



# 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 February 2014 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 <https://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 August 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 March 2014 issue of the JAOA.

## Sleep Problems, Posttraumatic Stress, and Mood Disorders Among Active-Duty Service Members

R. Gregory Lande, DO

1. Which of the following statements is false:

- (a) Insomnia is an independent risk factor for suicide.
- (b) Short sleep duration is defined as 5 or fewer hours of sleep per night.
- (c) Nightmares increase the risk of suicide.
- (d) Roughly half of individuals with insomnia have depression or anxiety.

2. Individuals with posttraumatic stress disorder:

- (a) generally experience a good night's sleep.
- (b) spend more of the night in deep sleep.
- (c) spend more of the night in dream sleep.
- (d) spend more of the night in light sleep.

## OMT Associated With Reduced Analgesic Prescribing and Fewer Missed Work Days: An Observational Study

Joseph K. Prinsen, PhD; Kendi L. Hensel, DO, PhD; and Richard J. Snow, DO

3. Which of the following qualities is *not* part of a randomized controlled trial design compared with an observational study:

- (a) tightly controlled treatment allocation
- (b) increased generalizability
- (c) strict random assignment of participants
- (d) considered the standard for medical evidence

4. The American Osteopathic Association Clinical Assessment Program provides a mechanism for observational studies to be conducted for several purposes, including:

- (a) validating results from a randomized controlled trial
- (b) evaluating how results from a randomized controlled trial apply to patient care
- (c) generating new research questions
- (d) all of the above

5. Patient-based research networks, compared with a randomized controlled trial, result in findings that have a(n):

- (a) lower average cost
- (b) longer time to interpretable results
- (c) inability to examine alternative outcome measures
- (d) both a and b

## Preventing Early Cardiovascular Death in Patients With Familial Hypercholesterolemia

Thomas B. Repas, DO, and J. Ross Tanner, DO

6. Which of the following statements is correct regarding familial hypercholesterolemia:

- (a) It is the most common monogenetic disorder in the United States and Europe.
- (b) Worldwide, approximately 200,000 people with the disorder die every year.
- (c) It can be caused by a mutation in the gene encoding the low-density lipoprotein receptor.
- (d) It is an autosomal dominant condition, which means that 50% of first-degree relatives are at risk of inheriting the disorder.
- (e) all of the above

7. If left untreated, what percentage of people with familial hypercholesterolemia will die from premature cardiovascular events by the age of 60 years?

- (a) 20%
- (b) 30%
- (c) 50%
- (d) 70%
- (e) 80%

8. At what age should children with risk factors such as family history of premature cardiovascular disease or severe hypercholesterolemia be screened for familial hypercholesterolemia?

- (a) birth
- (b) 2 or 3 years
- (c) 5 years
- (d) 10 years
- (e) puberty

9. In individuals younger than 20 years who have a first-degree relative (parent, offspring, or sibling) with heterozygous familial hypercholesterolemia, a low-density lipoprotein cholesterol level above which of the following levels predicts that they also have the disorder:

- (a) 100 mg/dL
- (b) 120 mg/dL
- (c) 155 mg/dL
- (d) 170 mg/dL
- (e) 190 mg/dL

### Mini-Medical School Programs Are an Effective Tool to Introduce Students to Osteopathic Medicine

Kathryn E. Kaye, OMS IV; Alyssa L. Berns, OMS IV; Lyndsi R. Cress, OMS IV; and Andrea M. Nazar, DO

10. According to the authors, the primary reason for promoting mini-medical school programs in rural areas is that these programs:

- (a) provide scholarships to students who could not otherwise attend medical school
- (b) educate the population, which will increase health literacy among patients
- (c) encourage students from rural locations to attend medical school and physicians from rural areas are much more likely to practice in a rural location
- (d) generate revenue for the host medical school

### Orthotic Correction of Postural Unleveling in a Patient With Ankylosing Spondylitis

James A. Lipton, DO, and Lisa J. Mitchell, DO

11. Which of the following is considered first-line therapy for patients with ankylosing spondylitis:

- (a) orthotic devices
- (b) surgical treatment
- (c) nonsteroidal anti-inflammatory drugs
- (d) anti-tumor necrosis factor- $\alpha$  monoclonal antibodies

### Osteopathic Manipulative Treatment in the Management of Biliary Dyskinesia

Katherine Heineman, DO

12. Biliary colic is thought to be caused by:

- (a) a decrease in the sphincter of Oddi basal pressure
- (b) an infection of the bile duct often caused by bacteria ascending from its junction with the duodenum
- (c) inflammation of the gallbladder, which occurs most commonly from obstruction of the cystic duct with gallstones
- (d) increased intraorgan pressure as the gallbladder contracts against the cystic duct opening

13. What is the aim of an osteopathic manipulative treatment in addressing nociception?

- (a) to maintain chronic exposure of the allostatic response
- (b) to remove excessive synaptic drive and restore homeostasis
- (c) to defacilitate sympathetic drive only from the primary afferent nociceptors
- (d) to enhance spinal outflow at the somatic and autonomic levels

## Answers to January 2014 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.

### **The Persistence of Lumbar Somatic Dysfunction and Its Association With Bone Mineral Density**

Karen T. Snider, DO; Jane C. Johnson, MA; Brian F. Degenhardt, DO; and Eric J. Snider, DO

1. (a) Vertebral somatic dysfunction was most frequently observed in vertebral level L1 over 8 weeks.
2. (d) Tissue texture changes was the vertebral somatic dysfunction element found to most frequently persist over 8 weeks.
3. (d) Lumbar vertebrae with persistent tissue texture changes demonstrated a statistically significant increase in bone mineral density T scores over 8 weeks.

### **Patterns of Misrepresentation of Clinical Findings on Patient Notes During the COMLEX-USA Level 2-PE**

Jeanne M. Sandella, DO; Larissa A. Smith, PhD; Laurie A. Gallagher, DO; and Erik E. Langenau, DO

4. (e) Breakdowns in cognition, communication, diagnosis, and systems all contribute to medical errors.
5. (d) Errors of transcription, omission, and commission have been found in both the education arena and in medical practice. All can result in adverse patient outcomes.
6. (c) A patient's personal history—including past medical history, social history, medications, allergies, and family history—is where most commissive errors occurred.

### **A Research Primer, Part 2: Guidelines for Developing a Research Project**

David P. Yens, PhD; Grace D. Brannan, PhD; and Jane Z. Dumsha, PhD

7. (c) A researcher would like to determine the extent to which geriatrics instruction is provided during student rotations at hospitals affiliated with a medical school. She prepares a

survey that is sent to the hospital directors of medical education to be completed and returned. The results are tabulated and a report is prepared. This study is a cross-sectional study.

8. (b) To randomize student participants, a researcher made a list of the students' identification numbers and used a table of random numbers to allocate the students to groups on the basis of the last 2 digits of their identification numbers. Assignment to each group was alternated according to each match. Simple random sampling was used in this example.

### **A Case of Seasonal Recurrent Myopericarditis**

Laura Divoky, MD, and Rex D. Wilford, DO

9. (c) Nonsteroidal anti-inflammatory drugs are the cornerstone for the initial management of myopericarditis.
10. (b) Myopericarditis occurs in 15% of patients with pericarditis.

### **A Case of Idiopathic Colonic Varices**

Matthew V. Speicher, OMS IV; Michael T. Keegan, MD; and Kathryn E. Kirk, MD

11. (c) Idiopathic colonic varices tend to manifest throughout the colon.

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