



## ACETAMINOPHEN: HIDDEN COMPLEXITIES OF A SIMPLE OVERDOSE

PLUS Trends in immunoassays for drugs-of-abuse testing

*MLO* and Northern Illinois University (NIU), DeKalb, IL, are co-sponsors in offering continuing education units (CEUs) for this issue's article on **ACETAMINOPHEN: HIDDEN COMPLEXITIES OF A SIMPLE OVERDOSE**, and **TRENDS IN IMMUNOASSAYS FOR DoA TESTING**. CEUs or contact hours are granted by the College of Health and Human Sciences at NIU, which has been approved as a provider of continuing education programs in the clinical laboratory sciences by the ASCLS P.A.C.E.<sup>®</sup> program (Provider No. 0001) and by the American Medical Technologists Institute for Education (Provider No. 121019; Registry No. 0061). Approval as a provider of continuing education programs has been granted by the state of Florida (Provider No. JP0000496). Continuing education credits awarded for successful completion of this test are acceptable for the ASCP Board of Registry Continuing Competence Recognition Program. After reading the articles in the cover story section, answer the following test questions and send your completed test form to NIU along with the nominal fee of \$20. Readers who pass the test successfully (scoring 70% or higher) will receive a certificate for 1 contact hour of P.A.C.E.<sup>®</sup> credit. Participants should allow four to six weeks for receipt of certificates.

**The fee for this continuing education test is \$20.**

**This CE test covers all articles in the cover story section.** The Cover Story and Clinical Issues published in this month's *MLO* are peer-reviewed.

CE learning objectives and CE questions prepared by Masih Shokrani, PhD, MT(ASCP), Clinical Laboratory Sciences Program, College of Health and Human Sciences, Northern Illinois University, DeKalb, IL.

### CE QUESTIONS

- In which of the following settings is immunoassay the most widely practiced method of screening samples for drugs of abuse?**
  - clinical toxicology
  - anti-doping
  - forensic toxicology
  - all of the above
- Which of the following techniques were used in the 1970s to test for urine drug testing?**
  - radio immunoassay
  - enzyme multiplied immunoassay test
  - both a and b
  - neither a nor b
- Oral fluid and hair are new matrices that in the last 10 years have increased in prevalence for workplace testing and medico-legal sectors.**
  - TRUE
  - FALSE
- More than \_\_\_\_\_ billion doses of acetaminophen were purchased by U.S. consumers in 2005.**
  - 18
  - 28
  - 50
  - 58
- Acetaminophen is the most common pharmaceutical compound that is taken in intentional overdose.**
  - TRUE
  - FALSE
- Acetaminophen has been marketed for which of the following indications:**
  - fever reduction
  - pain relief
  - cough and cold
  - all of the above
- The following indicates some of the concerns for taking acetaminophen:**
  - possible dosing errors
  - "ceiling effect" related to analgesia
  - both a and b
  - neither a nor b
- Acetylcysteine is the commonly recognized antidote for acetaminophen poisoning.**
  - TRUE
  - FALSE
- Poisoning with acetaminophen may lead to \_\_\_\_\_.**
  - metabolic acidosis
  - renal failure
  - cerebral edema
  - all of the above
- On the Rumack-Matthews nomogram, the area between \_\_\_\_\_ and \_\_\_\_\_ lines is known as the "possible toxicity" region for acetaminophen ingestion.**
  - 150 and the 200
  - 200 and the 300
  - 500 and the 600
  - 1,500 and the 2,000
- The following population is at increased risk of severe toxicity from acetaminophen:**
  - those with chronic alcoholism
  - those with poor nutrition
  - those with particular genetic polymorphism
  - all of the above
- The serum concentration of acetaminophen obtained between \_\_\_\_\_ hours after the ingestion can be interpreted to use the N-acetylcysteine treatment using the Rumack-Matthew nomogram.**
  - 4-24
  - 1-2
  - 0.1
  - none of the above

