



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 June 2015 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 December 31, 2016:

American Osteopathic Association
Division of CME
142 E Ontario St
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AOA No. _____

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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 July 2015 issue of the JAOA.

Perceptions of Physicians in Civilian Medical Practice on Veterans' Issues Related to Health Care

Todd Robert Fredricks, DO,
and Masato Nakazawa, PhD

1. Approximately how many US service members have participated in combat activities in Iraq and Afghanistan over the past 12 years?

- (a) 200,000
 (b) 500,000
 (c) 1,000,000
 (d) 1,500,000
 (e) 2,600,000

2. Approximately 164,000 primary care physicians practice medicine in the United States, each with an average patient panel of 3000 patients. What is the approximate number of veteran patients in the average primary care practice?

- (a) 50
 (b) 100
 (c) 130
 (d) 230
 (e) 300

3. Approximately what percentage of civilian physicians "very much" agreed that they needed more training in veterans' health issues?

- (a) 10%
 (b) 20%
 (c) 25%
 (d) 30%
 (e) 70%

4. Of the topics surveyed, which of the following was the most unfamiliar to respondents:

- (a) health risks of veterans
 (b) referral and consultation options for veterans
 (c) traumatic brain injury

- (d) posttraumatic stress disorder
 (e) aspects of active-duty military culture

Relationships Between Polypharmacy and the Sleep Cycle Among Active-Duty Service Members

R. Gregory Lande, DO,
and Cynthia Gragnani, PhD

5. The commonly prescribed selective serotonin reuptake inhibitors do all but which of the following:

- (a) reduce slow wave sleep
 (b) increase total rapid eye movement sleep
 (c) reduce total sleep time
 (d) impair sleep continuity

6. Which of the following statements is false:

- (a) The Pittsburg Insomnia Rating Scale is a 20-item self-report instrument.
 (b) The Epworth Sleepiness Scale is a 10-item self-report instrument.
 (c) The Posttraumatic Stress Disorder Checklist is a 17-item self-report instrument.

Screening for At-Risk Drinking Behavior in Trauma Patients

Timothy P. Plackett, DO; Hieu H. Ton-That, MD; Jeanne Mueller, RN; Karen M. Grimley, LCSW; Elizabeth J. Kovacs, PhD; and Thomas J. Esposito, MD, MPH

7. Compared with an AUDIT (Alcohol Use Disorders Identification Test) score, blood alcohol level greater than 0 mg/dL in a trauma patient is _____ predictive of at-risk drinking behavior.

- (a) more
 (b) equally
 (c) less

8. What percentage of trauma patients were found to have at-risk drinking behavior?

- (a) 4%
 (b) 24%
 (c) 44%
 (d) 74%

Age-Related Decline in Chest Wall Mobility: A Cross-Sectional Study Among Community-Dwelling Elderly Women

Daiki Adachi, RPT, BS; Minoru Yamada, PhD; Shu Nishiguchi, RPT, MSc; Nao to Fukutani, RPT, MSc; Takayuki Hotta, RPT, BS; Yu to Tashiro, RPT, BS; Saori Morino, RPT, BS; Hidehiko Shirooka, RPT, BS; Yuma Nozaki, RPT, BS; Hinako Hirata, RPT, BS; Moe Yamaguchi, RPT, BS; and Tomoki Aoyama, MD, PhD

9. At which of the following levels did chest wall mobility decrease with age?

- (a) axillary
 (b) xiphoid
 (c) tenth rib
 (d) umbilical

The Doctors Hospital and Nationwide Children's Hospital Dually Accredited Pediatric Residency Program: A Potential Best Model for Pediatric Osteopathic GME Training

Alexander Rakowsky, MD; John Mahan, MD; Rajesh Donthi, MD; and Carl Backes, DO

10. Which of the following statements is true regarding pediatric resident education in the new single graduate medical education accreditation system:

- (a) It will no longer be feasible for a pediatric residency program to provide specific osteopathic manipulative medicine (OMM) training.
 (b) Programs at smaller institutions will no longer be able to function and will need to close.
 (c) The osteopathic presence at pediatric training sites will be much decreased.

- (d) The ability will exist to develop programs that incorporate both Accreditation Council for Graduate Medical Education (ACGME) requirements and still provide a solid OMM foundation to interested residents.

11. A program that combines both OMM training and a rigorous ACGME curriculum can be expected to do which of the following:

- (a) prepare graduates to perform well in either the American Board of Pediatrics or American Osteopathic Board of Pediatrics examinations
 (b) prepare those graduates interested in primary care to succeed in such a future career
 (c) prepare those graduates in subspecialty training to be competitive candidates for pediatric fellowship positions
 (d) prepare graduates to be able to incorporate OMM into their future practice, regardless of the field of pediatrics they ultimately enter
 (e) all of the above

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Answers to the May 2015 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.

Variations in the Diagnosis and Treatment of Somatic Dysfunction Between 4 Osteopathic Residency Programs

Gregory A. Hon, DO; Karen T. Snider, DO; and Jane C. Johnson, MA

- (a) Residents from the family practice/osteopathic manipulative treatment residency program documented the most non-somatic dysfunction assessments.
- (e) Muscle energy was the osteopathic manipulative treatment technique most commonly used by residents.

Lymphatic Pump Treatment as an Adjunct to Antibiotics for Pneumonia in a Rat Model

Lisa M. Hodge, PhD; Caitlin Creasy, MS; KiahRae Carter, MS; Ashley Orłowski, BS; Artur Schander, DO, PhD; and Hollis H. King, DO, PhD

- (c) Three applications once daily of lymphatic pump treatment were shown to be effective when combined with levofloxacin to reduce the presence of pulmonary *Streptococcus pneumoniae*.
- (e) At 96 hours after infection with *S pneumoniae*, 5 of the 8 rats treated with the combination of levofloxacin and lymphatic pump treatment were cured.
- (d) Lymphatic pump treatment may protect against pneumonia by removing bacteria from the lung and enhancing the effect of levofloxacin.

Research Dissemination: Guiding the Novice Researcher on the Publication Path

Karen A. Collins, MPA; Grace D.

Brannan, PhD; and Godwin Y. Dogbey, PhD

6. (c) Whether quality improvement projects need institutional review board (IRB) approval depends: If the results are going to be disseminated outside the institution, then IRB approval is required. Although not common practice, researchers of quality improvement projects should obtain approval for an IRB waiver or exemption to avoid potential dissemination problems if there is an intention to submit for publication.
7. (b) The impact factor reflects the number of times a journal's articles have been cited during a given period. The impact factor is a ratio that is calculated on the basis of the number of citations the journal's articles receive in the 2 years after publication of the articles compared with the number of articles published in the same 2 years.

Pulmonary Lymphangitic Carcinomatosis From Metastatic Gastric

Adenocarcinoma: Case Report

Arsineh Khachekian, DO;

Sean Shargh, DO; and Sarkis Arabian, DO

8. (b) Diagnosis of pulmonary lymphangitic carcinomatosis requires transbronchial or open-lung biopsy. High-resolution computed tomography of the chest in these patients usually reveals thickening of the interlobular septa and central bronchovascular structures, known as central dots. Despite extensive involvement of the lymphatic system, the lung parenchyma is usually normal and not distorted, which is the distinguishing feature between lymphangitic carcinomatosis and sarcoidosis.

9. (a) Involvement of vascular endothelial growth factor C (VEGF-C) in promoting the lymphatic spread of the tumor has been postulated to be associated with pulmonary lymphangitic carcinomatosis. Together, VEGF-C and tissue factor play pivotal roles in the spread of tumors to lymphatic systems of lungs by upregulating endothelial and intimal proliferation, respectively. Aggregation of platelets releases serotonin from the platelets' granules, which bind serotonin receptors to trigger signaling pathways, leading to pulmonary tumor thrombotic microangiopathy and subacute pulmonary hypertension.
10. (d) Pulmonary lymphangitic carcinomatosis is most commonly associated with breast cancer; 33% of cases have the breast as the primary tumor site. Other common sources for the tumor include the stomach (29% of cases), the lungs (17% of cases), the pancreas (4% of cases), and the prostate (3% of cases). Nonetheless, pulmonary lymphangitic carcinomatosis can be caused by any metastatic neoplasm.

Spontaneous Pneumomediastinum in a Pediatric Patient After a 1600-m Run: Case Report and Literature Review

CPT Zachary C. Booms, DO,

and MAJ George A. Barbee, PA-C

11. (b) Up to 30% of patients with spontaneous pneumomediastinum have a concomitant pneumothorax. It is vital to rule out accompanying pneumothorax using plain film radiographs or computed tomography scans in those patients.

Answers to the April 2015 Supplement to the JAOA CME Quiz

- (c) The patient-centered medical home (PCMH) model has been shown to reduce the complications of type 2 diabetes mellitus (T2DM), such as blindness, amputations, and dialysis, by 60%.
- (a) Accountable Care Organizations (ACOs) require a broad base of primary care physicians to be successful.
- (e) Regarding the Patient Protection and Affordable Care Act and ACOs, the goal is to deliver seamless, high-quality care for Medicare beneficiaries.
- (c) Treating terminally ill patients is not a principle that needs to be recognized by osteopathic physicians in future models of health care for managing patient populations.
- (a) When considering the goals of innovations in health care models and practices, health care purchasers would understand the value of moving away from episodic care.
- (b) Regarding physician payments in the PCMH model, payments for episodic care are based on volume of patients seen.
- (e) When considering the joint principles of the PCMH, the comprehensive principle is a team of clinicians who are wholly accountable for a patient's physical and mental health care needs, including prevention and wellness, acute care, and chronic care.
- (c) In the PCMH-based diabetes treatment initiative that originated in Bethesda, Maryland (Navy Integrated Health Community), the use of community resources that provide support for the patient population resulted in a significant improvement in patient satisfaction in terms of outcomes and scores.
- (d) The fundamental need of existing ACOs is an infrastructure that provides the ability to obtain data.
- (c) Regarding the tenets of osteopathic medicine and the management of T2DM, noxious stimuli combined with internal risk factors contribute to T2DM.