



# Erectile Dysfunction

## The GP's role

- GPs are typically the first point of contact for men with erectile dysfunction.
- The GP's role in the management of erectile dysfunction (ED) includes clinical assessment, treatment including counselling, medication, referral and follow-up as needed.

## Overview

- ED is a persistent or recurrent inability to attain and/or maintain a penile erection sufficient for satisfactory sexual activity and intercourse.
- ED is a separate (but occasionally related) clinical condition to premature ejaculation, which has its own distinct management (See Clinical Summary Guide 8: Ejaculatory Disorders).
- ED is a common condition affecting 6-64% of males aged 45-79<sup>1</sup>.
- ED is associated with chronic disease including cardiovascular disease and diabetes. Furthermore, ED may be an early warning sign of these chronic diseases<sup>2</sup>.
- ED is a treatable condition that can impact strongly on the well-being of men and their partners.
- The sexual health of older patients is often overlooked.
- Understanding female partners' sexual needs as part of management should be considered.

## How to approach the topic with patients

- "Many men (of your age/with your condition) experience sexual difficulties. If you have any difficulties, I am happy to discuss them".
- "It is common for men with diabetes/heart disease/high blood pressure to have erectile problems. Also, erectile problems can indicate you are at higher risk for future health problems such as heart disease. So it's an important issue for us to discuss if it is a problem for you".

## Diagnosis

### History

Medical	Sexual	Psychosocial
Lifestyle	Define the nature of the sexual dysfunction	Depression
General health	ED onset	Anxiety
Chronic disease	Spontaneous morning erections	Relationship difficulties
Genital disease	Penetration possible	Sexual abuse
Medications	Maintenance of erection	
Pelvic surgery/radiation		

### Physical examination

- Genito-urinary: penis (plaques), testes (size).
- Cardiovascular: BP, HR, waist circumference, cardiac examination, carotid bruits.
- Neurological: focused neurological examination (e.g. perheral neuropathy).

Refer to Clinical Summary Guide 1: Step-by-Step Male Genital Examination

## Investigations

- Diabetes mellitus.
- Hyperlipidemia.
- Hypogonadism.
- Cardiovascular disease.
- Others as indicated.

## Management

### Treatment decision-making

- Cause: organic, psychosocial or combined.
- Determine patient and partner goals.
- Benefits, risks and costs of treatment options.

### Treatment summary

#### 1st line

- Alter modifiable risk factors and causes.
- Counselling and education.

#### 2nd line

- Oral agents (PDE5 inhibitors).
- Vacuum devices/rings.

#### 3rd line

- Consider specialist referral.
- Intracavernous vasoactive drug injection.

#### 4th line

- Specialist referral.
- Surgical treatment (penile implants).

For full details of treatment, refer over page.

## Referral

### Indicators for referral

- Level of GP training/experience.
- Patient request.

### Refer to endocrinologist

- Complex endocrine disorders.

### Refer to urologist

- Pelvic or perineal trauma.
- Penile deformities.
- Patients for penile implants.
- Treatment failure (e.g. poor or non-responders to medication).

### Refer to ED specialist (either endocrinologist or urologist)

- Complex problems including vascular, neurological and treatment failures.

### Follow-up

Follow-up is essential to ensure the best patient outcomes.

### Assess:

- Effectiveness of treatment and patient/partner satisfaction
- Any adverse effects of treatment
- Overall physical and mental health
- Partner's sexual function (e.g. libido) and couple's adaptation to changes to sex life.

## Treatment of erectile dysfunction

### 1st line treatment

#### Alter modifiable risk factors and causes

- Modify medication regime: change current medications linked to ED (e.g. antidepressants, antihypertensives) when possible.
- Manage androgen deficiency: when diagnosed and a cause is established, androgen replacement therapy.
- Address psychosocial issues: includes relationship difficulties, anxiety, lifestyle changes or stress.

#### Facilitating sexual health

- Lifestyle changes: Smoking cessation, reduced alcohol, improved diet and exercise, weight loss, stress reduction, illicit drug cessation, compliance with diabetes and cardiovascular medications.

### 2nd line treatment

#### Oral agents: PDE5 inhibitors<sup>2</sup>

- Adapt dose as necessary, according to the response and side-effects.
- Treatment is not considered a failure until full dose is trialled 7-8 times.
- Ensure patient knows that sexual stimulation is required for drug to work.
- Common side-effects: headaches, flushing, dyspepsia, nasal congestion, backache and myalgia.
- Contraindicated in patients who take long and short-acting nitrates, nitrate-containing medications, or recreational nitrates (amyl nitrate or methamphetamines).
- Exercise caution when considering PDE5 inhibitors for patients with active coronary ischaemia, congestive heart failure and borderline low blood pressure, borderline low cardiac volume status, a complicated multi-drug antihypertensive program, and drug therapy that can prolong the half-life of PDE5 inhibitors (consult patient's cardiologist if in doubt).

#### On demand dosing

- Sildenafil: 25, 50 and 100 mg; recommended starting dose 50 mg (usually need 100 mg); should be taken on an empty stomach.
- Tadalafil: 10 and 20 mg; recommended starting dose 20 mg.
- Vardenafil: 5, 10 and 20 mg; recommended starting dose 10 mg (usually need 20 mg).

#### Daily dosing

- Tadalafil: 5 mg at the same time every day. The dose may be decreased to 2.5 mg but not exceed 5 mg daily.

As of September 2020 Sildenafil and Tadalafil are off-patent and have generics available, making these more affordable.

#### Counselling and education

- Offer brief counselling and education to address psychological issues linked with ED, such as relationship difficulties, sexual performance concerns, anxiety and depression.
- Discuss sexual misinformation: Includes importance of sufficient arousal and lubrication, and realistic expectations, such as normal age-related changes.
- Consider concurrent patient/couple counselling with a psychologist, to address more complex issues, and/or to provide support during other treatment trials.

### Vacuum devices and rings

- Suitable for men who are not interested in, or have contraindications for oral or injectable pharmacologic therapies.
- Typically suitable for patients in long-term relationships.
- Adverse effects include penile discomfort, numbness and painful ejaculation.

### 3rd line treatment

- Consider referral or specialist training/supervision.

#### Intracavernous vasoactive drug injection

- Alprostadil: 10 and 20 µg is the first choice for its high rate of effectiveness and low risk of priapism and cavernosal fibrosis. If erection is not adequate with alprostadil alone, it may be combined with other vasoactive drugs (bimix/trimix) to increase efficacy or reduce side-effects.
- Commence with minimum effective dose and titrate upwards if necessary.
- Initial trial dose should be administered under supervision of an experienced GP or specialist.
- Erection usually appears after 5 to 15 minutes and lasts according to dose injected. Aim for hard erection not to last longer than 30 minutes.
- Recommended maximum usage is 3 times a week, with at least 24 hours between uses.
- Contraindicated in men with history of hypersensitivity to drug or risk of priapism.
- Patient comfort and education are essential. Inform patient of side-effects (priapism, pain, fibrosis and bruising, particularly if on blood-thinning agents). Provide a plan for urgent treatment of priapism if necessary.

### 4th line treatment

- Refer to urologist (surgical treatments).
- Penile prosthesis (penile implant): A highly successful option<sup>4</sup> for patients who prefer a permanent solution or have not had success with pharmacologic therapy. Surgery is irreversible and eliminates the normal function of the corpus cavernosa. Cost may be a limiting factor for some patients.
- Vascular surgery: Microvascular arterial bypass and venous ligation surgery to increase arterial inflow and decrease venous outflow may be appropriate for some men<sup>5</sup> but is not considered a standard approach<sup>2</sup>.

### Possible emerging treatments

- Low dose shock wave therapy, topical nitrates and new oral agents are being evaluated and may play a role in treatment of ED in the future.

## References

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