

CME ARTICLE

Erectile Dysfunction: The Primary Care Practitioner's View

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This activity is designed for primary care practitioners.

GOAL

To help primary care practitioners care for patients with erectile dysfunction, including screening, evaluation, and management.

OBJECTIVES

1. Review how to recognize erectile dysfunction and perform an appropriate evaluation for treatable etiologies.
2. Demonstrate development of a goal-oriented treatment plan that will help the male patient and his partner have more satisfactory sexual relations.
3. Describe how to discuss sexual activity issues with both the patient and the partner.

CONTINUING MEDICAL EDUCATION ACCREDITATION

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Erectile dysfunction (ED) is being encountered more frequently by primary care practitioners because of publicity and the advent of new treatments, especially oral medications, that can restore a man's ability to have a satisfactory erection. Primary care practitioners have become accustomed to asking patients about their sexual partners and the type of sexual activity in which they engage. In the 1980s and 1990s, these questions became critical to determine risk for sexually transmitted diseases such as hepatitis and human immunodeficiency virus infection.

Practitioners now need to ask patients about their satisfaction with sexual functioning because we have new methods to treat male erectile problems and to improve patients' ratings of their sexual capabilities and fulfillment. Successful treatment of these problems requires knowledge of erectile physiology, awareness of management options, and the willingness and ability to discuss sexual activity openly and nonjudgmentally with patients.

Primary care practitioners need to determine their own comfort level with discussions about sexual activity and to recognize the importance of such discussions with patients. We can have a major impact on ED, which can negatively affect the quality of life of the patient.¹ Practitioners need to decide whether they want to attempt to determine whether the major issues are psychogenic or organic (most cases involve a mixture of both etiologic factors) and then refer the patient, or to initiate therapy and refer patients if therapy is not successful.

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Definition and Prevalence

The definition of ED is "the inability to have or sustain an erection adequate for satisfactory sexual activity."² Patients with ED often complain about an erection that is too soft or is not maintained long enough to allow penetration. A few men will complain that they have absolutely no erections.

The Massachusetts Male Aging Study¹ demonstrated that male erectile function difficulties increase in prevalence with advancing age. Men with mild ED say that their erections are not as firm as they would like, but they are capable of having satisfactory sexual relations. The incidence of moderate and severe ED increases as men age from 40 years to 70 years. Most men in these groups will benefit from some type of treatment.

Anatomy and Physiology of the Male Erection

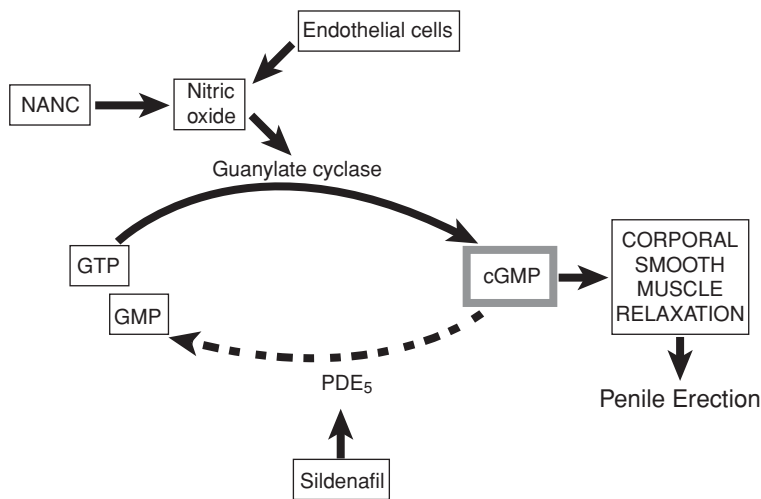
Several key areas of anatomy have to be functioning well to allow for an erection. One of them is the arterial supply to the corpora cavernosa provided by the cavernosal artery, a branch of the pudendal artery. The functional unit of the corpora cavernosa is the lacunar space, where smooth muscle relaxation permits blood entrapment to produce an erection. Venous drainage of the corpora cavernosa, if excessive, can cause erectile problems by allowing

premature emptying of the lacunar spaces in the corpora cavernosa. Ligation of these veins has been attempted as a treatment for ED, but most men simply developed other venous problems, causing continued erectile difficulty.

An intact nervous system also is essential for normal erectile function. The sympathetic nerves, more involved in ejaculation than erection, can be damaged in local dissections. The parasympathetic nerves are essential for erection and can be injured in a radical prostatectomy or other surgical procedure or during radiation therapy for prostate cancer.

The corpora smooth muscle relaxation necessary for flow of blood and entrapment of blood in the corpora lacunar spaces is regulated by cyclic guanosine monophosphate (cGMP), part of the nitric oxide pathway. Phosphodiesterase V(PDE₅) promotes breakdown of cGMP to GMP. That breakdown causes vascular constriction, resulting in outflow of blood from the corpora cavernosa and loss of erection (Figure 1).

Figure 1. Penile Erection Biochemistry and the Mechanism of Action of Sildenafil Citrate



NANC = Non-adrenergic, noncholinergic nerve endings; GTP = guanylate triphosphate; cGMP = guanylate monophosphate; PDE₅ = phosphodiesterase

Risk Factors for Erectile Dysfunction

Heart disease and vascular diseases, especially those caused by hyperlipidemia, diabetes, and hypertension, are associated with ED.^{1,3} Other metabolic problems including thyroid disease, chronic renal failure, and hepatic failure also negatively affect erectile function. Penile anatomical defects and Peyronie's disease may contribute to erectile problems. Abuse of alcohol, cocaine, or other agents can result in dysfunction. Smoking, clearly a cofactor, is probably an independent etiologic factor as well. Spinal cord injuries, pelvic and prostate surgery, and pelvic trauma are less common causes of dysfunction. Hypothalamic-pituitary-end organ disease may cause hypogonadism, hypothyroidism, or hyperthyroidism with resulting erectile difficulties.⁴ Psychogenic risk factors (eg, depression, anxiety states) are accompanied by increased rates of a variety of sexual dysfunctions.

Iatrogenic ED can be caused by inadequate glycemia, blood pres-

Adapted from illustration provided courtesy of Impact Communications, Inc.

sure, or lipid control, as well as by many of the medications commonly used in primary care.^{5,6} Antihypertensives, notably diuretics, β -blockers, and centrally acting agents, can cause ED, as can digoxin, psychopharmacologic agents, and hormonal agents such as leuprolide.

Testosterone levels do decline slightly with age but have not been proven to be related to ED except in the small minority of men who are truly hypogonadal.

Screening for and Evaluating Complaints of Erectile Dysfunction

Patients may either present with symptoms of ED or have risk factors that prompt a screening. Because men have increased risk of ED as they age, screening all men over age 50 years may be wise. A man with vague somatic complaints may actually be in the office because of a sexual problem. Because men often avoid routine visits, sex may be the actual reason for the visit. Partners may be the initial source of information about male ED because many men hesitate to bring problems to the doctor's attention.

There are several ways to introduce the topic, and asking in more than one way may be useful. In men with chronic illnesses, the topic could be introduced by asking, "How has your illness affected your sex life?" If taking a social history, the practitioner could ask, "Are you romantically or sexually involved with anyone? Are you having any sexual problems?" During the review of systems, the practitioner could ask, "Are you having any difficulty with erections or ejaculations?" Using synonyms such as "getting hard" or "coming" may help the patient understand the question better. A permission-giving question is often a good interviewing technique. For example, "Many men that I see are having sexual problems. Is anything troubling you? Do you have any concerns about your sexual function, your sex life?"

The evaluation of ED follows the same pattern as evaluation of any medical symptom: a pertinent history, a physical examination, and laboratory tests. A well-organized, brief sexual history can be an effective diagnostic tool. Questions generally review the phases of male sexual response (Table 1) and focus on problems of desire, arousal/erection, orgasm/ejaculation, and sexual pain. Offering the patient several phrases that describe the same phenomenon in different ways can make the communication clearer. It is better not to accept the patient's label for a disorder without first questioning and getting a clear picture of the complaint. Often, less-educated patients misuse medical or technical terminology.

For desire-phase disorder, the clinician could ask, "Do you still feel in the mood, feel desire, have sexual thoughts or fantasies?" If a man reports a loss of desire, is it secondary to the development of ED, or did it precede it? ED preceded by loss of desire can signal hormonal problems, relationship difficulties, medication adverse effects, or depression. It is difficult for most men to sustain an erection if they feel no desire.

Arousal/erection difficulties can be reviewed by asking, "Do you have trouble getting or keeping an erection, getting or keeping hard? Or both?" If the patient acknowledges an erectile difficulty, ask about its chronology, onset, and frequency; its relationship to medical treatments or medications; and stressful life events. An easy method of distinguishing most psychogenic ED disorders from potentially organically induced disorders is to ask 3 questions: (1) Do you ever wake up with an erection before having to urinate? (2) If you experiment and touch yourself when your partner is not around, can you get an erection? (3) Can you get an erection at any time of night or day, during any form of sexual activity, with any partner? A positive response to these questions indicates stress or anxiety as the trigger of the ED rather than a physical cause or an adverse effect of medication. Because some men confuse ED with premature ejaculation, asking if the erection is lost before or after ejaculation can clarify the problem.

Orgasm/ejaculatory phase problems can be reviewed by asking, "Do you feel you ejaculate, 'come' too quickly?" It is not unusual for ED to develop in a man who has become increasingly anxious about quick ejaculations. "Do you ever have difficulty reaching orgasm or ejaculating?" is a question for determining delayed or retrograde ejaculation. Retrograde ejaculations, for example, may lead to psychogenic ED because of a man's worry over a

Table 1. Phases of the Male Sexual Cycle

Adapted from reference 7.

<ol style="list-style-type: none"> 1. Desire (libido)—fantasies, thoughts, feelings 2. Excitement—pleasure, erection 3. Orgasm—emission and ejaculation 4. Resolution—relaxation, refractory period

lack of visible ejaculate. To reveal Peyronie's disease or pain disorders, ask about "a bend to the penis" or pain during or after sexual activity.

Using terminology that is clear, simple, and respectful of the patient's feelings can facilitate communication. Questions about sexuality need to show sensitivity to cultural and religious differences.

If a written evaluation tool seems easier to use, the Sexual Health Inventory for Men is a good way to learn about erectile function (Figure 2). This 5-item questionnaire provides an excellent objective standard for evaluating the quality of erection.

The medical history should include review of risk factors and screening for psychological difficulties (Table 2). A medication review, including over-the-counter preparations, may reveal the source of the problem because medications have been implicated in up to 25% of cases of ED.⁸ Different medications have adverse effects on various phases of sexual functioning, making clarification of the patient's complaint a priority before ascribing symptoms to specific medication side effects.⁶ Brief screening questions for depression such as "Do you sometimes feel blue, down in the dumps?" may elicit more honest responses than "Are you depressed?" Other psychiatric conditions such as anxiety also may be responsible for ED. The social history is critical; the practitioner should be alert for relationship-associated stress as well as for substance abuse, including abuse of alcohol and cigarettes. Finally, a review of daily activities and cardiovascular status is important to determine the potential risk of enhancing erectile function in patients who may have a sedentary lifestyle and who may be at risk for an adverse cardiac event when the potential for sexual activity is increased.⁹

The physical examination should be comprehensive, with emphasis on several areas (Table 3).^{10,11} Evaluation of blood pressure and peripheral pulses may reveal vascular disease. A neurologic exam including pelvic sensory function and anal sphincter tone is needed to confirm an intact neurologic system. A prostate exam may help to determine local nerve impingement, and the size and morphology of the prostate gland affect treatment decisions. A visual and, optimally, manual exam of the penis will enable discovery of any anatomic defects. Peyronie's disease can be identified by the presence of possibly tender plaques located in the tunica

Figure 2. Sexual Health Inventory for Men

PATIENT INSTRUCTIONS

Sexual health is an important part of an individual's overall physical and emotional well-being. Erectile dysfunction, also known as impotence, is one type of very common medical condition affecting sexual health. Fortunately, there are many different treatment options for erectile dysfunction. This questionnaire is designed to help you and your doctor identify if you may be experiencing erectile dysfunction. If you are, you may check out future treatment options with your doctor.

Each question has several possible responses. Circle the number of the response that best describes your own situation. Please be sure that you select one and only one response for each question.

OVER THE PAST 6 MONTHS:

1. How do you rate your confidence that you could get and keep an erection?

Very low | Low | Moderate | High | Very high
1 | 2 | 3 | 4 | 5

2. When you had erections with sexual stimulation, how often were your erections hard enough for penetration (entering your partner)?

No sexual activity | Almost never or never | A few times (much less than half the time) | Several times (about half the time) | Most times (much more than half the time) | Almost always or always
0 | 1 | 2 | 3 | 4 | 5

3. During sexual intercourse, how often were you able to maintain your erection after you had penetrated (entered) your partner?

Did not attempt intercourse | Almost never or never | A few times (much less than half the time) | Several times (about half the time) | Most times (much more than half the time) | Almost always or always
0 | 1 | 2 | 3 | 4 | 5

4. During sexual intercourse, how difficult was it to maintain your erection to completion of intercourse?

Did not attempt intercourse | Extremely difficult | Very difficult | Difficult | Slightly difficult | Not difficult
0 | 1 | 2 | 3 | 4 | 5

5. When you attempted sexual intercourse, how often was it satisfactory for you?

Did not attempt intercourse | Almost never or never | A few times (much less than half the time) | Sometimes (about half the time) | Most times (much more than half the time) | Almost always or always
0 | 1 | 2 | 3 | 4 | 5

SCORE

Add the numbers corresponding to questions 1-5. If your score is 24 or less, you may want to speak with your doctor.

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albuginea surrounding the corpus cavernosa. Immature secondary sex characteristics, including hair distribution and penile and testicular development, confirm the possibility of hypogonadism.

Laboratory tests useful in evaluating ED are those that identify the risk entities already discussed. A urinalysis can demonstrate renal disease or infection, a complete blood count can identify a potential hematologic disorder, a chemistry profile can check glucose and renal function, a lipid profile can rule out hyperlipidemia, and a thyroid stimulating hormone test can evaluate thyroid function. The test for prostate-specific antigen should be considered for men over age 50, and perhaps even younger men, to evaluate prostate size and whether a tumor is present, especially if testosterone treatment is a possibility.

Some experts recommend a morning serum free-testosterone quantitation and a prolactin level, but the value of routine endocrinologic testing is controversial.¹² If the clinician knows the patient well and there is clearly no libido problem and the patient has other major contributing factors that can account for the ED, hormone tests can be ordered on an individual basis. If there is any evidence of hypogonadism or the dysfunction is particularly consistent at a young age, further hormone evaluation becomes a higher priority.

The advanced diagnostic evaluation for ED includes tests like nocturnal penile tumescence studies, vascular evaluation with sonography, biothesiometry, and other tests that are done by a urologist. These tests are somewhat subjective and rarely provide useful information except in cases of trauma or other major vascular injury.

Treatment Options

The normal changes of aging are often misunderstood by patients and lead to problems. Most men have a diminution of spontaneous erectile function with erotic thoughts or actions as they get older. The easy-to-achieve, almost instant erection begins to disappear for men with chronic illness such as diabetes, hypertension, or renal disease. Often, direct tactile stimulation of the penis is needed to obtain and maintain an erection. The refractory period before re-arousal after a cycle of erection and ejaculation lengthens with age. This physiologic change in what used to be an almost automatic erection is often perceived by men as the onset of impotence. The man becomes increasingly anxious, which triggers further erectile difficulties. Information from the physician about these changes of aging can be extremely reassuring.

Partner issues vary widely. Patients may be having sex with one partner or multiple partners, partners of the opposite sex, partners of the same sex, or partners of both sexes. Issues around partner choice, partner participation in sexual activity, and partner physiology may impact on erectile function. In some situations, the postmenopausal partner of the man with ED may have vaginal dryness due to estrogen changes. Vaginal dryness also can result from diabetes or can be a side effect of medication. The woman and her partner can misinterpret the loss of lubrication as a sign of diminished interest. When vaginal dryness or vaginal atrophy leads to pain, women quickly lose interest in continued sexual activity.

Table 2. Risk Factors for Erectile Dysfunction

Vascular disease (hypertension, diabetes, hyperlipidemia)
Renal failure
Liver disease
Multiple sclerosis
Spinal cord injuries
Pelvic surgery
Substance abuse including cigarette smoking
Decreased androgen production
Abnormal thyroid function
Anemia
Penile anomalies or disease (Peyronie's disease)
Certain medications
Anxiety or depressive disorder

Table 3. Essential Physical Examination Elements

Blood pressure and peripheral pulses
Thyroid gland palpation
Neurologic exam (sphincter tone, perianal sensation, bulbocavernosus reflex)
Prostate exam
Genital exam (testicular abnormality, penile anatomic abnormality)
Secondary sex characteristics (gynecomastia, hair distribution)

Table 4. Physical Health Counseling for Patients with Erectile Dysfunction

Stop smoking and/or other substance abuse (including alcohol)
Reduce fat and cholesterol in diet
Exercise
Improve compliance with cardiovascular and diabetes medications
Stress reduction

Relationship factors often play a role in ED. Early in relationships, partners try to please and be sensitive to one another. As time goes by, these efforts may be abandoned and sex may become perfunctory in both form and function. All of the emotional components of a good relationship contribute to continued sexual satisfaction. The physician can encourage couples to renew intimacy and sensuality in the relationship and to extend foreplay for each other. The use of topical lubricants or estrogen replacement therapy for the woman may be essential. If the male receives treatment for ED, the partner must be physiologically prepared for the increased sexual activity. It is always valuable to include the partner in discussions about sexual activity with the patient so that both can understand and agree to the treatment options.

Treatment plans need to be goal oriented, ideally aimed at satisfying the needs of both the man and his partner. In most cases, regardless of etiology, the treatment options are the same. Whether the patient is older or younger, whether the etiology is primarily organic or psychogenic, whether the precipitating factor is sudden (eg, trauma) or incremental (eg, vascular insufficiency secondary to diabetes), the technology is available to provide any man with an erection satisfactory for sexual relations. Making healthy lifestyle changes can reduce the symptoms of ED and improve general physical health (Table 4). Patients need to understand that what is bad for the heart is bad for the penis. Elimination of smoking tobacco is critical, as may be the elimination of all other recreational drug use. Dietary changes (eg, reducing cholesterol and fats, eliminating hyperglycemia when present, and decreasing salt intake when salt-sensitive hypertension is noted) all help to diminish progression of vascular insufficiency. Exercise will increase cardiac output and improve peripheral circulation.

Changing medication regimens to remove causative agents can be tried when good alternatives are available and the clinical situation permits pharmacologic adjustments. Examples of these changes might be discontinuing a centrally acting antihypertensive medication and substituting an α -adrenergic blocker, weaning the patient from digoxin if the medication is not really necessary, or substituting bupropion, an antidepressant with minimal effect on sexual function, for a tricyclic or a selective serotonin reuptake inhibitor. These substitutions and eliminations may result in some success, but they need to be individualized depending on clinical circumstances.

Specific treatment regimens for ED include oral medications, transurethral suppositories, intracavernosal injection, vacuum devices, and surgery. The newest FDA-approved oral treatment is sildenafil citrate (Viagra). Sildenafil is effective for practically all etiologic types of ED—organic, psychogenic, and mixed.¹³ Sexual stimulation is needed to initiate the erectile mechanism; sildenafil citrate will not provide a spontaneous erection. Libido is not affected, although if a man feels that an erection is more likely to occur, libido may be increased as a secondary effect of using the medication.

Sildenafil works by blocking activity of PDE₅ and reducing the breakdown of cGMP to GMP (see Figure 1). Corporal smooth muscle relaxation prolongs penile engorgement and enhances the erection. Because sildenafil affects only PDE₅, an enzyme functional only in the penis, its action is locally confined. Other parts of the body are minimally affected, if at all. When used along with nitrate-containing medication, sildenafil can cause excessive vasodilation and hypotension.

The dose-response curve of sildenafil is statistically better than that of placebo, especially over time. The initial recommended dose is a single 50-mg tablet taken approximately 1 hour before initiating sexual activity. A lower dose of 25 mg may be used in patients who

- are elderly
- are sedentary
- have renal or hepatic insufficiency
- take a cytochrome P-450 inhibitor
- have spinal cord injury (making them more susceptible to all types of erectogenic medications) or
- have cardiac risk factors that increase the risk of coronary insufficiency during or immediately after sex.

The American Heart Association has recommended caution when sildenafil is used in patients who take multiple antihypertensive medications,

have a strong recent history of angina or myocardial infarction, or have severe left ventricular dysfunction.¹⁴ Any patient who is concomitantly using a nitrate-containing medication or who may take, at any time, a nitrate-containing medication should not be prescribed sildenafil because of the possibility of vasodilation and blood pressure drop.

A 100-mg tablet of sildenafil is available for those not responding to lower doses. No more than one dose is recommended daily, and doses larger than 100 mg are not approved. The timing of the sildenafil dose may need to be individualized because of the drug's half-life of 1-4 hours and the variability in physiologic response among men.

The documented adverse effects of sildenafil are primarily headache, dyspepsia, and visual disturbance. The visual disturbance is probably due to weak inhibition of phosphodiesterase VI located in the retina, and some men have reported slightly blurred vision or a blue tinge to their vision. No long-term problems have been reported, and these visual effects are totally reversible. Most men who reported this phenomenon continued to take sildenafil in the trials because of its successful enhancement of erections. Modest changes in blood pressure can occur, but these changes are generally not significant and do not cause symptoms or increased morbidity in most men. Dependence has not been a problem. The more likely scenario is that the man who uses sildenafil for a brief period has his confidence restored by improved erections and manages to continue satisfactory sexual activity without any medication aid.

Yohimbine is another oral medication that has been available for many years. Its efficacy in improving ED has never been clearly proven, especially when the strong placebo effect of any oral medication for this problem is considered.¹⁵ Results have been slightly better in men with primarily psychogenic etiologies, and men with primarily organic etiologies probably will not be helped. The adverse effects of hypertension and increased heart rate and the drug's proscriptioin with most antidepressants and in patients with cardiovascular disease make yohimbine significantly less useful than sildenafil. The American Urologic Association does not recommend yohimbine for ED.

Oral investigational agents likely to reach the FDA shortly include apomorphine and phentolamine. Apomorphine, a dopaminergic stimulator, is dosed sublingually and is efficacious in providing an erection in many men. The biggest problem is nausea, and the final preparation will need to address this issue. Oral phentolamine, an α -blocker, also

improves ED, with the major adverse effect being headaches. The currently available data do not permit efficacy comparisons between these drugs and sildenafil.¹⁶

Testosterone augmentation, available via patches or injection, is best reserved for patients with a decreased morning serum free-testosterone level. Generally, testosterone augmentation is associated with enhanced libido. This may improve erectile status by restoring interest and perhaps through other neurohormonal mechanisms, but relying solely on testosterone to restore erectile function in the dysfunctional male is inappropriate.¹⁷ Testosterone augmentation requires thorough evaluation and monitoring for prostate cancer.

Nonoral treatments for ED have been available for several years. Alprostadil is a prostaglandin E preparation in a pellet form that is inserted with a plunger-like mechanism into the urethral opening.¹⁸ Men should be advised to urinate before pellet insertion because lubricants should not be used, and a moist urethra will allow for easier insertion of the plunger device. After insertion, the pellet within the urethra should be dissolved by massaging, or "kneading," the penis for about a minute. Then the patient should remain upright for several minutes to maintain pellet position and to enhance even absorption. Adverse effects include penile pain and burning. Minor urethral bleeding, hypotension, and syncope have been reported. Ideally, the first insertion of alprostadil should be done in the doctor's office to monitor technique, change in blood pressure, and response (although this may be blunted in the office environment). The lowest effective dosage should be used. Most men require doses larger than 125-250 mcg. Probably the 500-mcg dose will provide a response within 5 minutes that will last around 30 minutes. Because premature drainage due to venous problems may thwart the erection caused by alprostadil insertion, a ring at the base of the penis may be used to constrict venous outflow. Contraindications include use with a pregnant partner or a partner who is likely to get pregnant, hypersensitivity to prostaglandin, and sickle cell anemia (patients are prone to developing priapism).

When oral medication and intraurethral alprostadil do not provide the desired effect, cavernosal injection therapy with alprostadil can be considered. This injection is given directly into the corpus cavernosum through the side of the penis near the base. The success rate is high, but problems include pain, prolonged erections or priapism, and penile fibrosis and plaques.¹⁹ Caution should be exer-

cised in patients receiving anticoagulation therapy. The starting dosage is 5-10 mcg, although 2.5 mcg may be adequate in men with spinal cord disease. Three times weekly with 24 hours between dosages is the recommended maximal frequency of use. This preparation should be reserved for patients who will use it properly.

Vacuum devices are a reasonable choice for many men who are in a stable relationship and whose partners are willing to accept the inconvenience. Pumps can be hand or battery powered. The band used at the base of the penis needs to be the right size to keep the blood trapped in the penis and permit painless sexual intercourse. Sick cell disease is a contraindication, and anticoagulation therapy is a caution. Adverse effects may include numbness or bruising, probably indicating that the vacuum pump is being used too often or that the band is too tight.

Penile implant surgery is a very successful therapy, although it should be reserved for patients who have considered or tried several other treatments. The surgery is irreversible, and the normal function of the corpus cavernosa is obliterated. The surgery carries low morbidity and mortality and is relatively routine. General or spinal anesthetic is required. The satisfaction rate is higher than that for any other type of treatment for ED.

Follow-up is an essential part of ED management, because it is more likely to result in achievement of the patient's goal. This includes evaluation of the success or lack of success of treatment, monitoring of any adverse effects, and consideration of dose or treatment alterations. Patients should be seen 1 month after initiation of treatment to evaluate progress. Comparison to baseline can be done by verbal exchange or by using the standardized questionnaire measuring erectile function (Figure 2).

Consultation with specialists may be appropriate at various intervals when managing a man with ED. The major factor is the primary care practitioner's comfort in discussing and managing treatment options. The obligation of the primary care practitioner is to recognize ED and make the patient feel comfortable about seeking help. Initial workup and treatment can be planned by the practitioner who has good communication skills about sexual activity and who is knowledgeable about first-line treatments. Urologists can be helpful in difficult or complex ED situations or when the patient presents with an anatomical problem such as Peyronie's disease. An endocrinologist may be consulted to assist in managing men with difficult-to-control diabetes, hypogonadism, or evidence of pituitary dysfunction. A sex therapist also may prove helpful.

Sex therapists are practitioners in the medical or mental health field who, in addition to their basic clinical education, have had additional training in sex therapy including evaluation and treatment options. The Association of Sex Therapists and Counselors (phone: 319-895-8407) can provide a directory of trained, certified sex therapists. Most major teaching hospitals have such a trained individual on their staffs.

Sex therapists can work collaboratively with the physician to resolve the patient's sexual difficulty, tease out important history, educate the patient and his partner, suggest sexual enhancement techniques, and help couples resolve relationship problems. They can help evaluate and explain varied treatment options so that the patient fully understands how to successfully utilize the option chosen.

Emotional and relational factors can play an important role in ED. Anxiety, for example, can block the production of nitric oxide, interfering with erectile function. For many men, the trigger or result of ED is continuous, anxious fear of failure. Once a cycle of ED has begun, the sexual atmosphere is permeated by anxiety. Most couples in which the male has ED have not had sex for many years. This long period of abstinence often has been coupled with avoidance of all physical affection and intimacy. The relaxed pleasure and sensuality that are necessary to trigger and maintain good sexual response has been lost. Men are often totally focused on the goal of getting and keeping an erection. "Working" for an erection usually results in defeat.

The physician can help reduce this performance anxiety in several ways. By encouraging sensuality, extended foreplay, and a focus on pleasure rather than erection, greater arousal is possible. Often, couples need to be encouraged to rekindle the sense of courtship and romance that existed earlier in their relationship. When the physician recommends new treatments, the patient's anxiety may be reduced by explaining that treatments often take time to be fully effective and that most couples need time to comfortably integrate the new treatment into their sex lives.

Sometimes a couple's sexual problems serve a function in the relationship. Anger, mistrust, power struggles, and other relationship issues can be expressed through sexual difficulties. When that happens, treatment can be effectively sabotaged. When the physician suspects that this is the case, referral to a marital or sexual therapist is necessary. Lack of communication also can play a role in sexual dysfunction. Couples, even in long-term loving relationships, may never have discussed the kinds of

touch and caresses that are most arousing. Criticism often seems easier than open discussion. It is more effective to guide and encourage the partner in a constructive manner. The physician can encourage the man and his partner to discuss what they enjoy in order to enhance the sexual relationship.

Conclusion

The patient with ED often suffers in silence, as does the partner. With all the therapeutic options available, this emotionally devastating disease can be resolved. Required are an appropriate evaluation and treatment choice as well as some romance and tenderness between the man and his partner. Good communication between clinician and patient, clinician and partner, and patient and partner enhances the likelihood of a satisfactory and happy outcome.

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CME QUESTIONS: TEST #059903

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Instructions

After reading the article "Erectile Dysfunction: The Primary Care Practitioner's View," select the best answer to each of the following questions. In order to receive 1 CME credit, at least 7 of the 10 answers must be correct. Estimated time for this activity is 1 hour. CME credits are distributed on a yearly basis.

1. Erectile dysfunction is associated with all of the following *except*:

- a) hypertension
- b) diabetes
- c) hyperlipidemia
- d) smoking
- e) ulcer disease

2. The phase of sexual activity most affected by testosterone deficiency in men is:

- a) desire or libido
- b) excitement or erection
- c) orgasm
- d) resolution or relaxation

3. The phase of sexual activity most augmented by sildenafil in men is:

- a) desire or libido
- b) excitement or erection
- c) orgasm
- d) resolution or relaxation

4. Sildenafil is contraindicated in any patient who is taking or even has access to:

- a) β -blockers
- b) diuretics
- c) erythromycin
- d) nitrate-containing medications
- e) hydralazine

5. Discussing sexual activity with a patient is *not* enhanced by:

- a) open-ended questions
- b) a judgmental attitude
- c) discussing putting more romance into sexual activity
- d) reassuring the patient that his concerns about sexual function are understandable

6. The occasional inability to have a sustained erection is called erectile dysfunction.

- a) true
- b) false

7. Erectile dysfunction is a psychogenic problem.

- a) true
- b) false

(CME QUESTIONS CONTINUED ON FOLLOWING PAGE)

CME TEST FORM

AJMC Test #059903

Erectile Dysfunction:
The Primary Care
Practitioner's View

(Test valid through
March 31, 2000.
No credit will be given
after this date.)

Please circle your answers:

- 1. a b c d e
- 2. a b c d
- 3. a b c d
- 4. a b c d e
- 5. a b c d
- 6. a b
- 7. a b
- 8. a b
- 9. a b
- 10. a b

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(CME QUESTIONS CONTINUED FROM PREVIOUS PAGE)

8. Some level of erectile dysfunction is reported in more than 40% of men at 40 years of age.

- a) true
- b) false

9. The presence of strong morning erections or instantaneous erections in the male patient with erectile dysfunction generally rules out an organic etiology.

- a) true
- b) false

10. When visiting the doctor, most patients do not want to discuss their sexual relations.

- a) true
- b) false