

# Clinical challenge

These questions are based on the Focus articles in this issue. Please choose the single best answer for each question.

## CASE 1

Nina, an elite athlete, aged 42 years, presents for review of foot pain.

### QUESTION 1

Modifying activities for plantar fasciitis include: avoiding running, weight management and:

- A. ethanol reduction
- B. smoking cessation
- C. prolonged standing
- D. non-weight bearing

### QUESTION 2

The mainstay of diagnosis in arthritis of the foot and ankle is:

- A. computed tomography
- B. magnetic resonance imaging
- C. weight bearing plain X-ray
- D. single-photon emission computerised tomography

### QUESTION 3

In inflammatory arthritis, magnetic resonance imaging (MRI) will demonstrate synovitis, perichondral erosions and:

- A. osteophytes
- B. cyst formation
- C. subchondral sclerosis
- D. asymmetric joint space narrowing

### QUESTION 4

The mainstay of treatment of arthritis of the foot involves activity modification, weight loss and:

- A. surgery
- B. anti-inflammatory medications
- C. footwear changes
- D. physiotherapy

## CASE 2

Khaled, a man aged 65 years, presents with tingling sensation in the setting of longstanding type 2 diabetes mellitus.

### QUESTION 5

Conditioned pain modulation is mediated by the:

- A. brainstem
- B. spinal cord
- C. cerebellum
- D. thalamus

### QUESTION 6

Temporal pain summation is linked to activation of NMDA receptors in the:

- A. cerebellum
- B. dorsal horn
- C. medulla
- D. pons

## CASE 3

Mick, a man aged 62 years, with a background of chronic obstructive pulmonary disease would like to discuss strategies to incorporate exercise into his daily routine.

### QUESTION 7

A novel strategy to improve cardiometabolic health is:

- A. low protein diets
- B. smoking cessation
- C. exercise snacks
- D. ketogenic diet

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## The five domains of general practice

- (D1) Communication skills and the patient-doctor relationship
- (D2) Domain 2: Applied professional knowledge and skills
- (D3) Domain 3: Population health and the context of general practice
- (D4) Domain 4: Professional and ethical role
- (D5) Domain 5: Organisational and legal dimensions

These domains apply to all Focus articles, which are required reading for the Clinical challenge CPD activity.

## How to use AJGP for your CPD

Each issue of the Australian Journal of General Practice (AJGP) has a focus on a specific clinical or health topic. Many GPs find the entire issue of interest and of relevance to their practice; some GPs find one or more articles in the journal relevant.

You can use AJGP for your CPD. If you want to use the entire issue for CPD, you must work your way carefully through each article in the issue and complete the Clinical challenge. When you do this, take time to read the articles carefully and critically, and think carefully about how you might adjust your practice in response to what you have learned.

We recommend that you access AJGP, the articles and the Clinical challenge through *gplearning* (<https://gpl.racgp.org.au/d2l/home>) (Activity ID: 691510). Then, when you complete the articles and the Clinical challenge, your CPD hours are automatically credited to your CPD account. If you work through the full issue of AJGP and complete the Clinical challenge, you will receive 10 CPD hours (five hours' Educational Activities and five hours' Reviewing Performance).

If you do not want to do the full AJGP issue, and you prefer to select one or more articles to read, you can QuickLog the CPD hours directly through your myCPD dashboard. As guidance, each article in AJGP would provide 1-2 CPD hours, split half Educational Activities and half Reviewing Performance.



**QUESTION 8**

The most important outcome of regular exercise is the improvement in:

- A. vital capacity
- B. central adiposity
- C. weight reduction
- D. cardiorespiratory fitness

**QUESTION 9**

Bouts of high-intensity exercise interspersed with lower-intensity recovery periods is otherwise known as:

- A. intermittent exercise snacks
- B. high-intensity interval training
- C. vigorous-intermittent physical activity
- D. aerobic core stability activity challenge

**CASE 4**

Jenny presents with her son, Jack, aged three years, to discuss exercise recommendations for young children.

**QUESTION 10**

The recommended duration of hours of physical activity for toddlers throughout the day is:

- A. five
- B. three
- C. one
- D. two

*These questions are based on the Focus articles in this issue. Please write a concise and focused response to each question.*

**CASE 1**

Nina, an elite athlete, aged 42 years, presents for review of foot pain.

**QUESTION 1**

List the high-risk stress fractures of the foot that warrant urgent referral.

**QUESTION 2**

Describe the clinical presentation of navicular foot fractures.

**CASE 2**

Khaled, a man aged 65 years, presents with tingling sensation in the setting of longstanding type 2 diabetes mellitus.

**QUESTION 3**

List hallmark symptoms of diabetic peripheral neuropathy (DPN).

**QUESTION 4**

List the two protocols that are used to study endogenous pain facilitation and inhibition in the context of diabetic peripheral neuropathy.

**QUESTION 5**

Define what is meant by the term temporal summation of pain (TSP).

**QUESTION 6**

Define what is meant by the term conditioned pain modulation (CPM).

**CASE 3**

Mick, a man aged 62 years, with a background of chronic obstructive pulmonary disease would like to discuss strategies to incorporate exercise into his daily routine.

**QUESTION 7**

Define what is meant by the term 'exercise snacks' in the context of cardiometabolic fitness.

**CASE 4**

Jenny presents with her son, Jack, aged three years, to discuss exercise recommendations for young children.

**QUESTION 8**

State the recommended duration of exercise for children, as per Australian exercise guidelines.

**QUESTION 9**

List chronic conditions and disabilities in children that might preclude generalised activity guidance.

**QUESTION 10**

List cultural considerations that affect how children exercise.

**January–February 2024 Multiple-choice question answers**

**ANSWER 1: B**

Lateral internal sphincterotomy (LIS) consists of a partial incision to the internal anal sphincter to relieve hypertonia.

**ANSWER 2: C**

Fissurectomy consists of resecting the fibrous edges of the fissure, the sentinel skin tag and the hypertrophied anal papilla.

**ANSWER 3: C**

Findings on exam that might indicate endometriosis include palpable tethering of pelvic organs (eg uterine immobility, tender pelvic nodularity and visible vaginal lesions), particularly in the posterior fornix.

**ANSWER 4: D**

Hormonal therapies for endometriosis have been shown to lead to a clinically significant reduction in dysmenorrhoea.

**ANSWER 5: A**

An effective treatment for stress urinary incontinence includes the use of mesh mid-urethral slings.

**ANSWER 6: D**

Protective factors for primary dysmenorrhoea include increasing age, increasing parity, exercise and oral contraceptive use.

**ANSWER 7: C**

Empiric therapy with non-steroidal anti-inflammatories and/or hormonal therapies should be offered as first-line therapy to women with symptoms consistent with primary dysmenorrhoea.

**ANSWER 8: B**

Muscles commonly involved in pelvic pain are the muscles of the pelvic floor and lower anterior abdominal wall, the obturator internus bilaterally and the gluteus medius.

**ANSWER 9: D**

Pain involving a combination of pelvic organ and central nervous system pain is classified as nociplastic.

**ANSWER 10: D**

Sex-related cognitions are embedded through an individual's sociocultural context, including their family, friends and religious beliefs.

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### January–February 2024 Short answer question answers

**ANSWER 1**

Acute anal fissures are first treated with conservative therapy, including dietary fibre and sitz baths.

**ANSWER 2**

Three complications of acute anal fissures are:

- sepsis
- fistula formation
- chronic anal fissure.

**ANSWER 3**

Botulinum toxin A (BTA) is produced by *Clostridium botulinum* and acts as an inhibitory neurotransmitter by preventing acetylcholine release from presynaptic terminals. This causes relaxation of both the external and internal anal sphincters for up to three months.

**ANSWER 4**

Risk factors that are recognised to be associated with a diagnosis of endometriosis include:

- early menarche ( $\leq 12$  years)
- shorter cycle length ( $\leq 26$  days)
- heavy flow (excessive bleeding that affects quality of life)
- lean body size
- nulliparity
- a first-degree relative with endometriosis.

**ANSWER 5**

Endometriosis is commonly classified into three categories:

- superficial peritoneal disease
- ovarian endometriosis
- deep infiltrating endometriosis (DIE), defined as endometriotic lesions invading  $>5$  mm beyond the surface of the peritoneum.

**ANSWER 6**

Three complications of transvaginal mesh prostheses for vaginal prolapse and incontinence are:

- pain
- erosion
- infection.

**ANSWER 7**

Risk factors for primary dysmenorrhoea include:

- smoking
- menarche  $<12$  years
- age  $<30$  years
- longer and heavier menstrual flow
- low or high body mass index ( $<20$  or  $>30$ )
- nulliparity
- positive family history
- previous sexual assault
- premenstrual symptoms
- previous pelvic inflammatory disease
- psychological disorders.

**ANSWER 8**

Secondary dysmenorrhoea is menstrual pain attributed to pelvic pathology. The most common aetiology is endometriosis, but other aetiologies include congenital or acquired obstructive and non-obstructive abnormalities, such as Mullerian malformations, adenomyosis, leiomyomas, pelvic masses and infection.

**ANSWER 9**

Symptoms that cluster with dysmenorrhoea include:

- bowel problems
- bladder problems
- dyspareunia
- stabbing pain
- headaches
- vulval pain
- poor sleep
- fatigue
- nausea
- sweating
- dizziness
- anxiety
- low mood.

**ANSWER 10**

Provoked vestibulodynia is defined as pain at the entrance to the vagina, elicited by touch or pressure, in the absence of any identifiable pathology.