Erectile dysfunction occurs in 30% of all diabetic men and affects 55% of those aged over 60 years. In diabetic men, risk factors include hypertension; smoking; vascular disease; duration of diabetes and poor metabolic control. Drugs may also be responsible but it may be difficult to distinguish the effect of the drug from the effect of the underlying reason for which the drug is prescribed. A clear temporal relationship may help. Testosterone deficiency and hyperprolactinaemia are rare causes. Psychological factors may also be wholly or partly responsible.

HISTORY

(a) Clearly define the problem
   (i) Loss of libido – may point to psychological or endocrine cause
   (ii) Failure of erection
   (iii) Failure of ejaculation
   (iv) Premature ejaculation
   (v) Other painful conditions of the penis e.g. balanitis, phimosis or Peyronie’s disease.

(b) Differentiate between psychological and organic cause.

<table>
<thead>
<tr>
<th>PSYCHOGENIC</th>
<th>ORGANIC</th>
</tr>
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<tbody>
<tr>
<td>Was the onset rapid?</td>
<td>Was the onset gradual?</td>
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</table>
Is there an inconsistent response varying with time/partner?  
Is lack of response consistent?  
Are morning/nocturnal erections still present?  
Have morning/nocturnal erections stopped?  
Is response to self stimulation still present?  
Is there no response to self stimulation?  
Has the patient had an important life event?  
Does the patient have an underlying medical condition which may be contributing?  
A yes response to most questions suggests an underlying psychological cause  
A yes response to most questions suggests a primary organic cause

(c) How important is the problem and what are the patient’s expectations of treatment?

EXAMINATION

Look for secondary sexual characteristics, gynaecomastia, peripheral vascular disease, peripheral neuropathy and the appearance of the external genitalia.

INVESTIGATION

Testosterone, FSH, LH, prolactin.

MANAGEMENT

The initial investigation and management of patients with erectile dysfunction can be carried out in Primary Care. Patients who fail to respond to one PDE5 blocker at full dosage should be referred to secondary care for consideration of alternative therapies. Referral to the appropriate specialist will depend upon the particular service which is available locally. Patients considered to have a psychological cause for their erectile dysfunction could be referred to a clinical psychologist if such a service is available.

General measures:
- Stop smoking;
- Improve glycaemic control;
• Reduce alcohol intake;
• Withdraw causative drugs where possible.

Pharmacological treatment:
• Oral preparations; PDE5 blockers e.g. sildenafil, tadalafil and vardenafil;
• Apomorphine; (this is an off label use of this medication)
• Intra-cavernosal injection of vasoactive drugs e.g. alprostadil;
• Intra-urethral agents e.g. alprostadil.
• Vacuum devices and surgical treatment

Some vacuum devices are available on prescription or may be available from the local urologist.

Hypogonadism

Hypogonadism is not uncommon in male patients with diabetes. The finding of a testosterone concentration which is below the normal laboratory range however does not always signify clinically important hypogonadism. The flow chart below should guide the initial investigation of the diabetic male in whom hypogonadism is suspected.
Past medical history & physical examination

Diabetic patient presents with 2 or more of the following
- Loss of libido
- Lack of response to PDE-5 inhibitors
- Unexplained anaemia
- Premature osteoporosis
- Non-specific symptoms – fatigue, low mood, poor concentration, reduced muscle mass, reduced well-being

Measure serum testosterone (T) levels between 7-11am

**T >12nmol/l**
- Consider alternative diagnoses

**T ≤12nmol/l**
- Repeat T level
- Measure FSH, LH & Prolactin

**T >12nmol/L, normal Prolactin and FSH/LH**
- Repeat tests

**T 8-12nmol/L, normal Prolactin and FSH/LH**

**T 8-12nmol/L, and ↑ Prolactin or abnormal FSH/LH**

**T <8nmol/L**
- HYPOGONADISM
- Refer to endocrine clinic