessful attempt at making love.
- Set time aside outside the bedroom (plan a romantic dinner, sit by the fireplace). The idea is to have a calm and relaxing atmosphere.
- Be honest, talk about how you have been feeling. It's okay to say you are uncomfortable discussing this. (e.g., I feel awkward talking about this, but I need you to know how I feel, and I really want to do something about it, for me and for us).
- Be positive. Reassure them that you are getting help. Thank your partner for their support, tell them how much you appreciate them and reassure them that you are attracted to them.
- Ask your partner for their support and help while you address the issue.

## Here are some conversation starters you can use to start communicating with your partner:

- You know that I love being with you, right? I want to make our sex life the best it can be, so I decided to get help.
- I know you've noticed that I am having some trouble with my erections, and I promise, it's not about you. I want and love sex with you.... I need to figure out what is going on in my body and I hope you'll help me by being patient.
- I love having sex with you, so I'm really trying to figure out what's going on with my penis, because it's definitely not about how I feel about you.
- Can we talk about how I feel about you?

## If you are not in a relationship

For those of you not in a relationship... repeat this sentence aloud twice: ED doesn't have to ruin my life—especially if I am willing to do something about it.



## Partner empowerment

**Reality check: If you or your partner is concerned about his ability to have an erection, to keep an erection, or the hardness of his erection for lovemaking—then there’s obviously some sort of difficulty.**

Every relationship is unique. Your approach to the subject of ED with your partner should be based on something that has worked before for other important relationship issues.

Here are a few suggestions to help get things going:

- Focus first on the ED issues that are important to him.
- Always try to speak in terms of “we” and “us” so that it’s clear that ED is an issue you’re both working on together.
- Avoid making statements. Instead, ask open-ended questions about how he’s feeling, what he thinks is going on, what the two of you should do, etc.
- Clear up all the myths, misunderstandings and misconceptions so that they don’t get in the way of working on the facts.
- Don’t try and force any action (such as immediately making an appointment with a physician)—you both have to own (believe in) a decision for it to work.
- Try to lead the discussion in the direction of a solution.

### Tips on talking about ED

If you know your partner is worried about his erection, the first step is to get him to admit he’s concerned... so that you can start to talk about it.

Here are some tips to make the conversation go smoother:

- Don’t take it personally.
- Be supportive.
- Reassure your partner (he may feel like he is incapable of satisfying you and that he is less of a man).
- Take the pressure off performance.

### Conversation starters

- We need to talk about what’s happening in the bedroom because I think you are making too much of it. Let’s figure out what it is, and how to fix it. I’ve heard that it’s not so complicated to treat.
- I hope you don’t think I’m taking this personally? I’m not, I know that this kind of thing happens to almost all men at some point.
- I want to help you with this, because I see what it’s doing to you. I still love you and love being with you. I don’t need intercourse to be satisfied, but I know it’s very important to you, so let’s do something about it.

## Resources

### Patient associations and other sites

- [Canadian Urological Association](#)
- [Canadian Diabetes Association](#)
- [Blood Pressure Canada](#)
- [Heart and Stroke Foundation of Canada](#)
- [UK Sexual Dysfunction Association](#)