

check

Independent learning program for GPs



Unit 500 November 2013

Men's health

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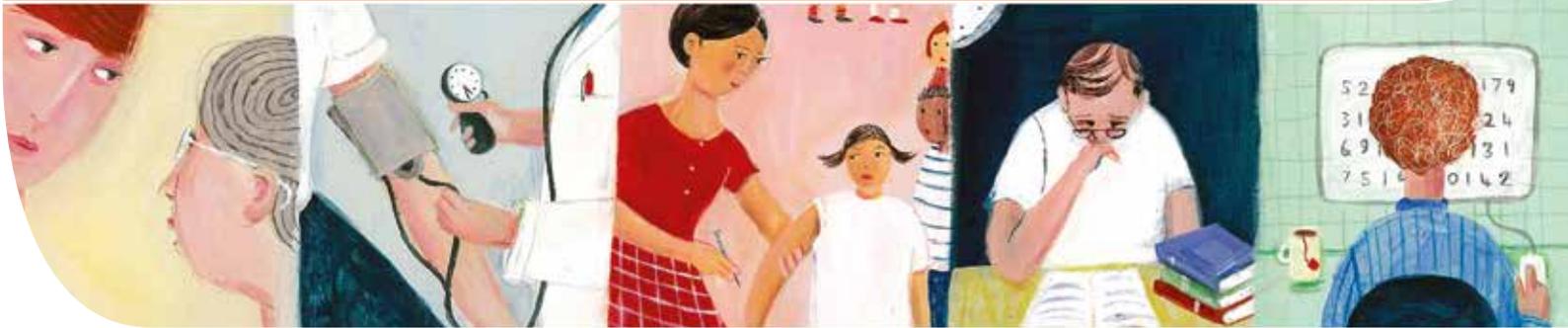
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The five domains of general practice

-  Communication skills and the patient-doctor relationship
-  Applied professional knowledge and skills
-  Population health and the context of general practice
-  Professional and ethical role
-  Organisational and legal dimensions

Bettering the Evaluation and Care of Health (BEACH) data reveal that men seek medical assistance and use medical services at significantly lower rates than women. When men access general practice services, their consultations tend to be brief and they may not always address key health issues.¹

The Australian Institute of Health and Welfare (AIHW) reports that the rate of unhealthy lifestyle practices such as tobacco use, alcohol consumption, poor nutrition and a lack of physical activity is higher among men than women.² It is therefore important for general practitioners (GPs) to opportunistically address these lifestyle risk factors through screening and counselling, to promote disease prevention or for early detection and management.³ However, BEACH data suggest there has been a significant decline in the last 10 years in rates of these preventive activities at GP visits.¹

Given that twice as many men's deaths, compared with women's deaths, are avoidable,⁴ there is a need for ongoing education on key men's health issues.

This unit of *check* examines a number of men's health issues that may present in general practice and makes recommendations for the diagnosis, management and treatment to assist you in managing men who present in your clinic.

Learning objectives

At the completion of this unit, participants will be able to:

- adopt a systematic approach to the management of sexually transmissible infections
- describe the differential diagnosis for testicular torsion and patient outcomes based on timely surgery
- identify ways to assess suicide risk in patients with depression
- list possible causes for erectile dysfunction and management options
- opportunistically assess overall wellbeing, incorporating preventive activities, for men.

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Ab	antibody	ICI	Intra-corporal injection therapy	SHBG	Sex hormone binding globulin
AIDS	acquired immunodeficiency syndrome	IIEF	International Index of Erectile Dysfunction	SHIM	Sexual Health Inventory for Men
ATAPS	Access to Allied Psychological Services	IPP	Intrapanile prosthesis	SNAP	smoking, nutrition, alcohol, physical activity
BMI	body mass index	K10	Kessler Psychological Distress Scale	SSRIs	selective serotonin reuptake inhibitors
BPH	benign prostatic hyperplasia	MBS	Medicare Benefits Schedule	STI	sexually transmissible infection
bpm	beats per minute	MSM	men who have sex with men	TPPA	Treponema pallidum particle agglutination
CBT	cognitive behavioural therapy	NAT	nucleic acid test	URTIs	upper respiratory tract infections
DSM-V	Diagnostic and Statistical Manual of Mental Disorders, 5th Edition	NGU	non-gonococcal urethritis	VCDs	vacuum constriction devices
DM	Diabetes mellitus	NNDSS	National Notifiable Diseases Surveillance Systems		
ED	erectile dysfunction	NOS	Nitric oxide synthase		
HEADSS	Home, Education & Employment, (Eating & exercise) Activities and peers, Drugs, Sexuality, Suicide and depression, Safety, Spirituality	PCR	polymerase chain reaction		
		PDE-5	Phosphodiesterase type 5 inhibitor		
		PSA	Prostate specific antigen		
HIV	human immunodeficiency virus	RPR	rapid plasma reagin		

CASE 1
JACOB HAS PAIN WHEN PASSING URINE

Jacob is a 19-year-old Aboriginal man who is new to your practice. You have seen his mother, Ruby, in the past. You call Jacob into your consulting room and he seems quiet and shy. You ask him why he has come to see you and he laughs nervously and says, 'It hurts when I piss'.

QUESTION 1  

When consulting with Aboriginal and Torres Strait Islander youth, what steps can you take to make them feel more at ease?

FURTHER INFORMATION

You gently enquire about Jacob's pain when passing urine and find he has had symptoms for a few weeks now. He has been too embarrassed to see a doctor. Jacob tells you he has had some discharge from his penis, but has no ulcers or sores. He has been seeing a 17-year-old woman for the last few weeks and has had several other casual female partners over the last 3 months. He 'sometimes' uses condoms, but usually only if the girl wants him to. He has never had male-to-male sex.

Jacob denies any injecting drug use, but you notice what appear to be homemade tattoos on his forearms. He agrees to being examined and you see that he has some tissue paper inside his underwear to collect the thick yellow discharge that is present at his meatus.

QUESTION 2 

What are the likely diagnoses for Jacob's condition? What tests will you perform?

QUESTION 3  

You tell Jacob the results may take a few days to come back. How will you manage him while you wait for the results?

ANSWER 4

Jacob has gonorrhoea and chlamydia, and the treatment you provided will work very well. There is no need for a test-of-cure, given the high efficacy of treatment, although a test-of-reinfection is recommended at 3 months as people who contract chlamydia are at high risk of reinfection. Approximately 15–20% of those diagnosed and treated for chlamydia will have it again when retested some months later.⁵

In addition, Jacob has syphilis as all of his blood tests for this infection are reactive. He has adequate immunity to hepatitis B through vaccination, and he has acquired hepatitis C at some stage. He has no evidence of HIV infection.

Confirmed cases of gonorrhoea and chlamydia (laboratory definitive evidence) should be notified to the Commonwealth's National Notifiable Diseases Surveillance System (NNDSS). Hepatitis C (unspecified) that is confirmed by laboratory definitive evidence, that does not meet the criteria for newly acquired infection and has been present more than 24 months should also be notified to NNDSS. For more information, refer to the Australian Government Department of Health website at www.health.gov.au/casedefinitions#

Partner notification (contact tracing) should be carried out either by yourself (if he gives you the names of his sexual contacts) or by Jacob, who can contact his sexual partners and advise them to have testing and treatment. Australian guidelines recommend that sexual partners for the previous 6 months should be followed up for chlamydia and those for the previous 2 months for gonorrhoea.⁶ Follow-up of syphilis will depend on the stage of infection, i.e. primary, secondary or early latent.

ANSWER 5

The easiest way to determine Jacob's syphilis stage is to ask him whether he has previously been treated for syphilis, or has ever had signs of early syphilis (such as a chancre or skin rash, especially on the palms and soles). Examination may be helpful, looking for a chancre, rash, mucosal lesions, patchy alopecia or lymphadenopathy. If he cannot recall any of these (and this is a not-uncommon occurrence), and nothing is present on examination, then he should be treated for 'syphilis of unknown duration' – an intramuscular injection of 1.8 g benzathine penicillin is given weekly for 3 weeks.⁷ Follow-up serology (using the rapid plasma reagin [RPR], which will fall with effective treatment) should then be performed at 1, 6 and 12 months.⁸

Jacob's hepatitis C antibodies are reactive, indicating exposure at some stage in his life. Approximately 25% of those who contract hepatitis C will clear it spontaneously, though they will remain antibody-positive.⁹ A hepatitis C PCR test should be ordered; if negative, it indicates Jacob has cleared the infection. If positive, he has ongoing hepatitis C infection and should be followed up for this chronic viral infection, which is curable in most cases with modern antiviral treatments.¹⁰

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CASE 2

SAM PRESENTS WITH TESTICULAR PAIN

Sam is a 15-year-old male, whose family you have known for many years. His past history includes only minor problems such as upper respiratory tract infections (URTIs) and sports injuries – he is a keen AFL player. Your receptionist has asked you to see Sam as a matter of urgency as his mother, Jane, is very worried about him. You usher Sam and Jane into your consulting room.

You notice Sam is walking gingerly and appears pale and in pain. You sit him down and ask why they are here. Jane tells you that Sam woke a couple of hours ago with some pain down there and didn't eat breakfast. You ask Sam if he would like his mother to stay for the consult – he looks at her and Jane offers to leave.

Now on his own, Sam tells you his ball is really sore. He feels nauseated, although he hasn't vomited. He doesn't feel like he has a fever and he doesn't have any abdominal pain as such. You ask if he has a girlfriend and Sam replies, 'sort of'. When pressed, he says they had sex a couple of weeks ago for the first time and that she is his first sexual partner.

QUESTION 1 

What are the possible diagnoses for testicular pain in a teenager?
How might you distinguish them on examination?

FURTHER INFORMATION

You examine Sam and find his oral temperature is 37°C and a pulse of 88 beats per minute (bpm). He has no tenderness on palpation of the abdomen, but on examination of his genitalia the scrotum is erythematous, especially on the right side. The right testicle is high and is very tender to palpation. There is no cremasteric reflex on that side. The left testicle is normal on examination.

QUESTION 2 

Are these findings in keeping with a testicular torsion? Would you order any investigations at this stage?

QUESTION 3 

How would you manage Sam?

FURTHER INFORMATION

Two weeks later Sam is in your waiting room again, but this time he is in school uniform and has come by himself. You call him in and ask how he is getting on. He lets you know that he is still a bit sore, but he is very grateful to you and the surgeon for saving his testicle. The surgeon told him he should be able to resume football training in a couple of weeks and he is looking forward to that. He then looks embarrassed and says that he has a problem with his foreskin. When he had sex with his girlfriend, it hurt him a lot and there was some bleeding from the under-surface of his penis. He wonders if there is something wrong with him.

QUESTION 4 

What do you do now?

CASE 2 ANSWERS

ANSWER 1

Examination of a prepubescent or adolescent male with lower abdominal and/or testicular pain is mandatory. Embarrassment may lead young males to omit or deny symptoms of testicular pain, so examination of the external genitalia should be carried out in a sensitive manner. The diagnosis to be excluded is torsion of the testicle, as rapid surgical treatment is necessary to save the testicle from necrosis. Torsion of the testicle is the most common cause of testicular loss in young males. Some 26% of cases of acute scrotal pain are due to torsion.¹ Other possibilities include epididymo-orchitis and torsion of a testicular appendix. The most common age group affected is 12–16 years, although it can occur at any age.

Torsion is more likely with pain of less than 24 hours' duration, nausea or vomiting, a high position of the testicle, transverse lie of the affected testis and an abnormal cremasteric reflex.²

ANSWER 2

The examination findings are typical of testicular torsion, but epididymo-orchitis and torsion of a testicular appendix are also possible, though less likely. With epididymo-orchitis, there may be erythema of the scrotum and testicular and epididymal tenderness, but the cremasteric reflex is generally not affected.

It is important to note that treatment should not be delayed by ordering investigations. Investigations such as Doppler ultrasound of the scrotal contents can improve diagnostic accuracy significantly, especially when the probability of testicular torsion is considered low.³ In epididymo-orchitis the vascular flow to the epididymis and adjacent testicle is increased, whereas with torsion the blood flow is compromised and much reduced. Radionuclide scans are very accurate but time-consuming and not always available.

ANSWER 3

Suspected torsion of the testicle is a surgical emergency and rapid referral is vital to save the testicle. If treated surgically within 6 hours, there is a high chance (approximately 90%) of preserving the testicle.⁴ At 12 hours the rate decreases to 50%, at 24 hours it drops to 10% and after 24 hours the rate of preservation approaches 0%.⁴ Analgesia should be given parenterally if Sam is in significant pain.

Manual detorsion can be performed if there will be a significant delay in attending surgery. The procedure for manual detorsion of the testis is similar to the 'opening of a book' when the physician is standing at the patient's feet. Most torsions twist inward and toward the midline; thus, manual detorsion of the testicle involves twisting outward and laterally. Unfortunately, lateral rotation has been described in up to one-third of testicular torsions and in such cases further lateral rotation will worsen the condition. In the literature, the success rate of manual detorsion has varied widely: success rates ranged from 26.5% to more than 80%.⁵ Generally speaking, surgical referral is far preferable.

ANSWER 4

Once again it is necessary to examine Sam. You find that he has a tight phimosis and that the foreskin cannot be retracted over the glans penis. You let him get dressed again and explain the situation – he has a constriction of the foreskin that has probably been present for a long time, but has only become a real problem since becoming sexually active (though some men find it is a problem with masturbation, too).

It may be helpful to provide some basic information about the foreskin and encourage Sam to gently retract the skin and wash regularly when bathing or showering.

The treatment initially involves daily application of a potent corticosteroid cream such as betamethasone dipropionate (0.05%) for 2–4 weeks to the scarred area in order to thin the scar tissue and allow stretching of the constricted foreskin. This conservative treatment is often effective.⁶ If not, then preputioplasty (in which a limited dorsal slit with transverse closure is made along the constricting band of skin) can be performed by a surgeon. It has the advantage of limiting pain and a short healing period relative to circumcision and avoids cosmetic effects.⁷ It is rare to require formal circumcision if more conservative measures are tried.

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QUESTION 5  

Given Michael's diagnosis, what other important issue needs to be explored?

QUESTION 6  

In developing a management plan for Michael what would you consider?

FURTHER INFORMATION

You order blood tests and ask Michael to return in a few days to discuss the results. You advise him to reduce his use of alcohol to no more than two standard drinks per day. You also provide him with written information about depression and emergency contact numbers.

When he returns, he is still low in mood, but feels hopeful that things will improve. He has reduced his alcohol use and the blood test results are unremarkable.

QUESTION 7  

What further interventions would you offer?

CASE 3 ANSWERS

ANSWER 1

A large number of medical conditions can lead to feelings of tiredness. In general practice, tiredness is the second most common complaint after cough with 5–7% of patients presenting with this symptom.¹ Physical conditions such as infections, endocrine problems, nutritional deficiencies, sleep apnoea, coeliac disease and diabetes can all present with fatigue.

People with mental health issues such as stress, bereavement, depression, anxiety and chronic fatigue syndrome may also present with tiredness. A 2009 Australian survey reported a 45.5% lifetime prevalence of any mental health issue in the general population.²

ANSWER 2

To help differentiate the cause(s) of Michael's tiredness, consider a systematic enquiry of the main organ systems, sleep duration and quality, infections, pain, and review of mood and physiological shift symptoms (appetite, weight, motivation, concentration, memory, guilt, hopelessness) as well as drug and alcohol use.

A general examination of the patient including assessment of weight, blood pressure and temperature should be undertaken, as well as performing a urinalysis. For those with prolonged fatigue and infrequent consultations with general practitioners, baseline blood tests including a full blood count, erythrocyte sedimentation rate, liver function, renal function, thyroid function and blood sugar levels would be helpful first-line investigations.

If depression is suspected, use of a validated psychological assessment tool such as the Hamilton Depression Rating Scale or the Kessler Psychological Distress Scale (K10) may help determine the level of depression and anxiety at baseline and can provide a means by which to assess treatment response.³

ANSWER 3

The Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-V) describes a major depressive episode as consisting of either depressed mood or diminished interest, with changes in appetite, weight, energy, concentration, motivation or guilt for a period of at least two weeks.⁴ Hence, Michael fulfils the criteria for a major depressive episode (see *Table 1*). Differential diagnosis includes alcohol-induced mood disorder or a mood disorder due to a general medical condition.

Table 1. Diagnostic criteria for major depression³

<p>Pervasive depressed mood (or irritable mood in children) and/or marked loss of interest or pleasure unexplained by personal circumstances, e.g. grief, plus four or more of the following for greater than 2 weeks:</p> <ul style="list-style-type: none"> • Marked change in weight or appetite • Insomnia/hypersomnia nearly every day • Psychomotor agitation/retardation nearly every day • Fatigue/loss of energy nearly every day • Feelings of worthlessness, excessive/inappropriate guilt • Indecisiveness or diminished concentration • Feelings of hopelessness • Thoughts of death, suicidal ideation/attempt
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Men are less frequently diagnosed with depression, compared with women. Possible socio-cultural reasons for this may include the masculine gender role, which is less emotion-focused and more likely to interpret seeking help as incompetent or dependent. Consequently, depression is less likely to be recognised by men, who are then less likely to seek help.⁵ Men also may present with substance use issues and anger when depressed rather than complaints of depressed mood.

ANSWER 4

Although there may be a continuum of severity and pervasiveness from sadness to clinical depression, depression can be considered to be an exaggerated or disproportionate response to adverse life events.⁶ Many who are exposed to stressful life events do not develop a depressive syndrome. The physical changes (lethargy, amotivation) and cognitive changes (guilt, hopelessness) are more likely described by those suffering with depression rather than sadness.

ANSWER 5

Current guidelines recommend questioning people with depression directly about suicide risk.^{7,8} This can be achieved through sensitive use of open-ended questions to gently explore the risk of harm, including suicide ideation and intent. Where the risk of harm is deemed to be significant, consider referral to specialist services.

Current risk factors for suicide in Michael's case include being middle aged, male, abusing alcohol and having depression. Along with risk factors, protective factors also need to be identified (see *Table 2*).

Table 2. Assessing suicide risk^{9, 10, 11}

<p>Risk factors for suicide</p> <ul style="list-style-type: none"> • Feeling of hopelessness • Previous self harm/suicide attempt(s) • Diagnosis of a psychiatric condition • Substance abuse (alcohol, drugs) • Family history of suicide • Recent stress or major loss • Age, gender, marital status (older age, male, divorced)
<p>Asking about suicide</p> <p>Example questions:</p> <ul style="list-style-type: none"> • Do you ever feel like giving up? • Does your life ever feel so bad that you wish you could die? • Are you having thoughts of suicide? • Are you thinking about killing yourself? • Have you taken any steps to do something? • How close have you come to doing something? (access to methods of suicide, e.g. firearms, stockpiling medications)

ANSWER 6

A supportive and empathic relationship between doctor and patient is important in formulating a management plan tailored to the needs of the individual.^{7,9} Factors that could be considered might include the treatment setting, patients' preferences, concomitant psychiatric and physical disorders, concurrent drugs, patients' experiences with previous treatments, the severity of depressive symptoms or subtypes of depression, risk of suicide and the availability of treatment options.

Most patients with depression can be managed in the general practice setting, and this may involve using the GP Mental Health Care Items through the Medicare Benefits Schedule (MBS), which include preparation of written mental health care plans for individual patients. Specialist referral is indicated for severe depressive states or those at immediate risk of harm. In a rural area, access to specialist mental health services may be limited and the benefits of referral to specialist treatments in metropolitan settings need to be weighed against the disruption of lifestyle and relationships that may result from a change of setting.

Provision of education regarding depression and treatment options, as well as written information including after hours contact details in case of clinical deterioration or emergencies need to be discussed with the patient and family.

ANSWER 7

Psychological and/or pharmacological interventions could be offered to Michael.

Psychological interventions could be offered given the presence of psychosocial issues such as grief and work-related stress.¹¹ In mild to moderate depression, psychological treatments are as effective as antidepressant medication.¹² Cognitive behavioural therapy (CBT) and interpersonal therapy have the strongest evidence for efficacy in mild to moderate depression.¹¹ The Access to Allied Psychological Services Program (ATAPS) is part of the Better Outcomes in Mental Health Care Initiative, which is funded by the Department of Health and managed locally by Medicare Locals. ATAPS allows GPs to refer patients to mental health professionals for a maximum of 12 sessions per calendar year, with the possibility of an additional six sessions, at minimal cost to the patient. Lastly, advising Michael to engage in regular exercise and improve his lifestyle by socialising and engaging with support systems in the community is also important.¹³

Antidepressants are indicated in moderate to severe major depression. While it is generally accepted that antidepressants have similar efficacies, individual patient responses may vary. Selective serotonin reuptake inhibitors (SSRIs) are often considered to be appropriate first-line treatment choices given their favourable risk–benefit ratio, particularly in overdose. Full antidepressant response may not be seen for 6–8 weeks; however improvement is often seen within several weeks.^{3,11} Patient preference is an important consideration in determining treatment options. Patients who do not respond to an adequate trial of antidepressants should be referred to a psychiatrist.

Although Michael's weight loss is consistent with a depressive disorder, given his age, other causes of weight loss, such as carcinoma, should be considered and excluded through history taking and investigations as considered appropriate.

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RESOURCES FOR DOCTORS

- General practitioners can freely obtain advice, either by phone, fax or email from a psychiatrist within 24 hours by contacting GP Psych Support on 1800 200 588 or www.psychsupport.com.au
- A tele-health assessment with a psychiatrist over the internet can also be arranged and the names of participating psychiatrists can be obtained from the Royal Australian and New Zealand College of Psychiatrists website at www.ranzcp.org

RESOURCES FOR PATIENTS

- beyondblue offers web and phone-based resources for men in managing depression (www.beyondblue.org.au).
- SANE (www.sane.org) provides fact sheets and podcasts with easy-to-read explanations on a wide range of mental disorders, treatments and related issues, for patients and their families.
- Crisis support for patients is available from lifeline, which offers free calls from mobile phones 24 hours each day (www.lifeline.org.au).
- The National Prescribing Service offers a comprehensive leaflet with support groups and links for people with depression, including men, children, teens, the over 65s and people from culturally and linguistically diverse communities (www.nps.org.au).

CASE 4

JOHN COMPLAINS OF ERECTION DIFFICULTIES

John is a 62-year-old accountant, who has been married to Jan for 32 years. He has a 2-year history of progressively worsening erectile dysfunction (ED). He achieves partial erections that are sufficient for penetration on approximately 30% of attempts. He no longer experiences waking erections or erections in response to sexual fantasy or solitary pleasuring. He is surprised, angry and embarrassed, and he avoids intimacy and sexual intercourse. John is concerned that his relationship with Jan has deteriorated.

QUESTION 1  

John asks, 'Why me ...?' How would you respond?

QUESTION 2 

Why do you think John has developed a pattern of sexual avoidance?

FURTHER INFORMATION

John has a 10-year history of type 2 diabetes mellitus (DM) complicated by diabetic retinopathy, obesity (BMI 32.9 kg/m², waist circumference 108 cm), hypertension and hyperlipidaemia. His current medication includes gliclazide (160 mg bd), metformin controlled release formulation (1000 mg bd), telmisartan (40 mg mane) and atorvastatin (20 mg mane). He smokes 15 cigarettes a day and admits to 20 standard drinks per week.

QUESTION 3 

Given this additional information, what could be the possible causes of John's ED?

QUESTION 4 

How common is ED in men with diabetes mellitus?

QUESTION 5  

How would you evaluate John?

FURTHER INFORMATION

Results of John's investigations include:

- fasting glucose 16.3 mmol/L
- HBA1c 9.6%
- total cholesterol 7.9 mmol/L
- LDL cholesterol 4.7 mmol/L
- triglycerides 1.9 mmol/L
- total testosterone 12.1 mmol/L
- prostate-specific antigen (PSA) 1.2 µg/L.

First-line pharmacotherapy for ED includes undertaking a trial of phosphodiesterase type 5 (PDE-5) inhibitors. John has previously failed to respond to a trial of multiple doses of *on-demand* sildenafil (100 mg) and tadalafil (20 mg). John was managed with a number of lifestyle modifications, including a low calorie diet and an exercise program, and review of the management of his diabetes by his endocrinologist. His ED was treated with *daily* tadalafil (5 mg) and at 6-week review he reported a good response with no significant adverse effects.

QUESTION 6 

Comment on the results of John's investigations.

QUESTION 7  

How would you explain John's failure to respond to on-demand PDE-5 inhibitor drugs?

QUESTION 8 

What other treatment options could you consider if John had failed to respond to daily tadalafil?

CASE 4 ANSWERS

ANSWER 1

Community-based epidemiological studies¹ suggest ED is a common disorder in men, affecting up to 52% of men aged 40–70 years and is associated with reduced quality of life. Data from Australian, US and UK studies^{2,3} are similar, and estimate the prevalence of complete ED as approximately 5% among 40-year-olds, 10% among men in their 60s, 15% among men in their 70s and 30–40% among men in their 80s. It is projected that by 2025, 322 million men worldwide will have ED.⁴ Prevalence studies^{4,5} show that, when controlling for other factors, increasing age, obesity, diabetes, hypertension, hyperlipidaemia and vascular disease are contributive factors.

TABLE 1. Risk factors associated with erectile dysfunction^{6,7}

Lifestyle	Alcohol Obesity Recreational drugs Smoking
Medical	Hypertension Cardiovascular disease Diabetes mellitus Hyperlipidaemia Depression Sleep apnoea Multiple sclerosis
Surgical	Prostate surgery
Medications	Antihypertensives and diuretics (beta-blockers, thiazides, clonidine) Antidepressants (selective serotonin reuptake inhibitors, tricyclic antidepressants, lithium, monoamine oxidase inhibitors) Chemotherapy and hormonal medications Opiate analgesics
Other	Peyronies disease Spinal cord trauma Pelvic trauma Pelvic radiotherapy

ANSWER 2

It is increasingly recognised that a diagnosis of ED can have a profound impact on the patient's and partner's quality of life. ED can lead to withdrawal from intimacy, avoidance of all physical contact with a partner and an increase in emotional stress, which itself can perpetuate any psychogenic component to the ED. The condition can affect a man's self-esteem and self-image, and lead to anxiety and hence depression. Treatment of ED has been shown to lead to resolution of depression and restoration of self-esteem, and thus improvement in quality of life.⁸

ANSWER 3

It is now recognised that vascular disease of the penile arteries is the most common cause of ED in John's age group, accounting for up to 80% of cases.⁹ Apart from age, the main risk factors are those for vascular disease (smoking, diabetes mellitus, hypertension, abnormal lipid profile, obesity and lack of exercise). Essentially, any condition that damages endothelial function can result in ED. ED may be an early manifestation of generalised endothelial dysfunction and a predictor and a precursor of other forms of cardiovascular disease. More than half of men with ED who have no cardiac symptoms have an abnormal stress test, and 40% have been found to have significant coronary artery disease when studied.¹⁰

Endocrine disorders, such as hypogonadism, have a significant role in ED physiology. Testosterone regulates cavernosal nerve structure and function, nitric oxide synthase (NOS) expression and activity, PDE-5 and corporal smooth muscle cell growth and differentiation. Men with benign prostatic hyperplasia (BPH) have a high prevalence of ED.¹¹ The explanation for this association remains unclear, and the quality of life of men with BPH is reduced by its effects on sexual function.

Although in most men, ED has an underlying vascular cause, usually related to endothelial dysfunction, there is always a contributing, sometimes substantial, psychogenic component related to performance anxiety. Treatment of this psychological component alone may be sufficient to restore normal erections. Lastly, use of certain medications, including commonly prescribed antihypertensives, may contribute to ED.

Given the above considerations, the following are possible contributors to John's ED: his age, diabetes, hypertension, dyslipidaemia, obesity, smoking and use of telmisartan.

ANSWER 4

ED is reported to occur in 35–70% of men with DM.¹² More than 50% of men develop ED within 10 years of being diagnosed with DM.¹³ ED occurs at an earlier age in men with DM, compared with men without DM and the age-adjusted probability of complete ED is nearly 3 times higher.^{1,12} The prevalence of ED increases with age, from 9% in men with DM aged 20–29 years to 95% in men >70 years, and increases with duration, poor glycaemic control, and complications of DM such as vascular and microvascular disease and neuropathies.¹⁴ One study reported that as many as 11% of men seeking treatment for ED have undiagnosed DM.¹⁵

ANSWER 5

Evaluation should include a full history (medical, sexual and psychosocial), physical examination and consideration of appropriate investigations.

A full history and thorough clinical examination of the patient is needed to:

- confirm that the patient is suffering from ED and/or another sexual dysfunction, such as hypoactive desire or premature ejaculation
- assess the severity of the condition
- determine whether ED is psychogenic or organic in origin
- identify risk factors or comorbid disease
- assess the fitness of the patient for resuming sexual activity.

There are a range of suitable initial questions to ask the patient with ED, for example:

- What is the problem with your erections?
- How frequently do you have the problem?
- When did you last have successful sexual intercourse?
- How strong is your desire for sex, now and in the past?

- What has been the effect of your sexual difficulties on your relationship with your partner?
- What is your partner's attitude to the problem?
- What are you and your partner hoping to gain from any treatments that may be available?

Several validated questionnaires have been developed to score the erectile problem objectively. Questionnaires may be completed in the waiting room, before a consultation or between consultations. The short five-question form of the International Index of Erectile Function (IIEF), or the IIEF-5 or Sexual Health Inventory for Men (SHIM), are useful for both diagnosis and assessment of response to treatment.

The association between anxiety and ED should be established. Psychogenic ED can be caused by a number of problems, principally performance anxiety, but also guilt, depression, relationship problems, or fear and personal anxiety. Careful enquiry should be made about current medications, such as beta-blockers, thiazide diuretics and anti-depressants, as well as the use of recreational drugs.

Physical examination of a man with ED will be directed, to a certain extent, by his history, and should include assessment of the external genitalia, the endocrine and vascular systems, and the prostate gland in most patients. The penis should be carefully palpated to exclude the presence of fibrous Peyronie's plaques and to check for phimosis. Prostatic induration or a palpable nodule should raise the suspicion of prostate cancer.

ANSWER 6

The degree to which men should undergo clinical investigation depends on the patient's history and examination findings. General investigations include serum concentrations of total testosterone (before 11am), fasting glucose and fasting lipids and, in men over 50 years of age, prostate-specific antigen (PSA). Further investigations may be required based on the results of these initial investigations including serum concentrations of free testosterone, sex hormone binding globulin (SHBG), luteinizing hormone and prolactin.

John's raised fasting glucose and HBA1c indicate poor glycaemic control of his diabetes with an increased risk of diabetic microvascular complications. Similarly, John's raised lipids and central obesity suggest metabolic syndrome and an increased risk of coronary artery and cerebrovascular disease. John's total testosterone is within the normal range and is consistent with his eugonadal appearance.

ANSWER 7

Three highly potent, selective PDE-5 inhibitors (sildenafil, tadalafil and vardenafil) are currently available for the treatment of ED in Australia. The overall efficacy of the different PDE-5 inhibitors appears similar¹⁶ and is related to the extent and severity of ED, with significantly reduced efficacy demonstrated in patients with severe vasculogenic ED, diabetic ED and post-radical prostatectomy

ED.^{17–19} Despite the demonstration of efficacy and tolerability in a broad range of ED aetiologies and severities in multiple large multicentre clinical trials, 30–35% of patients will fail to respond.²⁰ PDE-5 inhibitors are contraindicated in those with a recent myocardial infarct, concurrent users of nitrate therapy and those at high risk of cardiovascular disease.^{21–23}

The reasons for initial or delayed PDE-5 inhibitor failure are diverse and manifold, and include severe ED at first presentation, worsening of endothelial dysfunction and progression of penile atherosclerosis, post-radical prostatectomy ED, unrecognised hypogonadism, inadequate patient education and incorrect drug usage, the possible development of tachyphylaxis or drug tolerance, and the presence or development of comorbid psychosocial factors.

It may be useful to explain the indications for PDE-5 inhibitors, how they work and their correct use, as this may lead to improved efficacy.

ANSWER 8

Second- and third-line treatment options include intra-corporeal injection therapy (ICI), vacuum constriction devices (VCDs) and intrapenile penile prostheses (IPP).

ICI: Treatment with patient-administered ICI using vasodilator drugs such as alprostadil, which relaxes the arterial and trabecular smooth muscle, is an effective treatment for ED.²⁴ ICI can be used in most men with ED, but is especially useful in men who fail to respond to oral pharmacological agents.²⁵ Alprostadil resulted in an erection of sufficient rigidity for sexual intercourse in 72.6% of men with ED.²⁴ Self-injection technique should be taught by either the physician or the practice nurse. Relative contraindications to ICI include anticoagulant therapy, previous poor compliance and a history of priapism.

VCD: This involves application of a vacuum to the penis in a vacuum cylinder causing tumescence and rigidity, which is sustained using a constricting ring at the base of the penis. Vacuum constriction devices require enthusiasm on the part of the patient and a sympathetic partner. They are more popular in middle and older age group couples, and are an uncommon treatment choice in single younger men. Approximately 60–70% of men find using the device straightforward.²⁶

IPP: Surgical treatment of ED with an IPP is usually reserved for patients in whom more conservative therapy has failed, or for whom conservative therapy is contraindicated.²⁷ Most of these patients will have significant arterial or venous disease, penile corpus cavernosum fibrosis or Peyronie's disease or will, by choice, prefer the prospect of a 'one-off' solution. While the outcome of surgical intervention may be more reliable in certain selected patients, the incidence of morbidity and complications is significantly greater than with medical treatment.²⁸ Multi-component inflatable penile implants are associated with high patient satisfaction rates, and device failure and prosthetic infection are uncommon.²⁸ Infection is the most problematic complication following surgery and often requires removal of the prosthesis and either immediate replacement or staged re-implantation at a later stage.

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RESOURCES FOR DOCTORS

- Andrology Australia has produced a clinical summary guide, 'Erectile dysfunction: diagnosis and management', which is available at www.andrologyaustralia.org/health-professionals/clinical-summary-guidelines

RESOURCES FOR PATIENTS

- The Better Health Channel provides an erectile dysfunction leaflet on its website at www.betterhealth.vic.gov.au/bhcv2/bhcarticles.nsf/pages/Erectile_dysfunction?open

CASE 5

ROBERT INJURED HIS ANKLE

Robert is a 22-year-old librarian who presents one Monday morning with a swollen left ankle. He tells you he tripped the previous evening. Robert has never had ankle problems in the past. On examination he has a minor strain, which you manage.

QUESTION 1 

What other information would you want to ask Robert?

FURTHER INFORMATION

When assessing Robert's lifestyle risks, he reports that he had been out drinking the night before and injured his ankle when he slipped while leaving the pub. Further questions revealed unsafe levels of alcohol consumption. You discuss his alcohol use non-judgmentally and explain what constitutes safe levels of drinking. He states that he does not smoke, but used ecstasy once about 18 months ago and has not used it since.

Nine months later, Robert presents with dysuria and a urethral discharge.

QUESTION 2 

What else would you want to know? What tests would you order?

FURTHER INFORMATION

Robert informs you that he had unprotected anal sex with another man. His test results confirm that he has gonococcal urethritis. Chlamydia was not detected, nor was HIV infection.

QUESTION 3 

How would you treat Robert? What follow-up would you recommend?

QUESTION 4 

Is there any relationship between Robert's previous ankle injury and other risk-taking activities?

QUESTION 5 

What further advice would you give Robert?

CASE 5 ANSWERS

ANSWER 1

In addition to asking questions to manage Robert's ankle injury, this presentation provides an opportunity to assess his general wellbeing and lifestyle risk factors, aiming to reduce future risk. Young adult men aged 15–24 years present less often to their GPs, compared with women in the same age group (men in this age group comprise 3.1% of GP encounters, compared with 5.4% for women).¹

Young men are more likely to report unhealthy behaviours, compared with women. In the 20–29 year age group, 19.7% of men report daily smoking, compared with 16.3% of women; 3.4% of men report daily drinking, compared with 0.9% of women.² Similarly, 30.5% of men report using illicit drugs compared to 24.3% of women.² In 2011, 95.2% of cases of newly diagnosed HIV/AIDS cases in Australia were in men.³

For men of Robert's age, age-specific preventative activities should be considered. Questions could be asked using the SNAP framework to explore weight and nutrition (N), alcohol use (A) and physical activity (P) on a two-yearly basis. Smoking (S) should be broached opportunistically and ideally at every visit. Blood pressure should be checked every two years, or more often for those at high cardiovascular risk. Review of sexual health, including chlamydia risk should be assessed opportunistically every 12 months. Chlamydia is the most commonly diagnosed and curable STI in Australia and regular screening in sexually active people aged 15–29 years is recommended to minimise risk of complications.⁴

ANSWER 2

In addition to obtaining a sexual history for the presenting complaint (e.g. duration of symptoms, amount and nature of discharge), you should conduct a risk assessment of Robert's sexual behaviour in a non-judgmental manner. When determining sexual behaviour risks, elicit information on the number and gender of recent sexual partners, the nature of sexual activity, sexual contact with sex workers and use of condoms for insertive intercourse. In the event of the diagnosis of a sexually transmissible infection, notification of sexual partners should be discussed.

Depending on Robert's responses, a number of tests could be considered. For example, a full check for STIs including HIV infection would be appropriate. Gonococcal infection has been shown to be a co-factor in the acquisition of HIV infection although the impact of the current pattern of STIs of men who have sex with men in Australia on the acquisition of HIV is not clear.⁵

A complete physical examination to check for the presence of other STIs, such as syphilis, and ordering of a urethral Gram stain, gonococcal culture and PCR testing for *C. trachomatis*, pre- and post-test counselling for HIV antibody test would be reasonable.⁶ Hepatitis A, B and C screening and/or vaccination may also be relevant.^{4, 7} Robert's informed consent is required for all tests.

ANSWER 3

Treatment of gonococcal urethritis should be based on the results of urethral (if discharge is evident) or endocervical swab Gram stain; bacterial culture for *N. gonorrhoeae* and other possible bacterial pathogens and, if relevant, susceptibility testing, and/or nucleic acid test (NAT) on first stream urine or genital swab for *C. trachomatis*, *N. gonorrhoeae* and *M. genitalium*.⁸

Reports of gonococcal strains resistant to penicillin, tetracyclines and fluoroquinolones are common in most Australian communities (including urban centres).⁵ Given that in Robert's case chlamydia infection was ruled out, an intramuscular infection of ceftriaxone 500 mg in 2 mL of 1% intramuscular lignocaine, as a single dose, is appropriate.⁸ Dissolving ceftriaxone in lignocaine reduces the pain associated with injecting ceftriaxone intramuscularly.⁹

A confirmed case of gonorrhoea (laboratory definitive evidence) should be notified to the Commonwealth's NNDSS.

Robert's sexual contacts from the last 6 months should be contacted and treated presumptively and any follow up undertaken in line with current guideline recommendations (e.g. in cases of chlamydia, repeat testing for reinfection after 3–12 months may be appropriate).^{4, 9}

Robert should be retested in 6 weeks for HIV infection, as HIV antibodies can take some time to appear after HIV exposure.

Hepatitis A, B and C serology and/or immunisation for hepatitis A or B could also be considered.⁷

ANSWER 4

The presence of high-risk alcohol consumption that contributed to Robert's ankle injury may be an indication of general high risk taking, which is more common in younger men.¹⁰ This includes sexual risk taking, the use of recreational drugs and risk of accidental injury.

ANSWER 5

Robert needs to be counselled to help reduce the high-risk behaviours that may have resulted in this infection. This encounter provides an important opportunity to reinforce education about safe sexual practices and discuss any possible anxiety or other risk behaviours to help prevent Robert from acquiring HIV or other infection(s).

This discussion should include the increased risk of harm associated with alcohol and recreational drug use in the context of men who have sex with men and strategies for reducing this risk. This may require referral to a counsellor skilled in this area.¹¹

The lifetime risk of alcohol-related injury increases more rapidly for men. Nearly one-third of self-inflicted injuries and suicides are linked to alcohol consumption in men.¹²

The discussion should inform Robert that safe drinking levels constitute two standard drinks per day for men,¹² and recommend annual screening for STIs in line with current recommendations for gay men and men who have sex with men (MSM). The provision of written materials would be appropriate.

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RESOURCES FOR DOCTORS

- The Australasian Society for HIV Medicine produces a primary care guide for the management of HIV, viral hepatitis and STIs. It is available at www.ashm.org.au/images/publications/monographs/hiv_viral_hepatitis_and_stis_a_guide_for_primary_care/hiv_viral_hepatitis_and_stis_whole.pdf

RESOURCES FOR PATIENTS

- STI care, treatment guidelines and fact sheets are available from the NSW Sexually Transmissible Infections Program Unit at www.stipu.nsw.gov.au
- Information for gay men on STIs, including notification advice, is available at www.thedramadownunder.info
- Online partner notification systems include www.letthemknow.org.au, www.bettertoknow.org.au (for Aboriginal and Torres Strait Islander youth).

Men's health

In order to qualify for 6 Category 2 points for the QI&CPD activity associated with this unit:

- read and complete the unit of *check* in hard copy or online at the *gplearning* website at www.gplearning.com.au, and
- log onto the *gplearning* website at www.gplearning.com.au and answer the following 10 multiple choice questions (MCQs) online, and
- complete the online evaluation.

If you are not an RACGP member, please contact the *gplearning* helpdesk on 1800 284 789 to register in the first instance. You will be provided with a username and password that will enable you access to the test.

The expected time to complete this activity is 3 hours.

Do not send answers to the MCQs into the *check* office. This activity can only be completed online at www.gplearning.com.au.

If you have any queries or technical issues accessing the test online, please contact the *gplearning* helpdesk on 1800 284 789.

**FOR A FULL LIST OF ABBREVIATIONS AND ACRONYMS USED IN THESE QUESTIONS PLEASE GO TO PAGE 3.
FOR EACH QUESTION BELOW SELECT ONE OPTION ONLY.**

QUESTION 1

Sean is a 33-year-old bisexual male artist who has recently started to date a new partner. He presents with a thick purulent creamy discharge from his penis and complains of pain when passing urine. He has had these symptoms for over a week. There are no ulcers or sores on his penis or anus. What would be an appropriate course of action?

- Treat presumptively for gonorrhoea and chlamydia.
- Take samples for microscopy and culture and arrange a follow-up appointment for Sean.
- Perform STI screening and undertake partner notification and appropriate follow-up.
- A + B.
- A + B + C.

QUESTION 2

Which of the following is incorrect with regards to the management of syphilis?

- Examination of patients is unlikely to provide information about the stage of syphilis.
- The diagnosis of syphilis is usually made on the basis of serological testing.

- Syphilis of unknown duration should be treated with an intramuscular injection of 1.8 mg benzathine penicillin weekly, for three weeks.
- In syphilis of unknown duration repeat serology should be performed at 1, 6 and 12 months.
- A person with syphilis should be screened for other STIs.

QUESTION 3

Various non-cancerous problems can affect the testicles, including testicular torsion, which occurs when the spermatic cord twists and cuts off the blood supply to the testicle. Which of the following statements is incorrect about testicular torsion?

- Torsion of the testicle is the most common cause of testicular loss in young males.
- While testicular torsion can occur at any age, the most common age for presentation of testicular torsion is 12–16 years.
- Differential diagnosis for testicular torsion should also include epididymo-orchitis and torsion of testicular appendix.
- Symptoms of testicular torsion may include severe pain, scrotal swelling, presence of a testicle lower than normal and nausea.
- Suspected testicular torsion is a surgical emergency with a 90% chance of preserving the testicle if treated within 6 hours.

QUESTION 4

Leon is a 47-year-old married man whose older brother passed away three months ago following unexpected complications arising from routine surgery. He says he is not sleeping well, is tired and a bit flat most days, yet feels he is coping reasonably well at work. Which of the following do you DISAGREE with regarding Leon's situation?

- Leon currently does not meet the criteria for a diagnosis of major depression.
- A course of antidepressants should be prescribed.
- Leon is most likely experiencing normal sadness and grief following the loss of his brother.
- Investigations for Leon's tiredness are probably not warranted at this presentation.
- Leon may benefit from non-pharmacological interventions such as referral to a psychologist.

QUESTION 5

Adam is an 83-year-old retired man living in a granny flat on the family farm now managed by his son. His wife passed away a year ago and since then he has become withdrawn. He says life is not worth living. He cannot sleep and feels tired and confused most of the time. He has lost 16 kg in weight. A friend of his recently took his own life and he cannot stop thinking about dying. Which of the following is INCORRECT?

- Adam meets the criteria for a diagnosis of major depression.
- Adam may benefit from a course of antidepressants.
- If antidepressants are prescribed, Adam should be advised of the

risk–benefit profile of the agent and the expected time course for efficacy.

- D. Adam should be assessed for suicide risk and questioned about suicide ideation and intent.
- E. Based on his current presentation Adam is at low risk for suicide.

QUESTION 6

Which of the following is not a DSM-V diagnostic criterion for major depression?

- A. Marked change in weight
- B. Occasional insomnia
- C. Feelings of worthlessness
- D. Suicide ideation
- E. Indecisiveness.

QUESTION 7

Andrew, a 56-year-old divorced solicitor, presents with an 18-month history of ED. He is a drinker and a smoker. He weighs 108 kg and is 167 cm tall. He is currently being treated for hypertension and dyslipidaemia. He had sleep apnoea diagnosed a year ago and has had recurrent genital herpes since his late twenties. Which of the following is UNLIKELY to be contributing to Andrew's ED?

- A. Weight
- B. Drinking and smoking
- C. Hypertension
- D. Genital herpes infection
- E. Sleep apnoea.

QUESTION 8

Scott is a 68-year-old recently retired business man. He has come to see you regarding his increasing difficulty sustaining an erection during sexual encounters with his partner. He was diagnosed with diabetes mellitus (DM) 13 years ago and commenced insulin two months ago. His blood pressure was well controlled on a low dose thiazide until recently when atenolol was added. He is of average height and weight, and is a non-smoker. He confesses he feels quite anxious about retirement. Which of the following is INCORRECT?

- A. More than 50% of men develop ED within 10 years of being diagnosed with DM.
- B. Scott's recent medication changes may be contributing to his ED.
- C. PDE-5 inhibitors are first-line pharmacotherapy for ED.
- D. Men with diabetic ED demonstrate better-than-average efficacy on PDE-5 inhibitors.
- E. Scott's anxiety about retirement should be explored.

QUESTION 9

Men attend general practice less often than women across the life cycle. It is important that clinicians seek opportunities to discuss general wellbeing and to undertake age-specific preventive activities

with men when occasions arise. Which of the following statements is INCORRECT?

- A. Young men are more likely to report unhealthy behaviours, compared with women.
- B. Men are less often diagnosed with depression compared with women.
- C. In younger men, review of smoking and sexual health, including chlamydia risk, should be assessed at least every 12 months.
- D. The SNAP framework may assist GPs to have discussions with men about their wellbeing.
- E. High-level alcohol consumption in younger men may be an indication of general high risk taking.

QUESTION 10

Which of the following statements is INCORRECT with regards to current guidelines for the management of gonococcal urethritis in most urban centres in Australia?

- A. IM injection of ceftriaxone 500 mg in 2 mL of 1% lignocaine as a single dose is recommended.
- B. IM injection of ceftriaxone 500 mg, in 2 mL of 1% lignocaine, as a single dose, plus appropriate treatment for chlamydia if infection has not been ruled out is recommended.
- C. Reports of gonococcal strains resistant to penicillin, tetracyclines and fluoroquinolones are common in most Australian urban centres.
- D. Partner notification (contact tracing) should be carried out.
- E. Partners of infected patients should be examined and treated empirically.