



Clinical Digest

PAIN MANAGEMENT

EMLA: Speeding Time to Analgesia

Eutectic mixture of local anesthetic (EMLA) cream has plenty of benefits: It's noninvasive, inexpensive, and effective in providing analgesia for such cutaneous procedures as phlebotomy and catheter placement. The catch? It takes a while to start working.

In the past, researchers have attempted to accelerate the cream's time to analgesia, but results had

been largely unsuccessful or impractical—until recently, when a team of researchers from Rainbow Babies and Children's Hospital and Case Western Reserve University, both in Cleveland, OH, tried heating the cream. In their prospective, randomized, double-blind clinical trial, they compared catheterization 20 and 60 minutes after applying EMLA cream with a heat pack, EMLA cream without heat, and placebo with and without heat.

Of 76 healthy adult volunteers, 39 were assigned to the 20-minute group and 37 to the 60-minute group.

The researchers say that sites prepared with heated EMLA cream had a catheterization success rate of 95% compared with 88% among placebo sites. Pain scores rated on a visual analog scale of 0 (for no pain) to 100 (for severe pain) showed that, compared with placebo, the 20-minute application provided significantly greater analgesia—both statistically and clinically. The 60-minute application without heat, however, provided better analgesia than did the 20-minute heated application. The researchers' conclusion: When time is of the essence, try heat.

Source: *Ann Emerg Med.* 2003; 42:27-33.

INFECTION CONTROL

With Multiple Lumens, Do Multiple Tests

If one lumen of a central venous catheter (CVC) is clear of infection, it doesn't mean the patient is free of infection, say researchers from the United Kingdom's General Infirmary at Leeds and University of Leeds. In their prospective evalua-

tion, they found that random sampling of one lumen per catheter caught only 60% of significant catheter-related bloodstream infections.

The researchers took peripheral blood cultures before removing CVCs from two groups of patients: 50 with suspected infection and 50 whose catheters were no longer needed. At least one CVC lumen was positive in all cases of catheter-related bloodstream infection and was the only source of infection in 20% of cases. Of the 25 CVCs suspected of causing infection, 10 (40%) had significant microbial colonization in one lumen, another 10 had colonization in two lumens, and five (20%) had colonization in three lumens.

Ideally, each lumen should be tested. If resources are limited, however, the researchers say the next best approach is to sample the lumen used for parenteral nutrition or the one used most frequently. If a negative result is obtained and infection is still suspected, sample the other lumens.

Source: *Crit Care Med.* 2003; 31:1688-1690.



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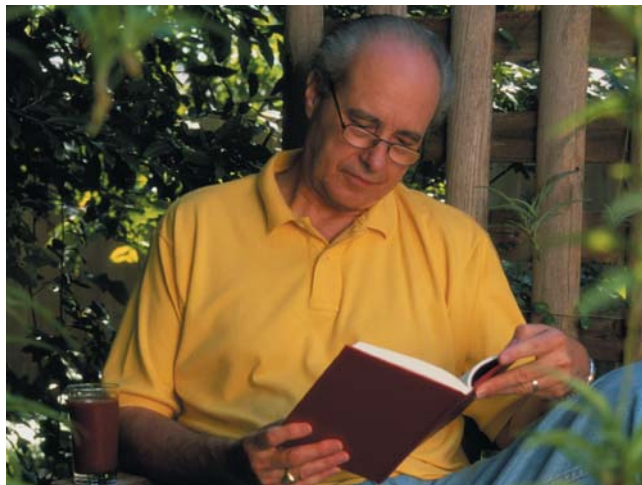
MENTAL HEALTH

Brain Games for Mental Fitness

It's a well accepted fact that regular physical exercise can keep your heart healthier. But can mental exercise really lower the risk of dementia? Investigators from the Einstein Aging Study at Albert Einstein College of Medicine, Bronx, NY think it might. In a 21-year study, they tested the frequency of dementia among 469 participants older than 75, who didn't have dementia at baseline and who regularly engaged in such leisure ac-

however, were associated with a reduced risk of dementia—and the more frequent the activity, the greater the reduction of risk. For example, elderly people who did crossword puzzles four days a week had a 47% lower risk of dementia compared with those who did crossword puzzles once a week. Results were similar for AD and vascular dementia.

The researchers suggest a number of possible explanations for their findings: While it's possible that such cognitive activities might slow the pathologic processes that lead to dementia, it could be that pa-



tivities as solving crossword puzzles, strumming a guitar, or playing bridge.

Over a median follow-up of five years, 124 participants (26%) developed dementia, including 61 (13%) who developed Alzheimer's disease (AD). Reading, playing board games, playing musical instruments, and dancing,

tients with preclinical dementia tend to participate in leisure activities less frequently than those without. In this study, however, the association between baseline cognitive activity scores and reduced risk of dementia was significant even after the exclusion of the 94 subjects in whom dementia was diag-

nosed during the first seven years after enrollment. In any case, the researchers say that their findings don't imply that subjects who were less active cognitively increased their risk of dementia.

Source: *N Engl J Med.* 2003; 348:2508–2516.

PRIMARY CARE

Chronic Fatigue Syndrome: Still a Public Health Problem

With no known cause or effective therapy, chronic fatigue syndrome (CFS) continues to be a significant public health problem—especially for women. To find out just how significant, a team of researchers from the United States and Canada performed a randomized telephone survey of 33,997 households (representing 90,316 individuals) in Wichita, KS, a location that's demographically similar to America as a whole with regard to age, race, ethnicity, sex, and income.

Through telephone screening, investigators identified 56,146 adults aged 18 to 69—5,295 of whom reported having had fatigue for one month or longer. These fatigued adults, plus 6,269 randomly selected nonfatigued controls, were asked to participate in detailed telephone

interviews. Ultimately, 3,528 fatigued adults and 3,634 nonfatigued adults agreed to participate. Respondents with such conditions as chronic hepatitis, lupus, and multiple sclerosis were excluded from the study, as were those with major psychiatric disorders.

After conducting subsequent, more detailed telephone interviews, the researchers classified 555 subjects as having a CSF-like illness and invited them—along with 167 of 619 randomly selected nonfatigued respondents—to undergo a clinical examination, both physical and psychiatric. Of those invited for a clinical examination, 299 subjects with a CFS-like illness and 64 of the nonfatigued respondents completed the exam.

The physician review committee classified 43 participants as having CFS at baseline, 112 as having insufficient symptoms for the diagnosis of CSF, and 141 as having exclusionary medical or psychiatric conditions (such as sleep disorders). Three patients couldn't be classified because diagnostic data were missing.

After weighting the results, the researchers determined that the 7,162 study participants and 43 identified CFS cases represent 272,838 adults and 641 CFS cases in the Wichita population—or an overall prevalence of 235 cases per 100,000 people. Prevalence

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estimates for women were significantly higher than for men for both CFS and CFS-like illness.

CFS is notoriously hard to diagnose, with symptoms suggestive of many other conditions. The researchers say they may have ruled out people who actually did have CFS simply because of fluctuations in disease severity. Still, they believe their results show CFS to be a major public health problem that deserves more investigation, particularly into possible diagnostic markers from molecular analyses of idiopathic fatiguing illnesses.

Source: *Arch Intern Med.* 2003; 163:1530–1536.

CARDIOLOGY

The Diagnostic Worth of C-Reactive Protein

For predicting cardiovascular risk, C-reactive protein has proven to be a strong forecasting tool. But can it predict myocardial infarction (MI) any more accurately than risk factors routinely assessed in clinical practice? Findings from a substudy of the 7,983-participant Rotterdam Study (conducted over eight years in Rotterdam, the Netherlands by a team of Dutch researchers) suggest that it has no additional diagnostic value.



The researchers say that theirs is the first study to investigate the clinical value of considering C-reactive protein along with the traditional cardiovascular risk factors. Using data from 157 patients who had an MI during follow-up and 500 randomly selected control subjects, they determined that the C-reactive protein level could indeed predict the incidence of MI in older patients—but no better than body mass index, hypertension, cholesterol, and other risk factors that normally are assessed during a physician visit. The researchers note, however, that their conclusion may not be applicable to younger populations, and are calling for further investigation into C-reactive protein's predictive value for patients under age 55.

Source: *Arch Intern Med.* 2003; 163:1323–1328.

WOMEN'S HEALTH

Emergency Contraception and Ectopic Pregnancy

The United Kingdom's chief medical officer recently raised a red flag over the possibility of a tripled risk of ectopic pregnancy—from 2% to 6%—after use of the emergency contraceptive levonorgestrel. But a physician from The Permanente Medical Group in Sacramento, CA says the alarm may be unwarranted.

Data from three large, double-blind, randomized trials, he said, show that, of the 4,098 women who used levonorgestrel as an emergency contraceptive, only 67 (1.6%) became pregnant and none of the pregnancies was ectopic. But since these studies were under-

powered to detect increased ectopic pregnancy risk, the FDA suggests that physicians caution emergency contraceptive users about the possible risks—based on data showing women who take daily progestin-only contraceptives have a higher risk of ectopic pregnancy.

If levonorgestrel is used properly, the expected failure rate is 1.6%, which should have translated into 16,000 unintended pregnancies and 320 ectopic pregnancies since its launch in the United Kingdom in February 2000. Yet, since that time, three million levonorgestrel contraceptives have been sold, the author says, and the reported figures were in fact much smaller: 201 unintended pregnancies and 12 ectopic pregnancies.

Granted, underreporting of such adverse events is common. But the real risks appear small, and hypervigilance is unnecessary, except for those women who don't have a normal period after using levonorgestrel. The possibility of an ectopic pregnancy should be considered, the author adds, but such counsel already should be the standard of care for any woman of childbearing age who reports abnormal menses along with abdominal pain or vaginal bleeding. ●

Source: *Ann Emerg Med.* 2003; 42:306–307 [letter].