

A broken wrist, often the first indicator of osteoporosis in women aged 55 years and older, may not alert physicians to begin treatment for decreased bone mineral density, say researchers who conducted a study of 1162 postmenopausal women who had broken one or both wrists.

Although women who break their wrists at this age have a twofold increased risk for hip fracture, scientists found that only one quarter of the participants had been evaluated for osteoporosis. Further, the failure to diagnose and treat the disease in these patients increased with patient age.

The report can be found in the August issue of the *Journal of Bone and Joint Surgery*.

Magnetic resonance imaging shows that study participants with a gene variant associated with the risk of Alzheimer's disease use greater mental effort to recall memorized words, say scientists from the University of California at Los Angeles who hope to use the technique for early detection of the disease. Further, results of tests performed 2 years later showed that those same participants had lost the most memory ability compared with those without the gene variant.

The study involved 30 people between the ages of 47 and 82 years who had normal results on conventional memory tests but were found to have APOE-4 allele, a gene variant associated with Alzheimer's disease. Magnetic resonance imaging of their brains showed that those with APOE-4 produced doubly strong signals, which indicate greater blood flow and increased mental effort than those without APOE-4. Scientists attribute the increased effort to the brain's attempt to compensate for deficits.

The report can be found in the August 17 issue of the *New England Journal of Medicine*.

The prevalence of diabetes in the United States increased from 4.9% in 1990 to 6.5% in 1998, with an alarming 76% increase among people between the ages of 30 and 40 years—particularly concerning because of the increased possibility of complications the longer a person has the disease. Because most new incidents of diabetes are patients with type 2 diabetes, researchers cite obesity, which has risen to 54% from 44% in the same period, as a major factor in the disease's prevalence. Further, larger increases are expected as newly obese persons get the disease. Type 2 diabetes accounts for 90% to 95% of all incidents of diabetes.

Scientists attribute rising obesity rates to general inactivity, lack of exercise, and overeating, with the risk of diabetes increasing 4% for every pound of excess weight. They recommend walking and other activities, making healthier food choices, and resuming physical education classes in schools.

The report can be found in the August 24 issue of *Diabetes Care*.

Remission may be maintained in patients with pouchitis when high doses of probiotics are administered, say researchers at the University of Bologna in Italy. Standard treatment for patients with pouchitis is antibiotics, which have only a short-term effect, while treatment with probiotics—living bacteria found in the human intestine—can be administered for years without side effects.

Forty patients with chronic pouchitis in remission after antibiotic therapy were randomly assigned to receive probiotic bacteria or a cornstarch placebo. Of those receiving the probiotic bacteria, 85% remained in remission for the 9-month study period while 15% relapsed compared with 100% of the patients receiving placebo who relapsed within 2 to 4 months.

Researchers believe the probiotic approach may also be useful in treating pa-

tients with Crohn's disease and ulcerative colitis.

The report can be found in the August issue of *Gastroenterology*.

Patients who have had a thromboembolism are much more likely to have a second clot if they have high levels of the clotting factor, factor VIII, say researchers from Vienna University Hospital in Austria.

Results of the retrospective study indicate that out of a total of 360 patients who had a thromboembolism, participants with the highest levels of factor VIII were seven times as likely to have a second clot than those with the lowest levels.

These results have prompted some physicians to suggest giving high-risk patients anticoagulant drugs, while others cite the need for further study to determine if use of anticoagulant drugs outweighs their side effects. Researchers recommend testing for factor VIII in screening for recurring blood clots.

The report can be found in the August 17 issue of the *New England Journal of Medicine*.

Results of a 3-year study indicate that estrogen replacement therapy fails to slow progression of heart disease in postmenopausal women. The study involved 309 women randomly assigned to groups receiving estrogen, estrogen plus methoxyprogesterone acetate, or placebo. The women's coronary arteries were injected with dye and examined by radiography over the course of the 3-year study. Results showed that the women's arteries narrowed regardless of whether they took estrogen.

Although scientists conducting the study concluded that estrogen replacement therapy is not effective in reducing the risk for heart attack or slowing heart disease, another

er study published in the same journal (August 24 issue of the *New England Journal of Medicine*) attributes the decline of heart disease among women to hormone therapy and behavioral changes.

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**Current stem cell research that demonstrates the ability of one kind of stem cell to produce cells for many different organs** may dispel scientists' theory that each organ has its own stem cells, say researchers who reported converting human blood stem cells into brain cells that connected to other brain cells. Researchers also found evidence that the neurons can travel to a designated area of the brain.

Stem cells may be used in future research for disorders such as Parkinson's disease and Alzheimer's disease as well as for damaged organs and limbs. The use of a patient's own supply of stem cells obtained by a simple procedure would eliminate rejection of new tissue.

The report can be found in the August

15 issue of the *Journal of Neuroscience Research*.

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**The stretching of the lung that occurs when breathing deeply may release a chemical** that keeps airways open, Johns Hopkins University researchers concluded following studies of the drug methacholine.

Results of studies indicate that methacholine caused narrowing of airways and wheezing in people without asthma when a series of shallow breaths were taken before receiving the drug; however, when the same group took deep breaths before receiving the drug, 85% of the group avoided the effects.

The report can be found in the August issue of the *Journal of Applied Physiology*.

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**Results of a study suggest that *Orientia tsutsugamushi*, the causal agent of scrub typhus, reduces HIV-1 viremia** in patients with acquired immunodeficiency syndrome.

The study involved 10 HIV-infected adults with scrub typhus and 5 with infections other than scrub typhus, none of whom was receiving antiretroviral therapy. The median of all viral loads for patients with scrub typhus was 111% compared with 374% for patients without scrub typhus. Further, all isolates from patients with scrub typhus were non-syncytia-inducing variants that may impede spread of the virus.

The report can be found in the August 5 issue of *Lancet*.

**Results of a study involving 407 children indicate that epilepsy is a probable diagnosis** when a child has seizures more than once and that 70% of children who have a second seizure continue to have more. These results may help determine whether an episode is an isolated incident or if long-term medication is appropriate.

Previous studies had shown that a single seizure does not necessarily indicate epilepsy, as only one third of children who had a seizure had a second seizure.

The report can be found in the August issue of *Annals of Neurology*.

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**Results of a study indicate that aerobics combined with a weight loss program lowered both resting and stress-induced blood pressure levels** in hypertensive patients more effectively than an exercise-only program.

The study, designed to determine the importance of reducing blood pressure related to mental stress, involved 99 participants with high normal or unmedicated stage 1 to 2 hypertension who were randomly assigned to groups receiving treatment involving aerobic exercise, aerobics with a behavioral weight loss program, or a waiting list control group.

Patients in the active treatment groups had lower systolic and diastolic blood pressure, peripheral resistance, and heart rate than patients in the control group. Further, diastolic blood pressure was even lower in patients in the aerobics plus weight loss program group than the aerobics-only group.

The report can be found in the August issue of *Hypertension*. ♦