Erectile dysfunction does not discriminate and, while prevalence increases with advancing age, men of all ages, ethnic and socioeconomic groups may, at some point in their lives, experience some form of erectile dysfunction.

Erectile dysfunction is one aspect on a spectrum of sexual dysfunctions men may experience. The role and function of the community nurse is wide and varied, and, as such, it is likely that he or she will be required to care for men who have a problem with the ability to initiate and sustain an erection for sexual activity. The community nurse, working with various populations, can provide increased awareness and understanding of the condition to patients and partners, the media and other interested parties.

Sexual health

Sex is an important part of life and relationships, and all people have a right to enjoy a fulfilling sexual life; good sexual health (sexual health free from disease) is one way in which people achieve this right. Just as health means different things to different people, so too does sexual health. It is important to work towards a definition of sexual health in order to provide care in a consistent and effective way to those who may have problems with their sexual health.

Sexual health, according to the World Health Organization (WHO, 2002), can be described as:

'A state of physical, mental and social well-being in relation to sexuality. It requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence.'

The Royal College of Nursing (RCN) provides a similar definition, suggesting that sexual health is:

'The physical, emotional, psychological, social and cultural well being of a person's sexual identity, and the capacity and freedom to enjoy and express sexuality without exploitation, oppression, physical or emotional harm.' (RCN, 2000)

Both definitions address sexual health as being holistic in nature, i.e. encompassing the bio-psychosocial aspects of the person and how sexual health is associated with the individual and society. For one person, being free from a sexually transmitted infection (STI) might mean good sexual health, while for another being in a secure and comfortable relationship with another person(s) might mean good sexual health for them.

Irrespective of how the man expresses his own personal sexual health, the community nurse should strive to offer him care that is supportive and responsive to his expressed needs and concerns. The Nursing and Midwifery Council (NMC) requires that all nurses treat people as individuals and respect their dignity (NMC, 2008). Nurses must not discriminate in any way against those in their care; their role is encapsulated by treating people kindly and considerately, helping people to access relevant health and social-care information, and providing them with the support that they may need.

Normal erectile function

Erection can occur throughout life. The mechanisms associated with achieving and maintaining an erection sufficient for sexual activity are complex and involve a variety of integrated actions. An interaction of neural, vascular, and biochemical activity results in normal erectile function. Sexual arousal occurs through physical and psychological stimulation, for example, sight, touch, smell and thought, stimulating the parasympathetic nervous system (see Figure 1). Figure 2 considers the cellular perspective of the erection pathway.

Two chambers in the penis, the corpus cavernosa, contain sinusoids: these fill with blood and enlarge to become rigid when smooth muscle is relaxed. Blood flow out of the penis is momentarily stopped (veno-occlusion) to maintain the
erect. Neural control is complex; in general, the sympathetic nervous system inhibits, and the parasympathetic system excites erectile function. The central nervous system can induce erections without peripheral stimuli, e.g. in nocturnal erections. There are five phases associated with erectile response:

1. Latent
2. Tumescent
3. Full erection
4. Rigid erection
5. Detumescent

The significant biochemical event in erectile function is an increase in the amount of cyclic guanosine monophosphate; this causes smooth-muscle relaxation and permits an erection to occur. This process is mediated by nitric oxide, produced by neurons and elsewhere, acting as a gaseous messenger molecule.

**Erectile dysfunction**

Erectile dysfunction is defined as 'inability to achieve or maintain a penile erection sufficient for satisfactory sexual performance' (NIH Consensus Conference on Impotence, 1993). Three events are required to take place for the erection to occur and to be maintained:

- First is sexual arousal
- Second is the brain’s communication of the sexual arousal to the nervous system (activating blood flow)
- Thirdly, relaxation of the blood vessels that supply blood to the penis must occur, allowing the erection.

If anything occurs that affects any of the three events above — arousal, nervous system response or the vascular system response — or the interplay between them, then the consequence can be erectile dysfunction. Erectile dysfunction should not be confused with other sexual dysfunction conditions, such as loss of libido or premature ejaculation.

**Causes of erectile dysfunction**

Given the complexities associated with erection, it is not surprising that a variety of diverse conditions can result in...
CARE OF THE OLDER PERSON

Table 1. Some causes of erectile dysfunction

<table>
<thead>
<tr>
<th>Psychogenic causes</th>
<th>Physical causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Anxiety</td>
<td>• Vascular conditions</td>
</tr>
<tr>
<td>• Stress</td>
<td>• Neurological conditions</td>
</tr>
<tr>
<td>• Guilt about sex (arising from religion, family, culture)</td>
<td>• Alcohol</td>
</tr>
<tr>
<td>• Fatigue</td>
<td>• Medications (for example, major tranquillisers, antidepressants, endocrine drugs, antihypertensives, clomipramine, phenytoin, carbamazepine)</td>
</tr>
<tr>
<td>• Relationship problems (associated with power, trust, intimacy)</td>
<td>• Diabetes mellitus</td>
</tr>
<tr>
<td>• Feelings about partner (influences sexual response)</td>
<td>• Abnormal nerve function</td>
</tr>
<tr>
<td>• Depression</td>
<td>• Hormone disorders</td>
</tr>
<tr>
<td>• Sexual situation, where the act takes place, time, choice of person</td>
<td>• Prostatectomy</td>
</tr>
<tr>
<td>• Anxiety about performance, size</td>
<td>• Pelvic/abdominal surgical procedures</td>
</tr>
</tbody>
</table>

Source: Adapted from Carson and Dean, 2007; Rané and Fraser, 2007; Carson and McMahon, 2008

Erectile disorders. Eardley (2002) suggests that there are a number of ways of classifying the pathophysiological causes of erectile dysfunction:
• Vascular
• Neurogenic
• Endocrinological
• Psychogenic
• Cellular
• Iatriogenic.

Table 1 outlines some of the causes of erectile dysfunction. Often there may be more than one cause present at the same time. The role of the community nurse is to undertake a holistic assessment with the aim of making a diagnosis and offering the man treatment and support.

Epidemiology
There have been a number of large epidemiological studies carried out globally that demonstrate a high prevalence and incidence of erectile dysfunction. The Massachusetts Male Aging Study (MMAS) (the most often cited study) conducted in 1994 reveals the prevalence of erectile dysfunction to be 52% in non-institutionalised men aged 40–70 years, in the Boston area: 17.2%, 25.2% and 9.6% for minimal, moderate and complete erectile dysfunction, respectively (Feldman et al, 1994). A study undertaken in the UK of men aged 18–75 showed a rate of 39% for lifetime erectile dysfunction, with a current prevalence of 26% (Dunn et al, 1998). In these studies there is an age-related increase in erectile dysfunction.

Making a diagnosis of erectile dysfunction
The NMC (2004) requires all specialist community public health nurses to collect and structure data and information on the health and wellbeing and related needs of a defined population. The nurse has to be able to analyse, interpret and communicate data and information with the aim of improving health and social wellbeing; this also applies to the health and wellbeing of men. One aspect of the community nurse’s role is to undertake a range of screening activities (NMC, 2004), for example, screening patients for undiagnosed cardiovascular disease. Part of this activity is to undertake a detailed health-care assessment, which would also include an assessment of the man’s sexual function. An in-depth physical and psychological assessment is required in order to make an accurate diagnosis. Full physical, psychological and sexual health histories are prerequisites.

The nurse should obtain a detailed description of the problem, including the duration of symptoms as well as the original cause(s) of the problem (see Table 1). The British Society of Sexual Medicine (BSSM) (2008) suggests that other factors that should be identified and recorded will include:
• Any subsequent investigations
• Treatment interventions along with the response achieved
• An expression of tumescence and rigidity with quality of morning awakening erections, and spontaneous, masturbatory or partner-related activity erections
• Sexual desire, ejaculatory and orgasmic dysfunction
• Previous erectile capacity
• Issues around any sexual aversion or sexual pain
• Partner issues e.g. menopause or vaginal pain.

The detailed assessment requires the nurse to encourage the man, in a respectful and sensitive manner, to clarify any problems he may have related to his sexual function. Other considerations that the nurse needs to think about when making a diagnosis are those factors related to precipitation, predisposing and maintenance factors (BSSM, 2008) (see Table 2).

Any coexisting medical, psychiatric and surgical history should also be recorded, as well as the man’s current rela-
Table 2. Some factors to consider when making a diagnosis

<table>
<thead>
<tr>
<th>Precipitation</th>
<th>Predisposing</th>
<th>Maintenance</th>
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</thead>
<tbody>
<tr>
<td>Lack of sexual knowledge</td>
<td>New relationship</td>
<td>Problems with relationship(s)</td>
</tr>
<tr>
<td>Negative previous sexual experiences</td>
<td>Acute relationship problems</td>
<td>Poor communication between partners</td>
</tr>
<tr>
<td>Relationship problems</td>
<td>Family or social pressures</td>
<td>Knowledge deficit concerning treatment options</td>
</tr>
<tr>
<td>Religious or cultural beliefs</td>
<td>Pregnancy and childbirth</td>
<td>Long term physical or mental health problems</td>
</tr>
<tr>
<td>Restrictive upbringing</td>
<td>Other major life events</td>
<td>Other sexual problems in the man or his partner</td>
</tr>
<tr>
<td>Confusion concerning sexual or gender preference</td>
<td>Partner's menopause</td>
<td>Use of drugs</td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>Acute physical or mental health problems</td>
<td></td>
</tr>
<tr>
<td>Physical or mental health problems</td>
<td>Lack of knowledge concerning the usual changes of ageing</td>
<td></td>
</tr>
<tr>
<td>Other sexual problems in the man or his partner</td>
<td>Other sexual problems in the man or his partner</td>
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<tr>
<td>Use of drugs</td>
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</table>

Source: Adapted from Carson and Dean, 2007; BSSM, 2008; Carson and McMahon, 2008

The onset of pain, deviation of the penis during tumescence, the symptoms of hypogonadism or other current or past urological symptoms. If the nurse suspects Peyronie's disease this would merit assessment of the peripheral vasculature (Rané and Fraser, 2007). It is not obligatory to perform a digital rectal examination; however, this should be considered if there is evidence of genito-urinary or protracted secondary ejaculatory symptoms (Carson and McMahon, 2008). Blood pressure, heart rate, waist circumference and weight should be measured.

Other investigations may be indicated and are tailored to the needs of the patient after an in-depth assessment.

Table 3. Individual examination and assessment

| Assess general appearance. Are there signs of other illnesses: | • Depression | • Thyroid problems | • Parkinson's disease |
| Assess secondary sexual characteristics: | • Distribution of body hair (facial, pubic, body) | • Muscle development | • Distribution of body fat |
| Assess genitalia: | • Observe, palpate and examine penis shaft, foreskin (if present) | • Any evidence of swelling, lumps, tenderness | • Any evidence of sexually transmitted infection |
| | | | • Inspect and palpate scrotal sac and contents (what size are the testes developmentally) |
| Assess physical parameters. Measure: | • Blood pressure | • Heart rate | • Waist circumference | • Weight |

Source: Adapted from Carson and Dean, 2007; BSSM, 2008
has taken place, as well as in response to the wishes of the patient. Carson and Dean (2007) have suggested that the following should be performed for all men with erectile dysfunction, accompanied by a detailed cardiovascular assessment that includes:

- Fasting glucose
- Urinalysis for glucose
- Total HDL and cholesterol and triglycerides
- Total testosterone, sex hormone binding globulin and albumen
- Prolactin
- Prostate specific antigen

Carson and McMahon (2008) suggest that in addition to the above, the following specialist clinical investigations may be required:

- Nocturnal penile tumescence rigidity testing
- Colour Doppler imaging
- Pharmacocavernosography
- Pharmacocavernography
- Psychiatric evaluation
- Vascular evaluation
- Cardiac evaluation.

**Treatment and nursing care**

Eardley (2002) noted that, in the general population, the most common causes of erectile dysfunction are vascular, with increasing evidence that the risk factors for atherosclerosis, specifically hypertension, smoking, hyperlipidaemia and diabetes, are all associated with erectile dysfunction. There are two key consequences:

- Control of these risk factors would help to reduce the risk of erectile dysfunction.
- When a man presents with erectile dysfunction the nurse must identify these risk factors, not only with the intention of improving the erectile dysfunction, but to also aim to prevent future cardiovascular sequelae.

Erectile dysfunction can have a significant impact on a man, his partner(s) and their relationships, often resulting in a reduction in self-esteem and poor quality of life. Men report feeling guilty and experiencing a sense of shame.

<table>
<thead>
<tr>
<th>Table 4. Treatment options</th>
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<tr>
<td>Treatment option</td>
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</table>
| **First line** | • Provision of education that reinforces sexual function, sexual responsiveness, sexual satisfaction and sexuality  
• Debunking of myths  
• Promotion of sex and the older person and intimacy  
• Consider referral to sexual and relationship therapist (psychosexual therapy)  
• Advice should be provided about lifestyle issues such as the harmful effects of cigarette smoking, use of alcohol and illicit drugs and the benefits of exercise  
• Depression and dyslipidemias if present should be addressed and corrected  
• Review and revision of current medications may be needed  
• Other therapeutic options may be indicated if there is evidence of other underlying pathology such as hypertension and coronary heart disease or poorly controlled diabetes  
• Administration of oral therapies such as sildenafil, tadalafil, vardenafil and sublingual apomorphine as required  
• Use of a vacuum tumescence device with a constriction ring |
| **Second line** | • Administration of oral therapies such as sildenafil, tadalafil, vardenafil and sublingual apomorphine on a daily basis  
• Administration of intracavernosal injections such as alprostadil (see Figure 3)  
• Administration of transurethral pellets, such as alprostadil |
| **Third line** | • Penile implant surgery  
• Vascular reconstructive surgery |

**Source:** BSSM, 2008; Carson and McMahon, 2008
(Engender Health, 2003), and the stigma associated with erectile dysfunction can cause the man to withdraw from intimacy. In some cases all forms of physical contact can become non-existent, resulting in emotional distress, causing stress and adding to the psychogenic component associated with erectile dysfunction. Treatment has the potential to resolve depression and improve the man's self-esteem and overall quality of life and sense of wellbeing (Carson and McMahon, 2008).

Currently, practitioners working in the primary care setting implement the guidance issued by the Department of Health (DH), in a number of Health Service Circulars (DH, 1999a; 1999b; 1999c), to determine the management and treatment of men with erectile dysfunction. The circulars provide the community nurse with guidance on good practice for those men who qualify for treatment within the NHS. Further guidelines have been produced by the BSSM (2008); this guidance, while still adhering to the current DH circulars, is underpinned by a more up-to-date evidence base.

Regardless of the treatment plan chosen, the nurse has a duty to provide the man and (if appropriate) his partner with appropriate and adequate information to help him understand the reasons why erectile dysfunction has occurred. Explaining to the man how his problem compares with the general population may help him feel less stigmatised, and debunking any myths associated with erectile dysfunction can provide an opportunity for him and his partner to understand each other's sexual needs and their sexuality and to choose the most appropriate treatment.

There are a number of treatment options available for erectile dysfunction, and many of these have been developed and revised over time, becoming more effective. Carson and McMahon (2008) consider treatment options from psychogenic and organic perspectives. The choice of treatment will depend on several factors, such as patient (and, if appropriate, partner) preference, severity of erectile dysfunction and the underlying cause. Rané and Fraser (2007) recommend a 'step ladder' approach to treatment, progressing from non-invasive talking therapies and drug therapies, to minimally invasive injection therapy (Figure 3) and vacuum devices, to invasive prosthetic surgery. Table 4 provides an overview of treatment options.

In order to help the patient choose the right treatment option, the nurse must have an up-to-date and in-depth knowledge base. Not all treatment options will suit all men, and they all have side-effects and contraindications. There is no 'one size fits all' approach: each man must be assessed and treated as an individual. The information and advice that the nurse offers should be provided in such a way that the man understands the options, the advantages and drawbacks, with the intention of making an informed choice.

Conclusion
Erectile dysfunction can have devastating effects on individuals. Men report feelings of guilt and shame, and experience stigma associated with this condition that can lower self-esteem and impact negatively on the person's sense of wellbeing. Community nurses are ideally placed to help men and, if appropriate, their partner(s) to come to terms with the condition and to select the most appropriate treatment option. In order to provide this information it is essential that the nurse is knowledgeable and up-to-date with contemporary approaches to the care and management of men with erectile dysfunction.

Acknowledgements: I would like to thank Mrs Frances Cohen for her help and support.

Department of Health (1999a) Health Service Circular/115. DH, London
Department of Health (1999b) Health Service Circular/148. DH, London
Department of Health (1999c) Health Service Circular HSC/177. DH, London
Royal College of Nursing (2006) Sexuality and Sexual Health in Nursing Practice. RCN, London

LEARNING POINTS
- Sex is an important aspect of many people's lives
- Our understanding of erectile dysfunction continues to develop
- The community nurse is ideally placed to help men (and their partners) who experience the physical and psychological impact erectile dysfunction can have on their lives and wellbeing
- Any condition that damages endothelial function can result in erectile dysfunction
- Some men with erectile dysfunction will also have coexisting conditions such as hypertension, hyperlipidaemia, diabetes and depression