



When you read up about your physical condition, you take an important tool into your own hands. The more you know about your physical condition, and the more positive steps you take, the better your chance for positive outcomes and treatment success.

Health Topic: Erectile Dysfunction

Erectile dysfunction or ED is defined as the inability to both obtain and maintain an erection for satisfactory intercourse. At some point in their lives, 50% of men over the age of 40 will have problems with erectile dysfunction. Twenty years ago, the predominant medical opinion was that 95% of men were thought to have a psychological reason for ED. However, medical research over the last twenty years has revolutionized the treatment of ED and now urologists understand that over 95% of men have a **medical reason** for their problem. Treatment for ED has changed tremendously over the last twenty years as urologists gained knowledge into the underlying causes of ED.

Understanding how an erection occurs in the normal male can help determine the possible reason for erectile dysfunction. For an erection to occur a man must first have the desire to have sexual relations, which is referred to as libido. A man's libido is largely determined by certain hormone levels in the body--especially that of the male hormone testosterone. Next the brain must send a signal through the nervous system for the penis to fill with blood. The arteries leading into the penis must be able to supply enough blood in order to both obtain and maintain an adequate erection. Thus the human erection is a complex event involving the hormonal system, the nervous system, and the vascular system (any breakdown in this chain of events can potentially lead to erectile dysfunction).

There are multiple reasons for erectile dysfunction, which include the following: diabetes, atherosclerosis (hardening of the arteries or poor blood flow), high blood pressure (hypertension), elevated cholesterol, medications (e.g. beta blockers), nervous system disorders (strokes, Parkinson's disease, multiple sclerosis), abnormal hormone levels (low testosterone levels, low thyroid levels), smoking, alcohol, surgery (e.g. prostate cancer surgery), obesity, spinal cord injury, smoking, and depression. Any one of the above-mentioned issues may not cause erectile dysfunction by itself; however, when two or more occur together the end result may be ED.

During a patient's initial visit for an erectile dysfunction evaluation, the physician may first ask the following series of questions to determine the severity of the problem: the length of time the patient has been dealing with the problem, potential aggravating factors, associated medical problems, prescribed medications, and the impact of ED on relationships. Next the physician will perform a physical exam, which includes checking the thyroid, genitalia, and prostate. He/she may order blood

test such as the PSA (to check for prostate cancer), sugar levels (to check for diabetes), thyroid levels, and hormone levels. After the first series of tests have been performed, additional test may be indicated. At the conclusion of the testing process, the urologist will then be able to discuss various treatment options.

A number of treatment options are available to the patient with ED. One of these options may be as simple as making different lifestyle choices, such as a smoking cessation program, less bicycle riding, or avoiding alcohol. Another option may be substituting one high blood pressure medication for another (i.e. a calcium channel blocker for a beta blocker). Other options include a group of medications called PDE5 inhibitors, such as Viagra, Levitra, or Cialis. However, certain medical conditions (heart disease) and medications (nitrates) may make this class of drug unsafe to use. Fortunately there are alternative treatments including vacuum devices, medications that can be injected directly into the penis (Impulse, or the Caverject system), and small pellets that can be inserted into the opening of the urine channel (MUSE system), which then dissolve and cause an erection. Finally when these interventions, medications and life style changes are not appropriate-- or fail to help-- surgical implants may be a consideration. The urologist will discuss all of these options and help the patient determine the appropriate treatment.