



# Clinical Digest

## GERONTOLOGY

### Promoting a Better Night's Rest

Exercise, light exposure, and regular sleeping hours may help curtail sleep problems long associated with advanced age for elders with Alzheimer disease (AD) and those without. Researchers from the University of Washington, Seattle say their study provides the first evidence that the same sleep tips touted for institutionalized elderly patients without dementia can improve sleep for patients with AD as well.

In the first of six one-hour, in-home sessions provided over a two-month period, caregivers of 17 elderly patients diagnosed as having probable AD were instructed to identify desirable bed and rising times for the patients and to allow them to deviate from that schedule by no more than 30 minutes daily. They also were directed to prevent patients from napping more than 30 minutes or after 1 PM and to reduce light in sleeping areas at night. In the second ses-

sion, patients were encouraged to walk daily—ideally for 30 minutes, outside, under natural light. In the third session, daily light exposure was increased, with patients being exposed to a light box for an hour every day, usually within three hours of bedtime. The final three sessions focused on adherence to the overall treatment plan. The control group, comprised of 19 patients, received general sleep-related education materials and caregiver support but no specific recommendations for improving sleep.

After two months, patients in the control group worsened while those in the intervention group, on average, spent 36 fewer minutes awake at night (a 32% reduction from baseline), had 5.3 fewer nightly awakenings (also a 32% reduction), and had significantly lower levels of depression. At baseline, 38% of the intervention group spent more than 85% of their bedtime asleep versus 50% of the control group. At two months, that proportion had risen to 69% in the intervention group and had fallen to 38% in the control group.

One program advantage, the researchers say, is short treatment time. They acknowledge, however, that such a program can be demanding, as many caregivers required help in reducing the extra burden the program entailed.

In a second study, conducted by researchers from the VA Greater Los Angeles Healthcare System, Los Angeles, CA; University of California at Los Angeles; and University of Maryland, Baltimore, 118 nursing home residents who slept excessively during the day and had nighttime sleep disruption were randomly assigned to usual care or to a nondrug intervention for five days and nights. The latter included having the patients spend less time in bed daily, get 30 or more minutes of daily sunlight exposure, exercise more, and follow a structured bedtime routine, while research staff tried to reduce nighttime noise and light in sleep areas.

Although researchers found only a modest reduction in mean duration of nighttime awakenings (versus an increase in the usual care group), patients were spending significantly less

time sleeping during the day. The researchers believe that this in itself is enough to improve quality of life for the patients, by making it easier for them to be socially involved during the day and to sleep at night.

Source: *J Am Geriatr Soc.* 2005;53:793–802; 803–810.

## EMERGENCY MEDICINE

### Can Lactate Levels Predict Mortality Risk?

Serum lactate is a good indicator of mortality risk among emergency department patients with infection, according to a study of 1,278 patients admitted with suspected infection at Beth Israel Deaconess Medical Center, Boston, MA between July 24, 2003 and March 24, 2004.

A total of 105 patients died, 55 in the first three days. Mortality rates increased as serum lactate levels increased: 43 (4.9%) of 877 patients with lactate levels below 2.5 mmol/L died, compared to 24 (9%) of 267 patients with levels

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between 2.5 and 3.9 mmol/L and 38 (28.4%) of 134 patients with levels of 4 mmol/L or greater. A lactate level of 4 mmol/L or greater was 36% sensitive and 92% specific for death and 55% sensitive and 91% specific for death within three days.

A risk-stratification biomarker such as serum lactate could aid in triage decisions for patients with clinically suspected infection, as patients who are more severely ill should be considered for closer monitoring and more aggressive care, the researchers say.

Source: *Ann Emerg Med.* 2005;45:524-528.

## CARDIOLOGY

### The Value of Pulse Pressure in Women

Pulse pressure measurements have been shown to predict risk of cardiovascular events but, until recently, most large cohort studies have focused on men. Now, findings from four years of follow-up in the Heart and Estrogen/Progestin Replacement Study (HERS) reveal that pulse pressure measurements of 70 mm Hg or higher increase the risk of myocardial infarction

(MI) or coronary heart disease (CHD) death by 47% and more than double the risk of cerebrovascular events and of hospitalization for congestive heart failure (CHF).

After adjusting for mean arterial pressure, a 1-SD increase in pulse pressure was associated with a 25% to 30% increased risk for cerebrovascular events or hospitalization for CHF.

Pulse pressure was roughly equivalent to systolic blood pressure as a predictor of MI and CHD death or of cerebrovascular events but was more strongly associated with

risk of hospitalization for CHF. Hormone replacement therapy was associated with a small but statistically significant increase in pulse pressure, though the researchers say the clinical significance of the effect is questionable. ●

Source: *Chest.* 2005;127:1498-1506.

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