

Erectile Dysfunction

Current Best Practices



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KEYWORDS

• Erectile dysfunction • Men's health • Sexual health

KEY POINTS

- Erectile dysfunction in men is common, especially after the age of 40 years.
- Underlying health conditions predispose men to erectile dysfunction.
- Dispelling the stigma and having open conversations about erectile dysfunction with men is essential in addressing treatment and management.
- There are several pharmacologic and nonpharmacological treatments available to treat erectile dysfunction.
- Nurses play a vital role in treating and managing erectile dysfunction in men.

INTRODUCTION

Sexual health is an important aspect of an individual's life. As men move through the phases of aging, sexuality and sex can take on different forms. For many men, their sexuality is defined by their ability to perform in the proverbial bedroom, which includes their ability to obtain erections to have sexual relations with their partner. Erections for men are an essential aspect of their sexual identity regardless of sexual orientation. When obtaining or maintaining erections becomes difficult, men often face multiple complex emotions. They often choose not to disclose this issue to anyone, including their health care provider, due to embarrassment or feeling inferior.

Erectile dysfunction (ED) is a condition in which a male cannot get or keep an erection firm enough for satisfactory sexual intercourse.^{1–4} ED can be short term or long term. An individual is considered to have ED when^{1,3,4}

- The individual can obtain erections sometimes, but not every time they want to have sex.
- The individual can obtain erections, but the erection does not last long enough for fulfilling or satisfactory sex.
- The individual is unable to get an erection at any time.

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ED is a common problem among men in the United States (US). The prevalence of ED increases with age, with the estimates suggesting that it affects around 50% of men over the age of 40 years.^{1,5,6} The National Institutes of Health estimate that ED affects about 18 million men in the US alone.⁵ The prevalence of ED is also higher among those who have certain health conditions such as diabetes, hypertension, and cardiovascular disease.^{1,5,7,8} ED is not a normal part of aging and can be treated by the individual consulting with a health care provider and addressing the underlying medical conditions predisposing them to the symptoms.^{2,6}

Because of the prevalence of ED in the US, nurses must become aware of the implications associated with ED and learn how to help treat men affected by this condition. Nurses maintain the skills and expertise to readily address the disorder by understanding the phenomena associated with this health condition.

Stigma of ED

Due to the stigma often associated with the condition, ED can be a sensitive and challenging subject for many men. The stigma of ED can make it difficult for men to seek help and treatment, ultimately leading to a decline in their sexual quality of life. A significant cause for the stigma associated with ED is the cultural perception of masculinity and the belief that men should always be able to perform sexually.^{9–11} This preconceived notion can make it challenging for men to admit to themselves and others that they are experiencing ED, as they may feel it is a sign of weakness or emasculation.^{9–11} Another reason for the stigma surrounding ED is the lack of education and understanding regarding the condition. Many believe ED is simply a natural part of aging that cannot be treated; however, this is not necessarily true because ED can have multiple underlying causes that can be treated.

Furthermore, the stigma of ED can make it difficult for men to talk to their health care provider about their condition and the symptoms they are experiencing. They often feel embarrassed or ashamed to discuss the subject, and health care providers may not always discuss it during routine health visits.^{9–11} Because of the stigmas associated with ED, there can be delays in seeking treatment, which can negatively impact the sexual health and quality of life of those affected by ED. As a health care provider, breaking down this stigmatization by creating more awareness and understanding of the condition is vital. Health care providers must encourage men to trust them to talk about ED if they are experiencing symptoms and to educate them that ED is a common condition that can be treated.

Men may be sensitive in discussing ED for several reasons that health care providers must be aware of. Some of these reasons may include the following.^{9–11}

- Embarrassment: ED can be a sensitive and personal topic, and some men may feel embarrassed or ashamed about their condition, making it difficult to discuss it openly.
- Stigma: There may be a societal stigma attached to ED, with men feeling it is a sign of weakness or lack of masculinity. This can make it difficult for men to talk about their condition, even with a health care provider.
- Fear of rejection: Men with ED may fear rejection from their partners and may be hesitant to discuss the condition with them out of fear that it will negatively impact their relationship.
- Fear of not having a solution: Some men may fear that there is no solution to their ED and that discussing it with a health care provider will be futile.
- Lack of knowledge: Some men may not be aware of the various treatment options available for ED or may not understand the underlying causes of their

condition. This can make it difficult for them to discuss it with a health care provider.

Psychological Effects of ED

Due to the stigma associated with ED, many men suffer psychological effects related to ED. If the individual was not already suffering from underlying psychological issues causing the ED, some of the common psychological effects that a health care provider must be aware of with men affected by ED are listed here.^{9,12}

- Low self-esteem: Men with ED may feel inadequate, leading to low self-esteem and embarrassment.
- Depression: ED can cause feelings of sadness, hopelessness, and worthlessness, leading to depression.
- Relationship problems: ED can strain relationships and cause both partners frustration, anger, or resentment.
- Reduces sexual desire: ED can cause a lack of sexual desire, which can have a negative impact on a man's overall quality of life.

For a health care provider, it is crucial to make sure that men affected by ED deduce that these feelings are normal and understandable. Health care providers must know that many effective ED treatments are available, including lifestyle changes, medications, and therapy. Counseling and therapy can help men with ED cope with the psychological effects of the condition. Health care providers must address the psychological effects of ED and ensure that men understand that ED is not a sign of weakness or failure.

Effects of Pornography on ED

The effects of pornography on ED are a topic of ongoing research and debate. Some studies suggest that excessive use of pornography can lead to ED, while others have found no significant link between the two.¹³ One theory is that viewing pornography can lead to desensitization to real-life sexual partners, making it difficult for men to become aroused to maintain an erection during sexual activity.¹³ In addition, some men may develop unrealistic expectations about sexual performance and physical appearance, contributing to anxiety and self-consciousness during sexual encounters.¹³

On the other hand, some experts suggest that moderate use of pornography can positively affect sexual function by improving sexual desire and sexual satisfaction. It is important to note that further research is needed to fully understand the relationship between pornography and ED, and the effects may vary from person to person.

Sexual Preference and ED

Sexual preference, orientation, and ED are separate issues that sometimes intersect. ED can affect men, regardless of sexual preference or orientation, and men who identify as gay, bisexual, or heterosexual can all experience ED. Literature suggests that men who identify as gay or bisexual may be at higher risk of ED due to factors such as increased stress and anxiety related to societal stigmatization and discrimination.^{14,15} Furthermore, men who have sex with men may have a higher risk of certain sexually transmitted infections that can contribute to developing ED.^{14,15}

Regarding sexual preference and orientation, it is crucial for health care providers to know that ED is a medical condition that can be treated regardless of sexual orientation or preference. Health care providers should attune to the sensitive and unique

needs of their patients. Gay and bisexual men often have unique concerns that need support from health care providers in providing information and support in helping manage ED and other sexual health concerns not experienced by their heterosexual counterparts.^{14,15}

Race and ED

Race may play a role in the rates of ED, as some studies have found that certain racial and ethnic groups have a higher prevalence of ED than others. However, it is essential to note that these studies are inconclusive, and more research is needed to understand the relationship between race and ED fully. Some studies have found that African American men may have a higher prevalence of ED than White or Hispanic men.^{16–18} This may be attributed to a higher prevalence of risk factors associated with ED, such as hypertension and diabetes, in this population. Other studies have found that Hispanic men may have a lower prevalence of ED than non-Hispanic White men.^{16,18} This may be due to differences in lifestyle and cultural practices, such as diet and physical activity levels. It is also important to note that other factors, such as socioeconomic status, access to health care, and education, also play a role in the prevalence of ED.

Age and ED

Although age is not a direct cause of ED, underlying medical conditions that affect men as they age are most likely to occur predominantly in men older than 40 years. As men age, their risk for certain health conditions that contribute to ED, such as hypertension, diabetes, and heart disease, increases. These conditions lead to a change in the blood vessels through a process of endothelial dysfunction affecting the ability of nitric oxide to make the necessary changes within the blood vessels to allow blood to flow to the penis during arousal, thus causing ED.^{1,2,6}

Furthermore, after the age of 40 years, men lose approximately 1% of total testosterone yearly.² This decline in testosterone can lead to decreased sexual desire and resultant ED.² Aging can also bring psychological changes contributing to ED, such as stress, anxiety, and depression.⁶ Despite ED not being related to aging, it is essential that health care providers routinely screen older men for ED and other sexual health concerns and provide appropriate care and treatment. This can improve their sexual health and overall quality of life.

Causes of ED

ED is a complex condition with multiple causes. The pathophysiology of ED involves a complex interplay of physiologic, psychological, and lifestyle factors that can interfere with the normal physiologic processes that result in an erection. Physiologically, an erection occurs when the spongy tissue in the penis fills with blood, causing it to become stiff and erect. This process is controlled by the nervous system and involves the release of nitric oxide, a chemical that relaxes the blood vessels in the penis and allows blood to flow into the penis.^{4,19–21}

The most common causes of ED include vascular problems, such as atherosclerosis or hypertension; neurologic problems, such as nerve damage from diabetes or spinal cord injuries; hormonal imbalances, such as low testosterone levels; and psychological problems, such as stress or anxiety.^{4,19–21} Vascular issues can lead to ED by causing a decrease in blood flow to the penis, making it difficult to achieve or maintain an erection. Neurologic problems can cause ED by disrupting the nerve signals necessary for an erection. Hormonal imbalances can also cause ED by disrupting the balance of hormones essential for sexual function. Psychological problems can

cause ED by causing anxiety disorders or stress, making it difficult to relax and become sexually aroused.

In most cases, ED is caused by a combination of factors. The underlying pathophysiology of ED involves the inability of the penile vessels to dilate and fill with blood to achieve and maintain an erection. This can be due to structural changes in the vessels, dysfunction of the smooth muscle cells, or a combination of both. Diagnosis of ED typically begins with a thorough history and physical examination and may include further testing such as blood tests, psychological evaluation, nocturnal tumescence, and rigidity testing.^{3,7,21–23}

Often ED is accompanied by concomitant sexual disorders. Health care providers must be aware of these disorders and evaluate them with ED. Some of the most common sexual conditions that accompany ED include^{4,19–21}

- **Premature ejaculation:** This is a condition in which a man ejaculates earlier than he or his partner would like. It can be a separate disorder or happen in conjunction with ED.
- **Delayed ejaculation:** This is a condition in which a man takes a longer time to ejaculate than he or his partner would like. It can be a separate disorder or happen in conjunction with ED.
- **Low libido:** Also known as hypoactive sexual desire disorder, a condition in which a man has reduced interest in sexual activity.
- **Anorgasmia:** This is the inability to achieve orgasm; it can be a separate disorder or happen in conjunction with ED.
- **Peyronie's disease:** This is a condition in which scar tissue forms inside the penis, causing it to bend or curve during an erection.
- **Male hypogonadism:** This is a condition in which the body does not produce enough testosterone, which can lead to a decreased sex drive and ED.

Awareness by the health care provider of these potential underlying and concomitant health conditions contributing to or causing ED is essential in ensuring that the individual's care is maximized through a holistic approach to their condition.

Assessing for ED

ED assessment involves a thorough medical history, physical examination, and diagnostic tests. During the medical history, the health care provider should ask about the patient's symptoms, including the duration and severity of ED, and any other related symptoms, such as premature ejaculation, low libido, and difficulty achieving orgasm. The health care provider should also ask about any medical conditions, medications, and lifestyle factors contributing to ED.^{4,19,20}

When bringing up the topic of ED in men during a health visit, the clinician must be sensitive, empathetic, and nonjudgmental. Some suggestions for the clinician in approaching the visit include^{4,19,20,22}

- **Use open-ended questions:** Ask the patient if he has any concerns or questions about his sexual health, which can help initiate the conversation in a nonthreatening way.
- **Provide privacy:** Make sure the patient is in a private room, and there are no interruptions during the conversation and examination.
- **Provide education:** Explain that ED is a common condition affecting many men and that various treatment options are available.
- **Address any underlying health conditions:** Ask the patient if he has any underlying health conditions, such as diabetes, hypertension, or cardiovascular disease, which can contribute to ED.

- Encourage the patient to speak freely: Let him know that he must be honest about his symptoms and concerns and that there is no shame in discussing ED.
- Provide resources: Let the patient know that various resources are available to help him, such as brochures, websites, or support groups.

The physical examination should include a genital and prostate examination. The health care provider should assess for signs of decreased blood flow to the penis, such as diminished penile sensation. Diagnostic tests that may be used to evaluate for ED include^{4,19,20,22}

- Blood test: to assess for conditions such as diabetes, low testosterone levels, and high cholesterol
- Psychological evaluation: to assess for psychological factors that may contribute to ED
- Nocturnal penile tumescence and rigidity testing: to evaluate the ability of the patient to achieve an erection during sleep
- Duplex ultrasound: to assess blood flow to the penis
- Penile angiogram: to assess blood vessels in the penis
- Corpus cavernosometry and cavernosography: to evaluate the structure and function of the blood vessels in the penis.

The clinician should take a systematic approach to the diagnosis of ED by using a comprehensive approach for evaluation that considers not only the physical symptoms but also the psychological, relational, and lifestyle factors that may contribute to ED.

Pharmacologic Treatment of ED

Pharmacologic treatments for ED offer several benefits for men experiencing this condition. Medications for ED have been extensively studied and proven effective in improving erections and sexual function.^{4,20,23} These medications increase blood flow to the penis, making it easier to achieve and maintain an erection.^{4,20,23} They are also generally safe when used as directed and under the guidance of a health care provider, with few serious side effects. Pharmacologic treatments for ED are also convenient, as they can be taken orally and used as needed without extensive preparation or planning. Restoring sexual function can significantly impact a man's quality of life, relationships, and overall well-being.

Several medications are commonly used to treat ED. These include^{4,20,23,24}

- Phosphodiesterase type 5 (PDE5) inhibitors: These medications work by increasing blood flow to the penis. These medications are typically available in oral form and are taken at least 1 hour before intercourse. During penile erections, cyclic guanosine monophosphate (cGMP) is metabolized through the PDE5 enzyme and cannot exert its downstream erectile effects. PDE5 inhibitors are selective, competitive, and reversible, generally decreasing cGMP metabolism and ultimately leading to the successful attainment and maintenance of an erection.²⁵ Examples of PDE5s include sildenafil, tadalafil, and vardenafil.
- Alprostadil: This medication can be injected into the penis or the urethra as a pellet. It works by increasing blood flow to the penis.
- Testosterone replacement therapy (TRT): Low testosterone levels can lead to ED; TRT may be prescribed for men with low testosterone levels. Testosterone affects nitric oxide production and PDE5 expression in the corpus cavernosum, which helps preserve muscle contractility by regulating contraction and relaxation and supports the structure of the corpus cavernosum.²⁶

These medications may not be suitable for every individual. The health care provider must be aware of potential side effects. Common side effects of these types of medications include^{4,19,23}

- Headache
- Nasal congestion
- Flushing
- Hypotension
- Altered colored vision.

Nonpharmacological Treatment of ED

Along with pharmacologic treatments for ED, there are nonpharmacological treatments that men can try to assist in reducing or eliminating the incidence of ED. The nonpharmacological treatments for ED include^{24,27}

- Behavioral therapy: This can help address any underlying psychological or emotional issues contributing to ED.
- Lifestyle changes: Quitting smoking, exercising regularly, and eating a healthy diet can improve blood flow and overall health, which can, in turn, improve ED symptoms.
- Penile pumps: A vacuum erection device can create an erection by drawing blood into the penis.
- Penile implants: A surgical option for men who do not respond to other treatments, penile implants involve the placement of a device into the penis that allows for an erection.
- Acupuncture: Some studies have suggested that acupuncture may be effective in improving ED symptoms although more research is needed to confirm this.
- Counseling or sex therapy: This can assist men and their partners in better understanding and coping with ED and can also help address any relationship issues contributing to the problem.

Although nonpharmacological treatments for ED can be effective, there are potential downsides to consider. Some nonpharmacological treatments, such as vacuum devices and penile implants, can be expensive and not covered by insurance. Psychological counseling may also be costly and may require ongoing sessions. In addition, some nonpharmacological treatments may not be suitable for everyone, and it is essential to talk to a health care provider to determine the best treatment approach. There may also be side effects or complications associated with some treatments, such as discomfort or infection from a penile implant. Furthermore, some nonpharmacological treatments may require time and effort to see results, and some men may prefer the convenience of medication.²⁷ It is important to weigh the potential benefits and drawbacks of nonpharmacological treatments before deciding on a treatment approach for ED.

Partner Participation in Treatment of ED

Partner participation in the treatment of ED is vital because ED has an impact on both partners. Involving the partner in the treatment process can help to improve communication and understanding about the condition and can help to reduce feelings of stress, anxiety, and frustration.^{9,28,29}

There are several ways a partner can participate in the treatment of ED.^{9,28}

- Support: Partners can provide emotional support to their loved ones by listening, being patient, and understanding the impact of ED on their relationship.

- Lifestyle changes: Partners can support their loved ones by changing their lifestyles, such as eating a healthy diet and exercising together.
- Therapy: Partners can participate in couples therapy or sex therapy to improve communication and intimacy.
- Medication and treatment: Partners can help remind the patient to take their medication and keep track of the treatment schedule.
- Encouragement: Partners can encourage their loved on to seek help and to talk to a health care provider about their condition.

ED is not just a man's issue but a couple's issue. A partner's participation in treatment can help to improve the outcome for the patient and the relationship.

Nurse's Role in the Management of ED

Nurses are primed to help men with ED. Nurses at all educational levels can play a significant role. Their responsibilities in helping manage ED in men include^{3,7,23,30}

- Assessment: Nurses can perform a thorough physical examination and take a detailed medical history to determine the underlying causes of ED.
- Diagnosis: Nurse practitioners (NPs) can diagnose ED by considering the patient's symptoms, medical history, and examination results.
- Treatment: NPs can prescribe medications such as PDE5s to treat ED. They can also recommend lifestyle changes such as diet and exercise to improve overall health.
- Follow-up care: Nurses can monitor the patient's response to treatment, and NPs can adjust the medications as needed. Nurses can also provide patients with education and support to help them manage their condition.
- Referral: If necessary, NPs can refer patients to specialists such as urologists or sex therapists to receive further evaluation and treatment.

Furthermore, nurses can help break the stigma associated with ED, playing a pivotal role in this process. Some ways that a nurse can help break the stigma for men with ED include^{3,7,23,30,31}

- Education: Nurses can educate men about the causes and risk factors for ED and help them understand that it is not a sign of weakness or failure.
- Normalizing the conversation: Nurses can talk openly and comfortably about ED with the patient and make sure that men understand that it is a common condition many men experience.
- Providing accurate information: Nurses can provide accurate information about ED and the available treatments, which can help to reduce fear, anxiety, and embarrassment.
- Encouraging patients to seek help: Nurses can encourage men to seek help for ED and talk to their partners about the condition.
- Collaboration with other health care providers: Nurses can work with other health care providers, such as urologists, sex therapists, and mental health professionals, to provide comprehensive care for men with ED.
- Breaking the language barriers: Nurses should ensure their patients understand the information provided, especially those whose primary language is not English. This can be done by using simple language, providing translated materials, and having a translator available to discuss their health concern.

Overall, nurses play an essential role in managing ED in men and can help break the stigma associated with the health condition through their diverse range of skills and

expertise. By providing patient education, counseling, and medication management services, nurses can help improve the quality of life for patients affected by this condition and contribute to the overall success of ED treatment plans.

SUMMARY

Nurses must become aware of ED because it is a common condition that can significantly affect men's physical and emotional health. Nurses play a vital role in assessing and managing patients with ED, including educating them about the causes and treatment options available. Nurses can help patients overcome this condition's stigma by being knowledgeable about ED and empowering them to seek the care they need.

ED is often a symptom of underlying conditions such as cardiovascular disease, diabetes, and hypertension. Nurses familiar with ED can recognize this connection and refer patients for further evaluation and treatment. ED can be an early warning sign of these conditions in some cases, allowing for earlier diagnosis and intervention to improve outcomes. Nurses can work collaboratively with other health care providers to manage these underlying conditions, which can, in turn, improve ED symptoms and the overall quality of life for patients.

Furthermore, ED can be a source of emotional distress and relationship issues for men and their partners. Nurses knowledgeable about ED can provide counseling and support to patients and their partners, helping them cope with the psychological impact of this condition. By being compassionate and nonjudgmental, nurses can create a safe and supportive environment for patients to discuss their concerns and seek the care they need.

In conclusion, ED is a common condition that can significantly impact men's physical and emotional health. Nurses knowledgeable about ED can play a crucial role in assessing and managing patients with this condition, identifying underlying medical conditions, and providing emotional support to patients and their partners. By being aware of ED and its implications, nurses can help improve outcomes and quality of life for patients affected by this condition.

DISCLOSURE

The author has nothing to disclose.

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