

ERECTILE DYSFUNCTION

DIAGNOSIS AND MANAGEMENT

CLINICAL SUMMARY GUIDE

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Erectile dysfunction (ED)

- Is a persistent or recurrent inability to attain and/or maintain a penile erection sufficient for satisfactory sexual activity and intercourse
- Is a common condition affecting 1 in 5 men over the age of 40 years
- Is associated with chronic disease including cardiovascular disease and diabetes. Furthermore, ED may be an early warning sign of these chronic diseases
- 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

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 includes clinical assessment, treatment including counselling, referral and follow-up

How do I approach the topic?

- "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
<input type="checkbox"/> Lifestyle	<input type="checkbox"/> Define the nature of the sexual dysfunction	<input type="checkbox"/> Depression
<input type="checkbox"/> General health	<input type="checkbox"/> ED onset	<input type="checkbox"/> Anxiety
<input type="checkbox"/> Chronic disease	<input type="checkbox"/> Spontaneous morning erections	<input type="checkbox"/> Relationship difficulties
<input type="checkbox"/> Genital disease	<input type="checkbox"/> Penetration possible	<input type="checkbox"/> Sexual abuse
<input type="checkbox"/> Medications	<input type="checkbox"/> Maintenance of erection	

Physical examination

- Genito-urinary: penis, testes
- Cardiovascular: BP, HR, waist circumference, cardiac examination, carotid bruits, foot pulses
- Neurological: focused neurological examination

➔ Refer to Clinical Summary Guide 1

Investigations

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

Management

Treatment decision-making

- Cause: organic, psychosocial or combined
- Patient and partner preferences
- Benefits, risks and costs of treatment options

Treatment summary

1st line

- Alter modifiable risk factors and causes
- Facilitate sexual health

2nd line

- Oral agents (PDE5 inhibitors)
- Counselling and education
- 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

Specialist referral

Indicators for specialist 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

Refer to ED specialist (either endocrinologist or urologist)

- Complex problems including vascular, neurological and treatment failures

Refer to counsellor, psychologist, psychiatrist or sexual therapist

- Relationship problems
- Complex psychiatric or psychological disorder

Follow-up

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

Assess:

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

Treatment of erectile dysfunction (ED)

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
- **Discuss sexual misinformation:** Includes importance of sufficient arousal and lubrication, and realistic expectations, such as normal age-related changes

2nd Line Treatment

Oral Agents: PDE5 inhibitors

- 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)
- 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

On demand dosing:

Sildenafil (Viagra® & generics): 25, 50 and 100 mg; recommended starting dose 50 mg (usually need 100 mg)

Tadalafil (Cialis®): 10 and 20 mg; recommended starting dose 20 mg

Vardenafil (Levitra®): 5, 10 and 20 mg; recommended starting dose 10 mg (usually need 20 mg)

Daily dosing:

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

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
- 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 pharmacologic therapies
- Not suitable for men with severe ED
- Typically suitable for patients in long-term relationships
- Adverse effects include penile discomfort, numbness and delayed ejaculation

3rd Line Treatment › consider referral or specialist training

Intracavernous vasoactive drug injection

- **Alprostadil (Caverject Impulse®):** 10 and 20 mcg 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 60 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 Aspirin or Warfarin). Provide a plan for urgent treatment of priapism if necessary

4th Line Treatment › Refer to Urologist (surgical treatments)

- **Penile prosthesis:** A highly successful option 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 can increase arterial inflow and decrease venous outflow but restoration of normal function is uncommon

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.