



THE JOURNAL *of the* AMERICAN OSTEOPATHIC ASSOCIATION

The purpose of this quiz is to provide a convenient means for osteopathic physicians to assess their understanding of the scientific content in the September 2013 issue of *The Journal of the American Osteopathic Association (JAOA)*.

To apply for 2 Category 1-B continuing medical education (CME) credits, AOA members may take this quiz online at <http://www.osteopathic.org/docmeonline>, where this and other JAOA quizzes can be accessed. Quizzes that are completed online will be graded and credited to members' CME activity reports.

Alternatively, osteopathic physicians can complete the quiz below and mail it to the following address by March 31, 2015:

American Osteopathic Association
Division of CME
142 E Ontario St
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If you mail or fax this form to the Division of CME, the AOA will record the fact that you have submitted this form for Category 1-B CME credit. Osteopathic physicians who are not members of the AOA and who forward hard copies of completed JAOA quizzes to the Division of CME will be charged a fee of \$25 per quiz for staff time to grade the quiz, record the credits, and provide a letter to the osteopathic physician as documentation.

For each of the questions below, place a checkmark in the box provided next to your answer so that you can easily verify your answers against the correct answers, which will be published in the October 2013 issue of the JAOA.

Frequency of Serious Outcomes in Patients With Hypertension as a Chief Complaint in the Emergency Department

Steven P. Frei, MD; David B. Burmeister, DO; and Jesse F. Coil, DO

1. Patients who present to the emergency department with elevated blood pressure as a chief complaint and with no other serious symptoms usually:
 - (a) have a serious outcome within 7 days
 - (b) have a previous diagnosis of hypertension
 - (c) have run out of their blood pressure medication
 - (d) require electrocardiography and computed tomography

Leg Length Discrepancy and Osteoarthritic Knee Pain in the Elderly: An Observational Study

Donald R. Noll, DO

2. An 80-year-old man presents with osteoarthritic knee pain in the right leg. The pain is chronic and has been of mild to moderate severity for several years. Which of the following statements is most likely to be true:
 - (a) The right leg will likely be the functionally short leg.
 - (b) The right leg will likely be the functionally long leg.
 - (c) The right leg will likely be the anatomically short leg.
 - (d) The right leg will likely be the anatomically long leg.
 - (e) There is no correlation between knee pain and leg length.

Fibromyalgia: A Clinical Update

Robert A. Hawkins, MD

3. A 33-year-old woman with an unremarkable medical history describes widespread pain that has been present for 8 months. She also notes severe fatigue, poor sleep, and difficulty with concentration. Additional complaints include headache, paresthesia, blurred vision, and anxiety. Physical examination reveals no joint swelling, loss of muscle strength, or presence of tender points. Baseline laboratory test results, including a comprehensive metabolic panel, erythrocyte sedimentation rate, and thyroid-stimulating hormone levels, are within reference range. Which of the following statements is correct:
 - (a) The patient has fibromyalgia.
 - (b) The patient does not have fibromyalgia because she lacks tender points.
 - (c) Further testing with antinuclear antibodies, rheumatoid factor, and anticyclic citrullinated peptide antibody is necessary.
 - (d) A computed tomography scan of the brain should be performed for headache.
 - (e) The cerebrospinal fluid should be examined for an elevated substance P level.
4. A patient receives a diagnosis of fibromyalgia. Which of the following treatment options would most likely be of greatest benefit:
 - (a) aggressive physical therapy with emphasis on muscle strengthening
 - (b) high-dose tricyclic antidepressant therapy, tapering doses as the patient responds to physical therapy
 - (c) psychological counseling for depression
 - (d) combination of naproxen and a low-dose opioid
 - (e) combination of low-level exercise and low-dose amitriptyline, increasing doses slowly over the course of weeks to months

Frequency of Counterstrain Tender Points in Osteopathic Medical Students

Karen T. Snider, DO; John C. Glover, DO;
Paul R. Rennie, DO; Heather P. Ferrill, DO;
William F. Morris, DO; and
Jane C. Johnson, MA

5. Which of the following groups of tender points was found to occur in more than 90% of osteopathic medical students:
- (a) anterior R1 through R6
 - (b) piriformis
 - (c) posterior C1 through C7
 - (d) posterior L1-L5 transverse processes
 - (e) supraspinatus
6. Which of the following tender points was statistically significantly more common in osteopathic medical students with chronic low back pain:
- (a) anterior L3 through L5
 - (b) anterior T7-T11 midline
 - (c) iliacus
 - (d) posterior L1-L5 transverse processes
 - (e) posterior R7 through R10
7. Which of the following tender points was found to be statistically significantly more common in female osteopathic medical students:
- (a) anterior T1-T6 midline
 - (b) posterior L1-L5 transverse processes
 - (c) anterior C2 through C6
 - (d) inguinal (pectineus)
 - (e) medial ankle

The 2012-2013 Influenza Epidemic and the Role of Osteopathic Manipulative Medicine

Donna M. Mueller, DO

8. Which of the following is considered the optimal, most widely tolerated antiviral medication to combat the past season's (2012-2013) influenza virus strain:
- (a) amantadine
 - (b) oseltamivir
 - (c) rimantadine
 - (d) Theraflu
 - (e) zanamivir
9. Which of the following groups was not considered to be at a greater than normal risk for complications from influenza on the basis of the 2011 recommendations of the Advisory Committee on Immunization Practices:
- (a) pregnant women
 - (b) children younger than 5 years
 - (c) individuals with hypertension alone
 - (d) individuals with moderate developmental delay
 - (e) individuals with morbid obesity

Mucormycosis in a Patient With AIDS Receiving Systemic Steroids

Andrew Shiao Pan, OMS IV, and
Latha Srinath, MD

10. Which of the following is the most common risk factor for developing mucormycosis:
- (a) increased hospital stay
 - (b) diabetes mellitus
 - (c) African-American descent
 - (d) uncontrolled hypertension

Answers to August 2013 JAOA CME Quiz

Discussion answers to JAOA continuing medical education quizzes appear only when authors have included discussions with the quiz questions and answers they must provide to meet the requirement for submission to and publication in the JAOA.

Mathematical Analysis of the Flow of Hyaluronic Acid Around Fascia During Manual Therapy Motions

Max Roman, PhD; Hans Chaudhry, PhD; Bruce Bukiet, PhD; Antonio Stecco, MD; and Thomas W. Findley, MD, PhD

1. **(b)** Perpendicular vibration results in the highest peak pressures and thus will produce the highest amount of sliding between 2 surfaces.

Exercise During Pregnancy: The Role of Health Care Providers

Linda E. May, MS, PhD; Richard R. Suminski, PhD, MPH; Emily R. Linklater, DO; Sara Jahnke, PhD; and Alan G. Glaros, PhD

2. **(d)** Being careful about eating healthy was statistically significantly associated with the likelihood that pregnant women met the recommended levels of aerobic activity.
3. **(a)** Compared with health care providers who did not discuss exercise with their patients, health care providers who discussed exercise with their patients were significantly more likely to have more pregnant patients with private insurance.

Caring for Patients with Chronic Pain: Pearls and Pitfalls

David J. Debono, MD; Laura J. Hoeksema, MD, MPH; and Raymond D. Hobbs, MD

4. **(c)** From 1999 to 2008, more overdose deaths involved opioid analgesics than those from heroin and cocaine combined.
5. **(a)** The 2011 Canadian guideline suggested using a maximum threshold of 200 mg/d of oral morphine equivalent. Above this dose, there is a significant rise in opioid-related deaths. A lack of efficacy has also been noted in doses greater than 200 mg/d.

Incorporating Simulation Technology Into a Neurology Clerkship

David Matthew Ermak, DO; Douglas W. Bower, MD; Jody Wood, BS; Elizabeth H. Sinz, MD; and Milind J. Kothari, DO

6. **(c)** High-fidelity simulation in medical education typically involves mannequins capable of displaying vital signs and life-like respirations.
7. **(b)** Current high-fidelity mannequins are unable to emulate facial droop.

Conservative Approach to Tardive Dyskinesia–Induced Neck and Upper Back Pain

Jeremy W. Reifsnnyder, DC, OMS IV, and Melicien A. Tettambel, DO

8. **(b)** The typical age range for the onset of schizophrenia is 15 to 35 years.
9. **(c)** Tardive dyskinesia is a potential adverse effect of “typical” antipsychotics such as haloperidol. Although tardive dyskinesia is not as common now because of the transition to less instigating, “atypical” antipsychotics, physicians should still be aware of this condition.
10. **(c)** Soft tissue and high-velocity, low-amplitude osteopathic manipulative treatment techniques were used to relieve pain in a patient with tardive dyskinesia. Although other manipulative techniques could also have been effective, the authors chose techniques that were rapid in approach to intercede between involuntary spasms associated with tardive dyskinesia.

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