



# 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 October 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 April 30, 2015:

American Osteopathic Association  
Division of CME  
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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 November 2013 issue of the JAOA.

## Prevention of Progressive Back-Specific Dysfunction During Pregnancy: An Assessment of Osteopathic Manual Treatment Based on Cochrane Back Review Group Criteria

John C. Licciardone, DO, MS, MBA, and  
Subhash Aryal, PhD

1. The observed treatment effect of combining osteopathic manual treatment with usual obstetric care was considered large in preventing progressive back-specific dysfunction on the basis of which of the following risk ratios pertaining to comparison with usual obstetric care as the control treatment:

- (a) <0.5  
 (b) ≤0.8  
 (c) >0.8  
 (d) ≥1.25

2. On the basis of a replication of the study's methods and results, how many cases of progressive back-specific dysfunction would most likely be prevented if 100 pregnant women received osteopathic manual treatment in addition to usual obstetric care during the third trimester of pregnancy?

- (a) 2.5 cases  
 (b) between 1.8 and 4.9 cases  
 (c) 25 cases  
 (d) 40 cases

## Influence of Manual Therapy on Functional Mobility After Joint Injury in a Rat Model

Rachel L. Ruhlen, PhD; Eric J. Snider, DO;  
Neil J. Sargentini, PhD; Bart D.

Worthington, MS, OMS III; Vineet K.

Singh, PhD; Vanessa M. Kvam, MS; Jane C.

Johnson, MA; and Brian F. Degenhardt, DO

3. After intra-articular injection of carrageenan into the ankle, voluntary running of rats decreases dramatically. How long did it take for postinjection running to return to baseline?

- (a) 4 hours  
 (b) 4 days  
 (c) 4 weeks  
 (d) 4 months

4. The authors attempted to establish a positive control for the pain model, but morphine, ketorolac, prednisone, and the manual therapy protocols tested were ineffective. Which of the following statements best describes the conclusions that can be drawn from this study:

- (a) Because the positive controls were ineffective, one cannot conclude that manual therapy is ineffective.  
 (b) Because none of the manual therapy protocols tested restored voluntary running more quickly than no touch, manual therapy was shown to be ineffective.  
 (c) Because positive controls were included, manual therapy was shown to be ineffective.  
 (d) Because clinically efficacious analgesic medications were ineffective in this model, and because manual therapy was also ineffective, manual therapy is likewise clinically efficacious.

(continued)

### Retrospective Medical Record Review of an Osteopathic Manipulative Medicine Hospital Consultation Service

Karen T. Snider, DO; Eric J. Snider, DO; Brett R. DeGooyer, DO; Allison M. Bukowski, DO; Regina K. Fleming, DO; and Jane C. Johnson, MA

5. In 2008, which of the following was the most common primary diagnosis for acute care hospital admissions in the United States:

- (a) acute exacerbation of chronic obstructive pulmonary disease
- (b) acute gastrointestinal bleeding
- (c) community acquired pneumonia
- (d) hypertension
- (e) pregnancy, childbirth, and liveborn infant

6. In the study by Snider et al, which of the following was the most common reason for obtaining an inpatient osteopathic manipulative medicine consultation:

- (a) acute exacerbation of chronic obstructive pulmonary disease
- (b) chest/rib pain
- (c) community acquired pneumonia
- (d) infant feeding disorder
- (e) postoperative bowel ileus

### Dementia: An Evidence-Based Review of Common Presentations and Family-Based Interventions

Angela L.H. Buffington, PhD; Dorothy M. Lipski, MA; and Erin Westfall, DO

7. Which of the following statements is not correct:

- (a) Dementia constitutes impairment in memory and at least 1 domain of cognitive functioning.

- (b) A diagnosis of dementia requires a decline from a previous level of functioning.
- (c) A diagnosis of dementia requires that functional abilities for daily activities remain intact.
- (d) A diagnosis of dementia requires that other conditions (such as delirium and mild cognitive impairment) be ruled out.

8. Cortical dementia is associated with deficits in \_\_\_\_\_, whereas subcortical dementia is associated with deficits in \_\_\_\_\_.

- (a) language; learning but not recall
- (b) learning but not recall; language
- (c) emotionality; processing speed
- (d) processing speed; emotionality

9. Which of the following statements is not correct:

- (a) Dementia with Lewy bodies typically results in impairment in attention and visuospatial ability.
- (b) Dementia with Lewy bodies typically results in disrupted sleep.
- (c) Alzheimer disease presents with memory and naming impairment.
- (d) Alzheimer disease typically results in socially inappropriate behavior.

10. Which of the following is not a type of subcortical dementia:

- (a) vascular dementia
- (b) depression
- (c) dementia due to Parkinson disease
- (d) frontotemporal dementia

### Medicare Reform and Primary Care Concerns for Future Physicians

Charles H. Mitchell, OMS IV, and Robert Spinelli, DBA, MPH

11. Which of the following specialties are considered "primary care" by the Medicare Direct Graduate Medical Education payment system:

- (a) family medicine and general internists only
- (b) family medicine, general internists, preventive medicine, and geriatric medicine only
- (c) family medicine, general internists, preventive medicine, geriatric medicine, and osteopathic general practice only
- (d) family medicine, general internists, preventive medicine, geriatric medicine, osteopathic general practice, and obstetrics-gynecology

### I Can't Move My Face!

#### A Case of Bilateral Facial Palsy

Marna Rayl Greenberg, DO, MPH; Megan C. Urquhart, DO; Jessica K. Eygnor, DO; Charles C. WorriLOW, MD; Nicole Ceccacci Gesell, DO; Bernadette Glenn Porter, BS; and Andrew C. Miller, DO

12. Which of the following statements is false?

- (a) Guillian-Barré syndrome must be considered in the differential diagnosis for bilateral facial nerve palsy.
- (b) Bilateral facial palsy is common.
- (c) Lyme disease is responsible for approximately 36% of facial paralysis cases.
- (d) People of any sex or age can contract Lyme disease.

## Answers to September 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.

### 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

- (b) Patients who present to the emergency department with elevated blood pressure as a chief complaint and with no other serious symptoms usually have a previous diagnosis of hypertension.

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

Donald R. Noll, DO

- (a) 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. For this patient, the right leg will likely be the functionally short leg.

### Fibromyalgia: A Clinical Update

Robert A. Hawkins, MD

- (a) A 33-year-old woman with an unremarkable medical history complains of widespread pain that has been present for 8 months. She also notes severe fatigue, poor sleep, and difficulty with concentration. Additional complaints include headache, paresthesias, 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 normal. The patient has fibromyalgia.

- (e) A patient receives a diagnosis of fibromyalgia. A combination of low-level exercise and low-dose amitriptyline, increasing doses slowly over the course of weeks to months, would be of greatest benefit in treating the patient.

### 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

- (a) The anterior R1-R6 group of tender points was found to occur in more than 90% of osteopathic medical students.
- (a) The anterior L3-L5 tender point was statistically significantly more common in osteopathic medical students with chronic low back pain.
- (a) The anterior T1-T6 midline tender point was statistically significantly more common in female osteopathic medical students.

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

Donna M. Mueller, DO

- (b) Oseltamivir is considered the optimal, most widely tolerated antiviral medication to combat the past season's (2012-2013) influenza virus strain. Zanamivir is also effective but is less well-tolerated by individuals with underlying pulmonary disease and is contraindicated for infants.
- (c) Individuals with hypertension alone are not considered to be at greater than normal risk for developing complications from influenza, according to the 2011 recommendations of the Advisory Committee of Immunization Practices.

### Mucormycosis in a Patient With AIDS Receiving Systemic Steroids

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

- (b) A review of 929 cases of mucormycosis between 1940 and 2003 showed that diabetes mellitus was the most common risk factor, found in 36% of cases. Other common risk factors included hematologic malignancies (17% of cases) and solid organ or hematopoietic cell transplantation (12% of cases) (*Clin Infect Dis*. 2005;41[5]:634-653).