



## ABSTRACTS IN URGENT CARE

- Statins and UTI
- Teens and muscularity
- FDA reports on energy drinks
- Pediatric appendicitis
- Panic disorder and atrial fibrillation

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Each month, Dr. Nahum Kovalski reviews a handful of abstracts from, or relevant to, urgent care practices and practitioners. For the full reports, go to the source cited under each title.

### Statins for Prevention of UTIs?

**Key point:** *Statin use was significantly associated with reduced risk of urinary tract infections overall and for a second episode, but not for a first episode.*

**Citation:** Pouwels KB, Visser ST, Hak E. Effect of pravastatin and fosinopril on recurrent urinary tract infections. *J Antimicrob Chemother.* 2012 Oct 30; doi 10.1093/jac/dks419 [e-pub ahead of print].

Recurrent urinary tract infections (UTIs) are common, especially among women. Recent research has suggested that invasion of bladder epithelial cells by uropathogenic *Escherichia coli* — and persistence of these bacteria in quiescent intracellular reservoirs — may underlie such recurrence. Statins have been found to interfere with the bacterial invasion of cells, providing a rationale for studying the clinical effect of statins on recurrent UTIs.

To this end, researchers in the Netherlands linked data from PREVENT IT (a randomized trial to examine whether use of pravastatin, fosinopril, or both might prevent cardiovascular and renal disease in nonhypertensive, nonhypercholesterolemic adults with microalbuminuria) with a large prescription database. Of the 864 trial participants who were randomized to a study medication, 655 were eligible for the UTI analyses; average follow-up was 3.8 years. Prescription of an antibiotic typically administered for UTI treatment (nitrofurantoin, trimethoprim, a sulfonamide) was considered a surrogate for infection.



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In intent-to-treat analyses, pravastatin was associated with reduced risk for UTIs both overall (relative risk, compared with placebo, 0.43; 95% confidence interval, 0.21–0.88) and for a second episode, but not for a first one. The risk for a primary UTI was increased with fosinopril. UTI rates with combination therapy (pravastatin plus fosinopril) did not differ significantly from those with placebo. Prescription rates for commonly prescribed drugs, and for other antibiotics used to treat UTIs, were similar among groups.

Published in *J Watch Infect Dis.* November 14, 2012 — Thomas Gluck, MD. ■

### Muscularity (and Behaviors Promoting It) Popular with Adolescents

**Key point:** *For all the talk about pediatric obesity, there are those who are seeking to increase muscularity and keep their weight down. Doctors NEED to learn about exercise and nutrition in order to guide these patients as well. And simply telling these kids that “steroids are bad” will not be very effective.*

**Citations:** Eisenberg ME, Wall M, Neumark-Sztainer D. Muscle-enhancing behaviors among adolescent girls and boys. *Pediatrics.* November 19, 2012. doi: 10.1542/peds.2012-0095 and [http://www.nytimes.com/2012/11/19/health/teenage-boys-worried-about-body-image-take-risks.html?\\_r=0](http://www.nytimes.com/2012/11/19/health/teenage-boys-worried-about-body-image-take-risks.html?_r=0).

Patients may ask about a *Pediatrics* study, covered on the front page of *The New York Times*, finding that more than 5% of adolescents use steroids to enhance muscle development.

Researchers surveyed nearly 2800 students at 20 urban middle and high schools about “muscle-enhancing behaviors,” including changed eating habits, exercise, protein powders, and steroids and other substances.

The authors say that these behaviors are more frequent than

had been thought — especially among boys — and they advise clinicians to discuss them with their patients in an attempt to avoid compulsive behaviors and future problems over time.

### FDA Posts Adverse Event Reports Related to Energy Drinks

**Key point:** 18 fatalities have been linked to the highly caffeinated energy drinks.

**Citation:** <http://www.fda.gov/Food/NewsEvents/ucm328536.htm>.

The FDA publicly released the adverse event reports for four energy drinks — 5-Hour Energy, Monster Energy, Rockstar Energy, and Red Bull. Thus far, 18 fatalities have been linked to the highly caffeinated energy drinks (5 to Monster Energy, 13 to 5-Hour).

Some of the symptoms mentioned in the reports include increased heart rate, fatigue, vomiting, loss of consciousness, and cardiac and respiratory arrest. A federal report also found that an energy drink was listed as a possible cause for over 13,000 emergency room visits in 2009, *The New York Times* reports.

The FDA says that important information may be missing from the adverse event reports, making it “difficult ... to fully evaluate” whether the energy drinks caused the injuries reported. Nevertheless, the agency advises consumers to consult a healthcare provider before using the products. ■

### Pediatric Appendicitis: Ultrasound Sensitivity Increases with Symptom Duration

**Key point:** Ultrasound sensitivity increased from 81% in patients with symptom duration <12 hours to 96% in those with symptom duration 48 to 71 hours.

**Citation:** Bachur RG, Dayan PS, Bajaj L, Macias CG, et al. The effect of abdominal pain duration on the accuracy of diagnostic imaging for pediatric appendicitis. *Ann Emerg Med.* 2012;60(5):582-590.e3.

Investigators assessed the diagnostic performance of computed tomography (CT) and ultrasound in relation to symptom duration in children (age range, 3 to 18 years) with suspected appendicitis. This secondary analysis of a prospective study of patients who presented to one of nine pediatric emergency departments included only patients with abdominal pain for <72 hours. Symptom duration was categorized as <12 hours, 13 to 24 hours, 25 to 36 hours, 37 to 48 hours, or 49 to 71 hours.

Of 1810 patients, 67% underwent CT, and 46% underwent ultrasound. Overall, 680 patients (38%) had pathology-confirmed appendicitis, and of these patients, 174 (26%) had perforated appendicitis. The sensitivity of CT for diagnosing appendicitis did not differ significantly by symptom duration: 98% for <12 hours and 96% for 49 to 71 hours. However, the sensitivity of ultrasound increased significantly with symptom du-

ration: 81% for <12 hours versus 96% for 49 to 71 hours. Specificity did not differ significantly by duration for either modality, ranging from 90% to 96% for CT and 80% to 86% for ultrasound. The risk of perforation significantly increased with symptom duration, and in the subset of patients with perforated appendicitis, diagnostic sensitivity increased significantly with symptom duration with ultrasound but not CT.

For children with suspected uncomplicated (that is, nonperforated) appendicitis and <36 hours of pain, the authors recommend not relying on a negative ultrasound. Although CT is a second study option, the authors advocate for reevaluation with ultrasound after a period of observation to avoid unnecessary radiation exposure. Alternatively, they suggest postponing the initial ultrasound until sufficient time (>24 hours) has passed to increase its sensitivity.

Published in *J Watch Emerg Med.* November 16, 2012 — Katherine Bakes, MD. ■

### Panic Disorder and Vulnerability to Later Atrial Fibrillation

**Key point:** Panic disorder is NOT just “hysteria” and should be respected as a risk factor for other serious conditions.

**Citation:** Cheng Y-F, Leu H-B, Su C-C, Huang C-C, et al. Association between panic disorder and risk of atrial fibrillation: A nationwide study. *Psychosom Med.* October 29, 2012. Doi: 10.1097/PSY.0bo13e18273393a.

Although panic disorder has been associated with increased risks for myocardial infarction, whether panic disorder might also specifically increase the risk for atrial fibrillation (AF) has not previously been studied. Using a Taiwanese national insurance database, investigators compared 3888 patients receiving baseline diagnoses of panic disorder with 38,880 control individuals, balanced according to known risk factors (such as age, sex, and histories of diabetes, hypertension, and hyperlipidemia). Participants with preexisting arrhythmia were excluded.

Relative to controls, those with initial panic disorder had elevated baseline rates of chronic obstructive pulmonary disease (COPD) and depression. Participants were tracked for up to 7 years for the subsequent development of AF (diagnosed by cardiologists). At follow-up, 406 participants (0.94% of entire population) had developed AF (panic disorder group, 1.2%; non-panic group, 0.9%). After adjustment for risk factors and comorbidities, initial panic disorder was independently associated with increased risk for developing new AF (hazard ratio, 1.73), as were age, male sex, hypertension, and histories of coronary disease history, congestive heart failure, and valvular heart disease (but not COPD or depression).

Published in *J Watch Psych.* November 9, 2012 — Joel Yager, MD. ■