



# 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 May 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/quiz>, 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 November 30, 2014:

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Division of CME

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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 June 2013 issue of the JAOA.

## The Effect of Osteopathic Manipulative Treatment on Postoperative Medical and Functional Recovery of Coronary Artery Bypass Graft Patients

by J. Michael Wieting, DO; Christopher Beal, DO; Gary L. Roth, DO; Sherman Gorbis, DO; Lori Dillard, DO; Dennis Gilliland, PhD; and Jacob Rowan, DO

- Continued stretch of the paraspinal muscles was employed at which of the following vertebral levels:
  - (a) T6
  - (b) L2
  - (c) C5
  - (d) T10
  - (e) S5

## Use of the SMART Balance Master to Quantify the Effects of Osteopathic Manipulative Treatment in Patients With Dizziness

by Marcel Fraix, DO; Ashlynn Gordon, OMS IV; Victoria Graham, PT, DPT, OCS, NCS; Eric Hurwitz, DC, PhD; and Michael A. Seffinger, DO

- Injury of or somatic dysfunction affecting which of the following anatomic structures of the cervical spine may precipitate vertigo and impair postural control:
  - (a) joint capsule mechanoreceptors
  - (b) cutaneous mechanoreceptors
  - (c) muscle spindles
  - (d) golgi tendon organ
  - (e) both a and c

- Atrophy of which of the following muscles or muscle groups may contribute to altered balance in patients with chronic neck pain:
  - (a) iliocostalis thoracis
  - (b) intercostal
  - (c) rhomboid
  - (d) suboccipital
  - (e) spinalis thoracis

- Patients with dizziness who were treated with osteopathic manipulative treatment had improvement in which of the following measures of dizziness and balance control:
  - (a) physical subscale of the Dizziness Handicap Inventory (DHI)
  - (b) functional subscale of the DHI
  - (c) emotional subscale of the DHI
  - (d) composite score derived from computerized dynamic posturographic data
  - (e) all of the above

## Osteopathic Approach to Gastrointestinal Disease: Somatic Clues to Diagnosis and Clinical Challenges Associated With *Helicobacter pylori* Antibiotic Resistance

by Alicia Smilowicz, DO

- Which of the following findings is usually included in the palpatory diagnosis of gastrointestinal disease:
  - (a) an occipitoatlantal joint sideslipped to the left
  - (b) an occipitomastoid suture restriction on the right side
  - (c) the C2 vertebra extended in a sidebent orientation and rotated to the right
  - (d) all of the above

(continued)

6. Which of the following models is not a proposed mechanism of gastrointestinal disease–related headache:
- (a) a vagus nerve model
  - (b) an *Escherichia coli* biochemical model
  - (c) a convergence–projection model
  - (d) a *Helicobacter pylori* biochemical model

#### Metastatic Brain Tumors: Current Therapeutic Options and Historical Perspective

by Mark Rivkin, DO, and  
Richard B. Kanoff, DO, MSc

7. Which of the following is the best approach to a patient with newly diagnosed brain metastatic lesion:
- (a) surgery
  - (b) radiation
  - (c) chemotherapy
  - (d) multidisciplinary approach
8. Which of the following cerebral metastatic lesions are considered to be most radiosensitive:
- (a) small-cell lung cancer
  - (b) non–small-cell lung cancer
  - (c) renal cancer
  - (d) melanoma

## Answers to April 2013 Supplement to the 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.

#### Identifying and Addressing Barriers to Insulin Acceptance and Adherence in Patients With Type 2 Diabetes Mellitus

by Allison M. Petznick, DO

1. (c) According to the American Diabetes Association (ADA) and the European Association for the Study of Diabetes (EASD), a glycosylated hemoglobin (HbA<sub>1c</sub>) goal of 7.5% to 8.0% is recommended for a patient with a history of severe hypoglycemia.
2. (a) According to the ADA and EASD guidelines, an HbA<sub>1c</sub> goal of 6.5% to 7.0% is recommended for a patient with long life expectancy.
3. (b) Insulin therapy should be considered mandatory for patients with weight loss and ketosis.
4. (a) The “5C intervention” refers to a method to engage patients in problem solving.
5. (b) Rapid-acting insulin analogs are the most physiologic insulins.

#### Insulin Therapy for Challenging Patient Cases

by Jay H. Shubrook Jr, DO

6. (c) Basal insulin constitutes approximately 50% of a person’s daily insulin needs.
7. (a) Basal insulin should be titrated to a fasting blood glucose goal of less than 130 mg/dL.
8. (c) The recommended starting dose of basal insulin is 0.2 U/kg.

9. (b) The addition of prandial insulin should be considered when basal insulin doses approach 0.5 U/kg.
10. (c) A patient with stable daily schedules who tends to eat the same thing every day would be a suitable candidate for premixed insulin analogs.
11. (b) Sweating is a cholinergic sign of hypoglycemia.

#### The Future of Insulin Therapy for Patients With Type 2 Diabetes Mellitus

by Joseph M. Tibaldi, MD

12. (b) Insulin therapy at diagnosis of type 2 diabetes mellitus may improve β-cell function.
13. (c) Doses of insulin may need to be reduced when exenatide twice daily or liraglutide are added.
14. (b) A lower risk of nocturnal hypoglycemia appears to be a major advantage of ultra–long-acting insulin.

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