

## Continuing Medical Education

You now have an opportunity to earn CME credits by reading articles in *The American Journal of Psychiatry*. Three articles in this issue each comprise a short course for up to 1 *AMA PRA Category 1 Credit*<sup>™</sup> each. The course consists of reading the article and answering three multiple-choice questions with a single correct answer. CME credit is issued only online. Readers who want credit must subscribe to the AJP Continuing Medical Education Course Program ([psychiatryonline.org/cme.aspx](http://psychiatryonline.org/cme.aspx)), select *The American Journal of Psychiatry* at that site, take the course(s) of their choosing, complete the evaluation form, and submit their answers for CME credit. A link from the question to the correct answer in context will be highlighted in the associated article. A certificate for each course will be generated upon successful completion. This activity is sponsored by the American Psychiatric Association.

### Information to Participants

**Objectives.** After evaluating a specific journal article, participants should be able to demonstrate an increase in their knowledge of clinical medicine. Participants should be able to understand the contents of a selected research or review article and to apply the new findings to their clinical practice.

**Participants.** This program is designed for all psychiatrists in clinical practice, residents in Graduate Medical Education programs, medical students interested in psychiatry, and other physicians who wish to advance their current knowledge of clinical medicine.

**Explanation of How Physicians Can Participate and Earn Credit.** In order to earn CME credit, subscribers should read through the material presented in the article. After reading the article, complete the CME quiz online at [cme.psychiatryonline.org](http://cme.psychiatryonline.org) and submit your evaluation and study hours (up to *AMA PRA Category 1 Credit*<sup>™</sup>).

**Credits.** The American Psychiatric Association designates this educational activity for a maximum of 1 *AMA PRA Category 1 Credit*<sup>™</sup>. Physicians should only claim credit commensurate with the extent of their participation in the activity. The American Psychiatric Association is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

### Information on Courses

**Title:** Diagnosis and Treatment of Postpartum Obsessions and Compulsions That Involve Infant Harm

**Faculty:** Robert Hudak, M.D., Katherine L. Wisner, M.D., M.S.

**Affiliations:** From the Departments of Psychiatry and Obstetrics and Gynecology, University of Pittsburgh School of Medicine (R.H.); and Western Psychiatric Institute and Clinic, University of Pittsburgh Medical Center, Pittsburgh (K.L.W.).

**Disclosures:** Dr. Hudak has received royalties from Cambridge University Press. Dr. Wisner has served on Eli Lilly's advisory board and has received donated medication and placebo from Novogyne (Novartis) for an NIMH-funded randomized trial.

**Discussion of unapproved or investigational use of products\*:** Yes

**Title:** Brain Activity in Adolescent Major Depressive Disorder Before and After Fluoxetine Treatment

**Faculty:** Rongrong Tao, M.D., Ph.D., Clifford S. Calley, B.S., John Hart, M.D., Taryn L. Mayes, M.S., Paul A. Nakonezny, Ph.D., Hanzhang Lu, Ph.D., Betsy D. Kennard, Psy.D., Carol A. Tamminga, M.D., Graham J. Emslie, M.D.

**Affiliations:** From the Department of Psychiatry (R.T., T.L.M., B.D.K., C.A.T., G.J.E.), the Department of Neurology (J.H.), the Division of Biostatistics of the Department of Clinical Sciences (P.A.N.), and the Advanced Imaging Center (H.L.), University of Texas Southwestern Medical Center at Dallas; the Center for Pediatric Psychiatry, Children's Medical Center of Dallas (R.T., T.L.M., B.D.K., G.J.E.); and the Center for BrainHealth of the University of Texas at Dallas (C.S.C., J.H.).

**Disclosures:** Dr. Tamminga is on the advisory board for Intracellular Therapies; is an ad hoc consultant for PureTech Ventures, Eli Lilly, Sunovion, Astellas, Cypress, Bioscience, and Merck; is a deputy editor for *The American Journal of Psychiatry*; and is an expert witness for Finnegan Henderson Farabow Garrett & Dunner, LLP. Dr. Emslie has received research support from Biobehavioral Diagnostics, Eli Lilly, Forest Laboratories, GlaxoSmithKline, and Somerset; has served as a consultant for Biobehavioral Diagnostics, Eli Lilly, Forest Laboratories, GlaxoSmithKline, INC Research Inc., Lundbeck, Pfizer, Seaside Therapeutics, Shire, and Wyeth; and has served on the speakers bureau for Forest Laboratories. The other authors report no financial relationships with commercial interests.

**Discussion of unapproved or investigational use of products\*:** No

**Title:** Neural Correlates of Stress-Induced and Cue-Induced Drug Craving: Influences of Sex and Cocaine Dependence

**Faculty:** Marc N. Potenza, M.D., Ph.D., Kwang-ik Adam Hong, Cheryl M. Lacadie, B.S., Robert K. Fulbright, M.D., Keri L. Tuit, Psy.D., Rajita Sinha, Ph.D.

**Affiliations:** From Yale University School of Medicine, New Haven, Conn.

**Disclosures:** Dr. Potenza consults for and is an adviser to Boehringer Ingelheim; has consulted for and has financial interests in Somaxon; has received research support from Forest Laboratories, Ortho-McNeil, Oy-Control/Biotie, GlaxoSmithKline, NIH, the U.S. Department of Veterans Affairs, Mohegan Sun Casino, and the National Center for Responsible Gaming and its affiliated Institute for Research on Gambling Disorders; has consulted for law offices and the federal public defender's office in issues related to impulse control disorders; and has given academic lectures in grand rounds, CME events, and other clinical or scientific venues. The other authors report no financial relationships with commercial interests.

**Discussion of unapproved or investigational use of products\*:** No

\* APA policy requires disclosure by CME authors of unapproved or investigational use of products discussed in CME programs. Off-label use of medications by individual physicians is permitted and common. Decisions about off-label use can be guided by scientific literature and clinical experience.

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**Estimated Time to Complete: 1 Hour**  
Begin date April 1, 2012 – End date March 31, 2014

## EXAMINATION QUESTIONS

Select the single best answer for each question below.

### Diagnosis and Treatment of Postpartum Obsessions and Compulsions That Involve Infant Harm

Robert Hudak, M.D., and Katherine L. Wisner, M.D., M.S.  
Am J Psychiatry 2012; 169:360–363

**Learning Objective.** The participant will recognize the frequency, characteristics and treatment recommendations for perinatal obsessions and compulsions.

1. Which of these compulsions would most likely be associated with a woman experiencing postpartum obsessions involving intrusive thoughts that she may stab her baby?

- A. Using kitchen knives to cut or scratch the baby
- B. Stabbing and killing the child (i.e., infanticide)
- C. Refusal to go near the child and asking others to do the primary caregiving
- D. Excessive hand washing, up to 2 hours per day

2. In the absence of treatment guidelines, it is recommended that women experiencing symptoms of postpartum obsessive-compulsive disorder receive selective serotonin reuptake inhibitors and which of the following?

- A. Systematic desensitization therapy
- B. Exposure with response prevention therapy
- C. Interpersonal therapy
- D. Augmentation with second-generation antipsychotic medications

3. What percentage of women who present to a perinatal mood disorders clinic will report clinically significant obsessions?

- A. Significant obsessions are rare and less than 5% of women have intrusive thoughts.
- B. Approximately 10% will have clinically significant obsessions, with some intrusive thoughts in about 25%.
- C. Close to 90% of women will experience intrusive thoughts, and half of those will be clinically significant.
- D. Close to 90% of women will experience intrusive thoughts, but clinically significant obsessions occur in less than 10% of those women.

## EVALUATION QUESTIONS

This evaluation form is adapted from the *MedBiquitous Journal-Based Continuing Education Guidelines* 28 November 2005. This evaluation will appear online at the end of each CME course. Participants must complete this evaluation in order to receive credit. Select the response which best indicates your reaction to the following statements about this activity.

**STATEMENT 1.** The activity achieved its stated objectives.

- 1. Strongly agree
- 2. Agree
- 3. Neutral
- 4. Disagree
- 5. Strongly disagree

**STATEMENT 2.** The activity was relevant to my practice.

- 1. Strongly agree
- 2. Agree
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- 4. Disagree
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**STATEMENT 3.** I plan to change my current practice based on what I learned in the activity.

- 1. Strongly agree
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**STATEMENT 4.** The activity validated my current practice.

- 1. Strongly agree
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**STATEMENT 5.** The activity provided sufficient scientific evidence to support the content presented.

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**STATEMENT 6.** The activity was free of commercial bias toward a particular product or company.

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### Brain Activity in Adolescent Major Depressive Disorder Before and After Fluoxetine Treatment

Rongrong Tao, M.D., Ph.D., et al.  
Am J Psychiatry 2012; 169:381–388

**Learning Objective.** The participant will recognize changes in brain activity that may occur during treatment of depression in adolescents.

- In this fMRI study of healthy adolescents and depressed adolescents prior to treatment, how did brain activity compare between groups while looking at fearful faces contrasted to neutral faces?
  - Both groups of adolescents showed the same brain activity in response to fearful faces.
  - The depressed adolescents showed lower brain activity in multiple regions.
  - Healthy adolescents showed greater activity in the left superior and middle frontal gyrus.
  - The depressed adolescents showed greater brain activity in multiple regions.
- Following treatment with fluoxetine, how did the brain activations change in the depressed adolescents when compared with repeat scans in the healthy adolescents?
  - Activity in the amygdala and orbitofrontal cortex remained greater in depressed patients after treatment.
  - Treatment changes involved lower brain activity in the frontal gyrus among the depressed adolescents.
  - After treatment the regions showing greater activity in the depressed group at baseline were no longer different from healthy adolescents.
  - Repeat scans of healthy adolescents showed lower activity in multiple regions compared to the depressed group.
- How does this study compare to brain activation studies of adults with depression?
  - Untreated depressed adults have not shown greater activations in limbic regions.
  - This study didn't show reduced frontal activation as observed in some adult studies.
  - Untreated adults tend to show a pattern of reduced limbic and higher frontal activation.
  - Frontal and limbic activations do not differ between adult and adolescent studies.

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### Neural Correlates of Stress-Induced and Cue-Induced Drug Craving: Influences of Sex and Cocaine Dependence

Marc N. Potenza, M.D., Ph.D., et al. • Am J Psychiatry 2012; 169:406–414

**Learning Objective.** The participant will recognize brain regions involved in craving states and how the neural correlates differ according to cue type (stress and drug cue) in women and men.

1. Relatively diminished activation of the precuneus and cuneus in men and women with cocaine dependence may be evident in which of the following clinical features?

- A. Reduced visual perception during cocaine craving
- B. Poor attention and impulse control
- C. Memory impairment
- D. Diminished motor coordination

2. Greater stress-related activations in corticostriatal-limbic regions in women with cocaine dependence suggest that which of the following strategies might be most helpful for decreasing hyper-responsiveness in these areas?

- A. Restricted diet with exercise
- B. Cognitive behavior therapy
- C. Mindfulness techniques
- D. Twelve-step programs involving structured meetings

3. Comparison of the corticostriatal-limbic hyperactivity in men with cocaine-dependence to women with cocaine dependence suggested which of the following?

- A. Men and women respond to drug cues and stress cues in the same manner.
- B. Women show greater corticostriatal-limbic activity in response to stress cues.
- C. Men show greater corticostriatal-limbic activity in response to stress cues.
- D. Women show increased corticostriatal-limbic activity only in response to drug cues.

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