



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 December 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 June 30, 2015:

American Osteopathic Association

Division of CME

142 E Ontario St

Chicago, IL 60611-2864

Fax: (312) 202-8202

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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 January 2014 issue of the JAOA.

Preventive Osteopathic Manipulative Treatment and Stress Fracture Incidence Among Collegiate Cross-Country Athletes

Lynn F. Brumm, DO; Carrie Janiski, DO, MS, ATC; Jenifer L. Balawender, DO; and Adam Feinstein, DO

1. Which of the following imaging modalities are preferred to magnetic resonance imaging for the diagnosis of stress fracture:
- (a) computed tomography
 - (b) ultrasonography
 - (c) plain film radiography
 - (d) nuclear bone scintigraphy
 - (e) none of the above

Effect of Inpatient Electroencephalography on Clinical Decision Making

Laura A. Harmon, MD; Megan Craddock, MD; Elisabeth Jones, MD; Craig W. Spellman, DO; and Donald M. Loveman, MD

2. Which of the following methods is recommended as the initial approach to an inpatient with a neurologic problem:
- (a) standard electroencephalography
 - (b) magnetic resonance imaging with contrast material
 - (c) a thorough patient history and physical examination
 - (d) telemetry monitoring

Correlates and Changes in Empathy and Attitudes Toward Interprofessional Collaboration in Osteopathic Medical Students

Leonard H. Calabrese, DO; Joseph A. Bianco, PhD; Douglas Mann, PhD; David Massello, BA; and Mohammadreza Hojat, PhD

3. Which of the following ideas is a key feature of empathy in the context of patient care:
- (a) It is predominantly an "affective" attribute.
 - (b) It is predominantly a "cognitive" attribute.
 - (c) It is a mysterious concept than cannot be defined.
 - (d) It cannot be measured.

Axioms, Osteopathic Culture, and a Perspective From Geriatric Medicine

Donald R. Noll, DO; Havilah Julia Sthole, AS; and Thomas A. Cavalieri, DO

4. Which of the following items has been called the greatest axiom of Andrew Taylor Still, MD, DO?
- (a) Listen to the patient. He is telling you the diagnosis.
 - (b) Find it, fix it, and leave it alone.
 - (c) If you talk with your patients long enough, they will tell you what is wrong with them.
 - (d) First try to blame it on the medications.
 - (e) none of the above

Subcutaneous Pellet Testosterone Replacement Therapy: The "First Steps" in Treating Men With Spinal Cord Injuries

Kendra M. Gray, OMS IV, and Angela DeRosa, DO, MBA, CPE

5. When considering testosterone replacement therapy, which of the following statements is most accurate?
- (a) Testosterone gels and creams have more potential adverse effects compared with intramuscular testosterone cypionate and testosterone enanthate.

- (b) Testosterone gels and creams have minimal risk of secondary exposure.
- (c) Baseline laboratory testing for testosterone deficiency is necessary for intramuscular testosterone cypionate and testosterone enanthate but not testosterone gels and creams.
- (d) Laboratory testing should occur 4 to 6 weeks after initiation of treatment.

An Unexpectedly Progressed Lumbar Herniated Disk

James A. Lipton, DO, and 2nd Lt Geoffrey A. McLeod, DO, USAF, MC

6. According to the American College of Radiology, which of the following red flag indicators warrant imaging in patients with low back pain:
- (a) recent trauma
 - (b) unexplained weight loss
 - (c) history of cancer
 - (d) symptom duration greater than 6 weeks
 - (e) all of the above

Correction

Answers to the July 2013 JAOA CME quiz. *J Am Osteopath Assoc.* 2013;113(8):645.

The answer to question 1 of the July 2013 continuing medical education quiz was incorrect. The answer should have read, “(d) The results of the exploratory pilot study suggest that a decrease in serum platelet counts is most likely to be observed.”

Answers to November 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.

In Vitro Biomechanical Strain Regulation of Fibroblast Wound Healing

Thanh V. Cao, BS; Michael R. Hicks, BS; and Paul R. Standley, PhD

1. (b) Nitric oxide plays a significant role during fibroblast wound healing. Low concentrations of nitric oxide are known to induce fibroblast proliferation.
2. (d) Prolonging protein kinase C activity by inhibiting dephosphorylation of its catalytic domain and phosphorylating the inhibitory subunit on phosphoinositide 3-kinase are likely mechanisms by which mechanical strain enhances fibroblast sensitivity to nitric oxide.

narrowing determined by cardiac catheterization. Now, aortic stenosis is considered in terms of the response of the left ventricle to the disease process.

5. (c) The discovery of “paradoxical” severe aortic stenosis, in which the gradient across the valve is low because of decreased left ventricular function in spite of a normal ejection fraction, is analogous to heart failure with a preserved left ventricular ejection fraction. The insight here is that the left ventricular systolic function is abnormal in spite of a normal ejection fraction because of decreased shortening of the left ventricle on its longitudinal axis due to subendocardial fibrosis.

Aortic Stenosis: New Thoughts on a Cardiac Disease of Older People

Felix J. Rogers, DO

3. (c) For a patient with isolated aortic stenosis, the guidelines presently recommend aortic valve replacement surgery in only symptomatic patients. Palpitations suggestive of a paroxysmal arrhythmia is not 1 of the 3 cardinal symptoms of aortic stenosis.
4. (a) For decades, aortic stenosis was considered just in terms of the valve gradient or the amount of valve

Role of Osteopathic Structural Diagnosis and Osteopathic Manipulative Treatment for Diabetes Mellitus and Its Complications

Amy W. Johnson, DO, and Jay H. Shubrook Jr, DO

6. (c) Sympathetic cord levels T5-T11 are associated with the pancreas.
7. (a) The Spencer technique has been shown to increase shoulder range of motion and to improve mobility in elderly patients.

**Tobacco Dependence Curricula
in US Osteopathic Medical Schools:
A Follow-up Study**

Brian N. Griffith, MS, PhD; Norman J. Montalto, DO; Lance Ridpath, MS; and Kendra Sullivan, MPA

8. (d) The number of curricular hours on tobacco dependence management were significantly higher in 2010 compared with those in 1998 (Fisher exact test, $P < .05$). Moreover, osteopathic medical schools in 2010 were 4.12 times more likely to have 3 or more hours of tobacco dependence instruction compared with those in 1998 (odds ratio, 4.12; $P < .001$).

**Thoracic Splenosis More Than
40 Years After Thoracoabdominal
Trauma**

Albert H. O-Yurvati, DO; Jared B. Thompson, OMS IV; and Tessa N. Woods, DO

9. (c) Ectopic splenosis is most commonly implanted on the small bowel mesentery.
10. (d) Rib raising and lymphatic pump are 2 osteopathic manipulative treatment techniques that may be included in a postoperative treatment plan for a patient who has experienced ectopic thoracic splenosis.

**Osteopathic Manipulative Treatment
in Tarsal Somatic Dysfunction:
A Case Study**

Joshua Batt, DO, and Michael M. Neeki, DO, MS

11. (d) Tarsal subluxations often present with lateral foot pain that radiates to the plantar aspect of the medial foot,

anterior ankle, or lateral metatarsal bones and is commonly secondary to traumatic ankle inversion injuries. Traumatic or genetic laxity of supporting ligaments and tendons may contribute to the osseous displacement seen in patients with this syndrome.

12. (e) The longitudinal arch is supported by the tibialis posterior muscle, which has tendinous attachments to the navicular, first cuneiform, and second, third, and fourth metatarsal bones. This arch has 2 divisions: lateral and medial. The osseous structures in these arches include the calcaneus, the cuboid, and the fourth and fifth metatarsal bones laterally and the talus, the navicular, the 3 cuneiform, and the first 3 metatarsal bones medially.
13. (c) High-velocity, low-amplitude manipulation of a subluxed cuboid can be performed with the patient either lying prone on a table or standing. The physician cradles the dorsum of the dysfunctional foot with interlaced fingers while placing the thumbs on the plantar surface of the medial cuboid. The manipulation is achieved by slight extension of the knee, plantar flexion of the ankle, and the application of a dorsally directed high-velocity, low-amplitude thrust with the thumbs approximately 60° laterally through the medial cuboid. It is recommended that “whipping” of the leg be avoided so as not to introduce extemporaneous forces to the talocrural joint.

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