

# Clinical Briefs in Primary Care™

The essential monthly primary care update

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Supplement to *Clinical Cardiology Alert, Clinical Oncology Alert, Critical Care Alert, Infectious Disease Alert, Neurology Alert, OB/GYN Clinical Alert, Primary Care Reports, and Sports Medicine Reports.*

VOLUME 7, NUMBER 9

PAGES 17-18

AUGUST 2002

## Creatine Supplementation on Anaerobic Performance

**Source:** Mistic M, Kelley GA. *Am J Sports Med.* 2002;4:116-124.

**M**ALE AND FEMALE ATHLETES OF all ages sometimes use supplementation with various herbal and medicinal substances touted to enhance performance, appearance, or energy levels. Creatine monohydrate, more commonly known simply as creatine (CRT), has enjoyed a good deal of popularity among athletes interested in physical activities that require short bursts of high-intensity energy, such as sprinting or weight lifting. Despite the publication of more than 100 trials to date on CRT, consensus about the effect on speed, strength, or stamina remains elusive.

Mistic and colleagues surveyed placebo-controlled studies ( $n = 29$ ) addressing brief anaerobic activities in which CRT was the only known "performance aid" administered. Interested clinicians may be a bit stymied by the "fine print" which details the resulting data analysis, since they chose a somewhat unfamiliar measurement tool called an ES (reportedly similar to a 'z-score') to report their results; an ES of 0.2 is considered a small effect, 0.5 is moderate, and 0.8 is large.

The bottom line was that CRT did not show any significant favorable (or detrimental) effect on anaerobic performance. Though earlier trials have shown that CRT supplementation does enhance muscle levels of CRT, such augmentation does not appear to be reflected by enhanced performance. ■

## Do Delayed Prescriptions Reduce the Use of Antibiotics for the Common Cold?

**Source:** Arroll B, et al. *J Fam Pract.* 2002;51:324-328.

**D**ESPITE WELL-ESTABLISHED EDUCATIONAL principles that decry the use of antibiotics for viral upper respiratory infections (URI), clinicians continue to prescribe them both here and abroad. Studies from the United States and United Kingdom have found that up to 60% of patients in some studies receive antibiotics for the common cold, with little encouraging news from distant neighbors like New Zealand, where as many as 78% of common cold sufferers are prescribed antibiotics.

One technique that holds promise for reducing the use of unnecessary antibiotics is that of delayed prescriptions (DRx), in which the clinician provides a prescription with the suggestion that it not be filled unless the patient remains symptomatic for a specific time period, usually 48-72 hours. Initial studies of DRx in the situation of pharyngitis have reported as much as a 66% reduction in subsequent prescription filling. This trial looked at the same technique in patients ( $n = 129$ ) suffering the common cold.

Arroll and colleagues found that using the DRx technique resulted in a substantial reduction in use of antibiotics, from 89% in those patients who had been instructed to take antibiotics now, to 48% in those advised with DRx. Though optimally no patient with a common cold will use unnecessary antibiotics, the DRx method may be a valuable step toward achieving this goal. ■

## Immediate Repair Compared with Surveillance of Small Abdominal Aortic Aneurysms

**Source:** Lederle FA, et al. *N Engl J Med.* 2002;346:1437-1444.

**A**BDOMINAL AORTIC ANEURYSMS (AAA) are responsible for 9000 deaths annually in the United States. Surgical procedures for elective AAA repair are performed over 30,000 times annually, incurring up to 2800 deaths. Since risk of rupture is closely linked to AAA size, there is little disagreement about the appropriateness of surgical interventions for large (5-6 cm) lesions. Fewer consensus exists, however, about whether elective repair of "small" AAA (mean size, 4.7 cm) results in net gain for patients. This study randomized 1136 patients with small AAA to immediate repair vs. surveillance. Surveillance was performed with ultrasound, and patients were referred for surgical intervention if they became symptomatic, or if AAA enlargement rate suggested the need. Patients were followed for up to 4.9 years.

At the conclusion of follow-up, there was no demonstrable difference for all-cause mortality or death related to AAA between the group assigned to surveillance and the group receiving early surgical intervention. These findings are strengthened by the low operative mortality rate seen in the study group (2-2.4%). In concordance with the United Kingdom Small Aneurysm Trial, this trial demonstrated no

benefit for early elective surgical repair of AAA less than 5.4 cm in diameter. ■

## Falls in Rural Elders: An Empiric Study of Risk Factors

**Source:** Richardson DR, et al. *J Am Board Fam Pract.* 2002;15:178-182.

**A**LMOST HALF OF PERSONS OLDER than 75 years fall each year. When these individuals subsequently fracture a hip, more than half will die within 12 months. Understanding the risk factors associated with falls might lead to opportunities for prevention. To this end, Richardson and colleagues studied a target population (n = 308) of community-dwelling rural elders older than age 65. Each patient responded by self-report to a survey detailing their health status, use of medication(s), and hospitalizations. Their physician then confirmed patient-reported data. Prospective data collection continued for 6 years.

Richardson et al specifically addressed what they termed “intrinsic” risk factors, including age, eyesight, sex, personal health rating, and prescriptions. This is in contrast to what were considered

“extrinsic” factors, such as a patient who tripped and fell over an object. “Extrinsic” factors were not included in the analysis.

Of the variables analyzed, age and prescription medications were found to influence risk of falls. For instance, falls increased 4% with each increased year of age. Of the potentially modifiable risk factors, analgesics (prescription) and tranquilizers had an adverse effect on fall risk. For instance, analgesics increased fall probability by 55-85%.

Encouragingly, arthritis medications (not defined further in the article) were associated with a decreased risk of falls (20-60%). Enhanced knowledge of risk factor impact on falls may offer opportunity for modulation. ■

## Secondary Prevention of CHD

**Source:** Gaspoz JM, et al. *N Engl J Med.* 2002;346:1800-1806.

**A**SPIRIN (ASA) FOR SECONDARY PREVENTION of cardiovascular disease end points has been widely used, based on cumulative experience which suggests that myocardial infarction, stroke, or vascular death may be reduced by as much as 30%. Fortunately, in recent years the vast majority (up to 85%) of post-MI patients have been advised to take ASA at hospital discharge.

Not everyone is able to tolerate ASA, and some persons continue to have vascular events even when taking ASA, prompting clinicians to consider the potential combination of ASA with other antiplatelet agents, such as clopidogrel (CLP). Indeed, the use of CLP in combination with ASA was shown to have superior benefits to ASA alone in studies of persons with acute coronary syndromes, achieving as great as 20% further reduction in cardiovascular end points.

Gaspoz and colleagues used the Coronary Heart Disease Policy Model to assess the comparative cost-effectiveness of ASA, CLP (for ASA ineligible persons), or ASA + CLP over long-range treatment (25 years). For a point of reference, readers are reminded that hypertension treatment, considered a cost-effective intervention, is associated with a cost per quality-adjusted life-year (QALY) of \$25-50,000.

In this computer simulation model, ASA

was estimated to cost \$11,000 per QALY, CLP (for ASA ineligible persons) \$31,000, and ASA + CLP \$130,000. To use CLP instead of ASA for all antiplatelet prevention opportunities was much less cost effective (> \$100,000). Should CLP become substantially reduced in price, its greater efficacy in comparison to ASA could become more attractive. Gaspoz et al conclude that ASA, or CLP in ASA-ineligible persons, are cost-effective. For persons who can tolerate ASA, the addition of CLP was not shown to be favorably cost-effective, despite its demonstrated clinical efficacy. ■

## Use of Ramipril in Preventing Stroke

**Source:** Bosch J, et al. *BMJ.* 2002;2:261-264.

**A**MONG THE FIRST-WORLD NATIONS, stroke remains the second leading cause of death. Encouraging results from trials of hypertension management indicate that control of blood pressure with a variety of agents has a favorable effect, resulting in as much as 40% decrease in stroke, independent of gender or ethnicity. Despite this favorable effect, many stroke victims do not possess blood pressure elevations sufficient to merit antihypertensive treatment by current-day standards. The HOPE trial evaluated almost 10,000 adults age 55 or older who were considered to be at high risk of developing stroke, either due to pre-existing cardiovascular disease (eg, stroke, MI, or angina) or diabetes. Only about half of the population was hypertensive.

This placebo-controlled trial used ramipril (10 mg) daily as treatment. The mean blood pressure change in this trial (3.8/2.8 mm Hg) was modest; this, coupled with the fact that stroke reduction was equivalent in persons who entered the trial with or without hypertension, supports the position that the impact is to some degree independent of blood pressure. Overall, use of ramipril reduced risk of fatal stroke by 61%.

Whether stroke reduction is a “class” effect of ACE inhibitors, or particularly related to ramipril, remains to be determined. In the recently published PROGRESS trial, perindopril, another ACE inhibitor, when used as monotherapy did not reduce stroke. ■

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