

## Chapter 60. Musculoskeletal Disorders, Self-Assessment Questions

1. Which one of the following is the major inflammatory mediator associated with soft-tissue injury?

- A. Prostaglandin (PG)
- B. Lipoxygenase
- C. Cyclooxygenase (COX)
- D. Arachidonic acid
- E. Thromboxanes

2. A patient presents with a knee injury from a football game. There is no apparent swelling, and the patient prefers an oral analgesic over a topical product. Which of the following is the best choice for systemic analgesia for this patient?

- A. Aspirin
- B. Acetaminophen
- C. Codeine
- D. Naproxen
- E. Tramadol

3. The counterirritant that produces an effect through a cooling sensation is:

- A. Camphor
- B. Capsaicin
- C. Methyl salicylate
- D. Allyl isothiocyanate
- E. Methyl nicotinate

4. Which of the following topical products should be *avoided* in patients with an aspirin allergy?

A. Ammonia water

B. Camphor

C. Menthol

D. Methyl salicylate

E. Methyl nicotinate

5. Which one of the following instructions should be included in an education plan for a patient using a counterirritant that contains menthol?

A. Burning sensation upon application will subside with regular use.

B. The product has little to no medicinal odor.

C. Must use regularly for 1 to 2 weeks before onset of effect.

D. After application, wrap the affected area tightly with a bandage.

E. Do not use with a heating pad.

6. Which one of the following instructions should be included in a patient education plan for diclofenac patches?

A. Apply immediately prior to bathing or showering.

B. Product may be used in combination with topical capsaicin.

C. If rash or irritation develops, apply moisturizer before patch application.

D. Discard used patches out of reach of children and pets.

E. Use with oral diclofenac for maximum effect.

7. A 52-year-old man desires to use a topical product for a few days to treat knee pain from osteoarthritis that worsened after moving his son into a new apartment. He has no known drug allergies and a past medical history of dyslipidemia. He expresses a desire for a topical product without a medicinal odor. Which one of the following is the best recommendation?

- A. Menthol
- B. Capsaicin
- C. Diclofenac gel
- D. Lidocaine gel
- E. Camphor

8. Heat, instead of ice, is recommended as nonpharmacologic therapy in a patient with which one of the following conditions?

- A. Ankle injury sustained this morning with swelling
- B. Shoulder soreness and swelling from baseball practice 1 week ago
- C. Knee injury sustained last week with no remaining swelling
- D. Tendonitis of the wrist from repetitive strain while typing
- E. Elbow pain from a tennis game yesterday accompanied by swelling

9. The preferred treatment option for a patient with a chronic overuse knee injury accompanied by inflammation is:

- A. Camphor
- B. Capsaicin
- C. Ibuprofen

D. Acetaminophen

E. Menthol

10. Which one of the following topical medications must be used regularly to have a therapeutic effect?

A. Capsaicin

B. Menthol

C. Methyl nicotinate

D. Methyl salicylate

E. Trolamine salicylate

11. Use of alcoholic beverages should be assessed prior to selecting which agent?

A. Acetaminophen

B. Capsaicin

C. Camphor

D. Methyl salicylate

E. Menthol

12. Which one of the following statements regarding nonpharmacologic therapy after musculoskeletal injury is appropriate?

A. Cool the area with ice for 15 minutes and repeat every 2 hours.

B. Alternate heat applications with ice when swelling is present.

C. Prolonged rest shortens recovery time.

- D. Begin wrapping the compression bandage at the area proximal to the injury.
- E. Apply ice directly to the skin for maximum cooling.

13. A patient with lower back pain after gardening buys an over-the-counter product containing camphor, menthol, and methyl salicylate. How often should she be advised to apply the product?

- A. Once daily in the morning
- B. Up to three to five times daily
- C. Twice daily upon waking and at bedtime
- D. Once daily at bedtime
- E. Every 1 to 2 hours as needed for pain

14. The appropriate timeframe to assess effectiveness of pharmacologic therapy for chronic pain treated with topical capsaicin is:

- A. 3 to 5 days
- B. 1 week
- C. 2 weeks
- D. 1 month
- E. 3 months

15. In which one of the following situations is self-care with a counterirritant a therapeutic option prior to referral to a physician??

- A. Symptoms persisting for more than 7 days
- B. Intact skin in area of injury
- C. Symptoms resolving, but then recurring
- D. Symptoms worsening
- E. Symptoms over a large area

**Answers**

1. A

2. B

3. A

4. D

5. E

6. D

7. C

8. C

9. C

10. A

11. A

12. A

13. B

14. C

15. B