Studies Show Physical Activity Delays Onset of Dementia

BY TIMOTHY F. KIRN
Sacramento Bureau

SEATTLE — Evidence is beginning to suggest that exercise can at least forestall Alzheimer’s disease, Dr. Eric B. Larson said at the annual scientific meeting of the American Geriatrics Society. “We now see association studies of physical activity showing a pretty convincing relationship with a delayed onset of dementia,” said Dr. Larson, the executive director of the Center for Health Studies of the Group Health Cooperative, Seattle. “I don’t think we are preventing this disease from ever happening,” he added. “What we’re doing is delaying it.”

Four observational studies have now shown, with consistency, a 30%-40% reduction in the incidence of Alzheimer’s disease when people get regular exercise, Dr. Larson noted.

Some might find it implausible that physical exercise could affect the brain, cognitive function, and decline, since it has been thought that the brain does not develop after a young age, Dr. Larson noted. It turns out that animal experiments show that new neurons do form in the adult brain. “Neurogenesis is possible at almost any phase of development, at least in animals,” he said.

And then, there is the human study.

In a study of humans who used functional magnetic resonance imaging, the investigators found that aerobic physical fitness measured on a treadmill correlated with frontal, parietal, and temporal lobe density, such that better fitness meant higher density, which indicates less age-related loss (J. Gerontol. A Biol. Sci. Med. Sci. 2003;58:176-80).

In his own study, Dr. Larson looked at 2,581 individuals, who were aged 65 years or older, without dementia. They were tested for cognitive functioning and interviewed about exercise habits every 2 years, starting in 1994-1996. For the analysis, the investigators threw out those individuals who scored in the bottom quartile of subjects on the cognitive testing, on the grounds that they might be persons already showing some dementia-associated decline (Ann. Intern. Med. 2006;144:73-81).

With an average follow-up of 6.2 years, during which time 158 subjects developed dementia, the researchers found that those subjects who exercised three or more times per week had a 40% reduction in the risk of developing dementia, compared with those who exercised less than three times per week.

The incidence rates of dementia were 1.8-1.000 person-years for those who exercised three or more times per week, compared with 19.7/1,000 person-years for those who exercised less than three times per week.

Exercise was defined as the number of days during the past year that subjects had engaged in walking, hiking, bicycling, aerobics or calisthenics, swimming, water aerobics, weight training, stretching, or other exercise, for at least 15 minutes at a time. About 60% of those who developed dementia had developed Alzheimer’s disease.

The interesting part of the findings was that those subjects who had the lowest physical performance benefited the most from exercise, Dr. Larson said. All of the prevention was in the people in the lowest third on physical performance measures.

ACE Inhibitors May Protect Against Mental Decline

BY TIMOTHY F. KIRN
Sacramento Bureau

SEATTLE — Angiotensin-converting enzyme inhibitors that cross the blood-brain barrier slow mental decline by about 50% relative to the decline seen in patients on other antihypertensives, an observational study of 1,074 hypertensives showed. A median of 6 years.

If there is an indication for an ACE inhibitor, we might as well use one that crosses the blood-brain barrier,” said Dr. Kaycee M. Sink, principal investigator, said at the annual meeting of the American Geriatrics Society.

Hypertension itself is a risk factor for dementia, so it is important to know whether an antihypertensive treatment has the ability to cut that risk, said Dr. Sink of the division of geriatrics at Wake Forest University, Winston-Salem, N.C. Previous trials of treatment have had mixed results. But in animal studies, the ACE inhibitor that crosses the blood-brain barrier have been shown to halt cognitive decline at doses below what would be used to control blood pressure. Those studies were the basis for the investigation, Dr. Sink said.

Her group looked at patients enrolled in the multicenter Cardiovascular Health Study, selecting out those patients who had hypertension and took an antihypertensive, and those who did not have dementia at baseline. The mean age of the patients was 78 years.

The aim was to look at the incidence of dementia. There were 158 subjects diagnosed with dementia over the average 6 years of follow-up. But the only effect by type of antihypertensive the patient was exposed to was a slightly higher risk in those who took an ACE inhibitor that did not cross the blood-brain barrier, with about an 18% higher risk than that seen in the subjects on other antihypertensives. However, when the investigators looked at the subject scores on the Mini-Mental State Exam, they did find a difference.

The group of patients on an antihypertensive other than an ACE inhibitor had a mean decline in exam scores of 0.64 points per year. Those on an ACE inhibitor had a mean decline of 0.38 points per year.

It is thought that some ACE inhibitors protect from dementia and mental decline by decreasing oxidative stress and inflammation in the brain, she noted.

By Sarah Pressman Lovinger Contributing Writer

Chicago — Patients with Alzheimer’s disease face many challenges, including proper diagnosis, ongoing care, and burdened families. But older people who have immigrated to the United States from non-English speaking countries and may have Alzheimer’s disease face even greater hurdles, according to Beth O’Grady of the Coalition of Limited English Speaking Elderly, and her colleagues.

“It’s important to reach low English proficiency communities because Alzheimer’s disease (AD) is not well understood in these communities,” said Ms. O’Grady, speaking at a joint conference of the American Society on Aging and the National Council on Aging.

In an effort to improve the understanding and support for older adults who have cognitive impairment in these communities, Ms. O’Grady joined Melanie Chavin, of the Alzheimer’s Association’s Greater Illinois Chapter and Aging and the National Council on Aging.

Lessons learned from the first 3-year project have already shaped efforts by the project coordinators to improve AD services in LEP communities. The coordinators discovered a lack of understanding among the community members about what AD is. They also realized that cultural differences play a role in how certain ethnic groups respond to a diagnosis of AD in a family member. “Education about AD is very valuable, but it must be offered in a culturally sensitive way,” Ms. Chavin said.

In addition to educating communities about AD, the panels also reached out to physicians in the LEP communities they were targeting to find out more about how they diagnosed and treated patients with memory loss. The physicians with whom the panels interacted could speak the same language as their patients and generally worked as solo practitioners in small storefront clinics.

Getting physicians in the communities on board to recognize memory loss and cognitive impairment was one of the major hurdles that the program coordinators faced. The physicians in the communities did not always think that memory loss was a condition they needed to address, Ms. Morhardt said.

The panels determined that time constraints often make proper diagnosis and treatment of patients with memory loss very challenging for many of the physicians working in the LEP communities. “The physicians were very busy and were not always open to the diagnostic guidelines,” said Ms. Morhardt, speaking about findings from the initial part of the project.

Lack of reimbursement for diagnosing dementia cut short the time physicians in the study would need to embark on a diagnostic plan. The solo practitioners also tended to be isolated and unaware of resources available to them, such as centers devoted to the diagnosis and treatment of AD at two academic institutions in Chicago.

The project coordinators first completed a 3-year research project that targeted physicians and families in communities that spoke primarily Polish, Russian, Korean, Chinese, and Spanish. They now are completing the second year of a 3-year project working with communities in which the primary languages spoken include Arabic, Assyrian, Bosnian, Hindi, and Urdu.

The project coordinators hope to increase the number of older adults in these communities who use their services by reaching out to limited English proficiency (LEP) communities and by determining the kind of additional support that patients and families need.

Source: Dr. Sink

August 2007 • www.clinicalpsychiatrynews.com

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ACE inhibitor

Antihypertensive other than ACE inhibitor

Mean Annual Decline of Scores on the Modified Mini-Mental State Exam

Note: Based on a study of 1,074 hypertensive patients followed for a median of 6 years. Source: Dr. Sink

Immigrants With Alzheimer’s Face Big Hurdles