



Questions for this month's clinical challenge are based on articles in this issue. The style and scope of questions is in keeping with the MCQ of the College Fellowship exam. The quiz is endorsed by the RACGP Quality Assurance and Continuing Professional Development Program and has been allocated 4 CPD points per issue. Answers to this clinical challenge will be published next month, and are available immediately following successful completion online at www.racgp.org.au/clinicalchallenge. Check clinical challenge online for this month's completion date.

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SINGLE COMPLETION ITEMS

DIRECTIONS Each of the questions or incomplete statements below is followed by five suggested answers or completions. Select the most appropriate statement as your answer.

Case 1 – Jan Freundfelder

Jan Freundfelder, aged 37 years, attends your general practice asking for help losing weight. She has a family history of type 2 diabetes and coronary artery disease, and is 100 kg with a body mass index (BMI) of 37.

Question 1

Jan asks how much weight she needs to lose in order to reduce her risk of diabetes and heart disease. You tell her that:

- A. as she has a family history of diabetes losing weight will not help her reduce her risk of disease
- B. she needs to lose over 30 kg to reduce her risk of disease
- C. even a small weight loss of 5–10 kg will result in a big reduction in disease risk
- D. only when her BMI is below 20 will her disease risk be acceptably low
- E. none of the above.

Question 2

You explain that all weight loss strategies involve some life-style change to bring about a change in the balance of 'energy in' versus 'energy out'. Calculating 'energy in' involves working out the energy density of a food. Energy density refers to:

- A. portion size
- B. number of calories per gram
- C. frequency of meals
- D. weight of the food
- E. cholesterol content of the food.

Question 3

Jan has purchased some weight loss tablets over-the-counter (OTC) at the chemist. Which of the following OTC products are effective in helping patients to lose weight:

- A. chitosan
- B. orlistat
- C. yerba maté
- D. pyruvate
- E. all of the above.

Question 4

Exercise is an important component of a weight loss prescription. As well as reducing her dietary intake, Jan should aim for a minimum of:

- A. 150 minutes per week
- B. 3.0–3.5 hours per week
- C. 200 000 steps per week
- D. 20 hours per week
- E. 30 minutes per week.

Case 2 – Callum McCarthy

Callum McCarthy, 44 years of age, attends your general practice asking for a 'heart check up'. He is concerned as his father had a heart attack at age 45 years. You take a full history including a smoking history. Callum has smoked 20 cigarettes per day for over 20 years.

Question 5

Regarding counselling about quitting smoking, the following statements are true, EXCEPT:

- A. correct identification and brief advice about smoking has been shown to have an effect on quit rates
- B. a 3 minute discussion is worthwhile
- C. nicotine is highly addictive so all smokers require nicotine replacement in order to quit
- D. assessment of stage of change is important
- E. referral to the Quitline may be helpful.

Question 6

Callum says he has been thinking about quitting smoking and has tried to quit without success twice in the past year. Each time he tried to quit he experienced cravings, headaches and irritability. He usually has a cigarette within half an hour of waking. You assess that Callum:

- A. does not require pharmacotherapy
- B. is a perfect candidate for acupuncture
- C. should be referred to an Allen Carr Easyway clinic
- D. is likely to benefit from pharmacotherapy
- E. is not nicotine dependent.

Question 7

You discuss smoking cessation pharmacotherapy with Callum and he is keen to try it. Which is the most effective form of smoking cessation pharmacotherapy:

- A. nicotine replacement therapy
- B. nortryptiline
- C. bupropion
- D. herbal cigarettes
- E. varenicline.

Question 8

You counsel Callum, prescribe pharmacotherapy and refer to the Quitline. Follow up:

- A. is not necessary as most quitters will not start smoking again
- B. is required for pharmacotherapy prescription but has not been shown to increase the likelihood of long term abstinence
- C. is required 1 year after the quit date in order to claim Medicare benefits
- D. has been shown to increase the likelihood of long term abstinence
- E. daily after the quit date is suggested.

Case 3 – Robert Talerski

Robert Talerski, 55 years of age, presents for a repeat blood pressure script. You consider screening him for risky drinking.

Question 9

Systematic screening and brief intervention for risky drinking:

- A. has not been shown to reduce alcohol use
- B. will miss 75% of risky drinkers
- C. is likely to offend the patient
- D. has been shown to reduce alcohol use
- E. is not useful unless the patient fulfils the DSM-IV criteria for alcohol dependence.

Question 10

Robert drinks 7–8 pots of beer at the pub after work most days. On a Saturday he sometimes drinks up to 12 pots. He denies any other alcohol use. His AUDIT score is 16. Based on this assessment, Robert's drinking behaviour is classed as:

- A. low risk
- B. risky/hazardous
- C. harmful
- D. indicative of alcohol dependence
- E. likely to result in an enlarged liver on examination.

Question 11

The AUDIT screen includes questions to assess for alcohol dependence. Each of the following is a DSM-IV criterion for alcohol dependence EXCEPT:

- A. tolerance
- B. withdrawal
- C. five or more standard drinks per day
- D. drinking more alcohol or for longer than intended
- E. neglecting social or work areas because of alcohol.

Question 12

Robert does not fulfill the DSM-IV criteria for alcohol dependence. However, he agrees that his drinking behaviour is concerning and is willing to discuss this further. Robert is thinking about joining an Alcoholics Anonymous (AA) group that meets in his local town hall. He wants to know whether AA is effective. You explain that:

- A. there is good evidence for the efficacy of AA and other 12 step programs
- B. there is no conclusive evidence for the efficacy of AA, however some patients may find it useful
- C. AA has been shown to be helpful in patients with true alcohol dependence
- D. AA is more effective in men than women
- E. AA is more effective in women than men.

Case 4 – Developing a 'physical activity' strategy

You are part of a working group in your clinic looking at ways to encourage patients to become more active. You aim to identify patterns of physical activity in Australia, recommended physical activity levels, ways to help patients overcome barriers and resources for support and follow up.

Question 13

According to a 1999 National Physical Activity Survey, which of the following patient groups are most likely to be insufficiently active:

- A. people aged 30 years and over
- B. middle aged people (45–59 years)
- C. women
- D. people in the obese weight range
- E. all of the above.

Question 14

What frequency, intensity and duration of exercise are recommended for adults (18–65 years of age) for cardiovascular disease and diabetes prevention:

- A. 60 minutes of vigorous intensity exercise each day
- B. 60 minutes of vigorous intensity exercise on at least 5 days per week
- C. 30 minutes of vigorous intensity exercise each day
- D. 30 minutes of moderate intensity exercise each day
- E. 30 minutes of moderate intensity exercise on at least 5 days per week.

Question 15

The following ideas will help patients address barriers and stick to a physical activity plan EXCEPT:

- A. physical activity is essential for health
- B. group activities can increase motivation
- C. physical activity costs money
- D. even short bouts of activity (10 minutes) can be beneficial
- E. water based exercise puts less stress on bones and joints.

Question 16

Lifescrpts are:

- A. prescriptions for preventative medications such as lipid lowering drugs
- B. lifestyle prescriptions
- C. Enduring Power of Attorney
- D. religious affirmations
- E. none of the above.

ANSWERS TO DECEMBER CLINICAL CHALLENGE

Case 1 – Marcus Grondman

1. Answer E

It is important to make an assessment of Marcus' cardiovascular risk, including lifestyle factors and any history of musculoskeletal pain or injury. Heavy alcohol use may increase risk of dehydration and heat exhaustion.

2. Answer C

You need to assess Marcus' cardiovascular risk, diabetic control, complications of diabetes and lung function. Carbon monoxide exposure is a problem for fire fighters due to smoke inhalation but is an acute problem and not routinely tested.

3. Answer D

Smoking increases Marcus' cardiovascular and respiratory risk on the fireground. Physical fitness and weight loss reduces the risk of acute cardiac events. Adequate fluid replacement, weight loss and physical fitness reduce the risk of heat exhaustion. Smoke inhalation is unavoidable but risk can be minimised by not smoking and regular rest breaks. A maximal stress test is recommended for fire fighters with cardiovascular risk factors.

4. Answer B

Fire fighters should not be redeployed to the fireground in the 48 hours after suffering heat exhaustion. If the heat exhaustion is severe the fire fighter may need to acclimatise for up to 2 weeks working in a warm environment before returning to the fireground.

Case 2 – Angelo Ricci

5. Answer C

In this presentation of heavy drinking resulting in injury in the setting of prolonged drought it is important screen for underlying depression and anxiety.

6. Answer D

Specialist services may be difficult to access in rural areas. Government agencies and the CWA can provide practical support.

7. Answer E

Drought may affect family relationships in many ways including increasing social isolation, more farm work for family members, the need for partners to move off the farm for additional income and inability to afford social outings.

8. Answer B

Anxiety and depression are equally common but suicide is more common in some patient groups in rural areas.

Case 3 – Nguyen Van Nam

9. Answer D

A blue line on the dental margins of the gums is a unique feature of lead toxicity.

10. Answer E

In addition to serum lead zinc protoporphyrin (ZPP) is measured in cases of lead toxicity. Fe deficiency anaemia with reticulocytosis occurs and renal function may be abnormal. Other tests to consider in the setting of lead toxicity include TFTs (hypothyroidism), LFTs (elevated liver transaminases) and amylase/lipase (question pancreatitis).

11. Answer B

Zinc protoporphyrin lags behind serum lead by 2–6 weeks. If ZPP is normal in the setting of elevated serum lead this indicates acute exposure.

12. Answer C

To reduce lead exposure cleaning should be performed in a manner which does not generate dust, ie. vacuuming.

Case 4 – Penny Gross

13. Answer C

Dual reticulation supplies refer to a system that distributes two grades of water through separate pipe networks. One grade of water is high quality and is used for drinking, cooking and other household purposes. The other is of lower quality and is used for nondrinking purposes.

14. Answer A

Indirect potable reuse of recycled water is a system in which highly treated wastewater is used to supplement drinking water supplies.

15. Answer E

While indirect potable reuse is considered safe, potential health effects include acute infections from waterborne diseases and chronic effects, from carcinogens, heavy metals, hormones and radioisotopes.

16. Answer E

Epidemiological studies and quantitative microbial risk assessment (QMRA) are used to assess risk.