

To ensure delivery, add info@preventad.com to your address book.

PREVENTION HIGHLIGHT

Preventing Alzheimer's Disease by Delaying Onset

There are approximately 13 risk factors for Alzheimer's disease (AD), established by large epidemiological studies. Many of these risks can be reduced with appropriate treatment and simple life style modifications. Some of these risk factors have been discussed in previous newsletters. Please visit our newsletter archive for additional information.

Three treatments: non-steroidal anti-inflammatory drugs (NSAIDs), statins, and antioxidants, are discussed below which reduce the risk of developing AD by 35-75%, translating to a delay of AD onset by 3 to 5 years.

Non-Steroidal Anti-inflammatory Drugs

Nonsteroidal anti-inflammatory drugs (NSAIDs) are typically prescribed for treating conditions such as arthritis. Over-the-counter, non-prescription NSAIDs include aspirin and ibuprofen. NSAIDs relieve pain and help reduce inflammation and lower fevers. They also prevent blood from clotting. In some cases, this can be beneficial in reducing clotting and protecting against heart disease. But reduction in blood clotting could also increase bruising and have other negative effects. 9 out of 10 population-based studies have shown that NSAIDs used in low doses for two or more years in persons under 80 years old reduce the chance of developing AD by about 50%. Low dose means <175 mg aspirin or <500 mg Naproxyn or equivalent dose with other NSAIDs. The efficacy of aspirin in particular, varies. Many studies show about a 30% risk reduction, while some studies did not show a risk reduction and others showed risk reduction comparable to other NSAIDs.

Eight NSAIDs have been shown to reduce beta amyloid 1-42, the mechanism for developing AD, in brain levels. These include ibuprofen, sulindac and indomethacin. Data from a well-known study called the Established Populations for Epidemiologic Studies of the Elderly showed that persons taking low to moderate doses of NSAIDs performed better on cognitive assessments than persons not taking NSAIDs or taking high doses of NSAIDs. The magnitude of this effect was estimated to delay the onset of cognitive decline by 3.5 years.

Statins

Statins are prescribed for lowering of cholesterol levels. Some studies have demonstrated a relationship between statin use and the reduction of prevalence of dementia and AD. However, this relationship is complex. A number of large, well-designed epidemiological studies have shown risk reduction for developing AD. For example, a study of 1,364 individuals age 50 years and older selected from 368 primary care practices in the UK found a relative risk of 0.29 for developing dementia among statin users vs. non-users. The Canadian Health Study of the Aging studied 492 individuals over 65 years old who had

developed dementia after their initial assessment, and compared them to 823 persons who remained normal. The relative risk for AD among statin users was 74% less than non-statin users under 80 years old. These results are also consistent with a recent meta-analysis of seven studies in the literature, which showed that statin use reduces overall risk of cognitive impairment by 57%, while other lipid lowering agents do not show a statistically significant reduction in risk of cognitive impairment.

Supplementary and Dietary Sources of Vitamin E

A 3-year study of 2,889 community residents 65 to 102 years old examined working memory, short-term memory, global mental status and complex task performance. The study found that persons who took Vitamin E: 400 iu/day or higher showed a 1/3 reduction in their rate of cognitive decline compared to those who took little or no Vitamin E.

Dietary Sources of Vitamins C and E

A well-designed population-based study of AD risk in Rotterdam examined dietary intake of sources of vitamins C and E, which largely consist of fruits and vegetables. They found a 20% risk reduction of AD in persons with a high intake of fruits and vegetables. A similar risk reduction was not seen in persons taking vitamin C and E supplements. One possible explanation why supplements did not reduce AD risk is that most supplements of vitamin E are d-alpha tocopherol, which is less effective in lowering AD risk than mixtures of at least alpha- and gamma-tocopherol. Dietary sources of vitamin E occur as mixed tocopherols, so it remains to be determined whether supplements of vitamin E in the form of mixed tocopherols, with or without vitamin C, can lower AD risk.

RESEARCH UPDATES

Silent Strokes Impair Quality of Life

A study using data from Reasons for Geographic and Racial Differences in Stroke (REGARDS) cohort evaluated the relationship between silent strokes and an individual's quality of life using the Physical and Mental Component Summary scores of the Short Form 12 (PCS-12 and MCS-12). George Howard, DrPH, from the School of Public Health at the University of Alabama, Birmingham, and colleagues compared the average physical and mental functioning among participant groups symptom-free (n=16,090); history of stroke symptoms but free of stroke/transient ischemic attack (n=3,404); history of stroke (n=1,491); and history of transient ischemic attack (n=818). Compared to subjects without symptoms or a diagnosis of stroke, those with silent strokes had PCS-12 scores that were 5.5 points lower. In comparison, the group that had already had a TIA scored 6 points lower than the group without symptoms.

Statins May Prevent Alzheimer's Disease

Dr. Gail Ge Li, at the University of Washington School of Medicine in Seattle and colleagues studied whether antecedent statin exposure is associated with neuritic plaque (NP) or neurofibrillary tangle (NFT) burden in a population-based sample of human subjects. Brain autopsies were performed on 110 subjects, ages 65 to 79 years, who were cognitively

normal at enrollment into the Adult Changes in Thought Study. Neuropathologic findings were compared between statin users with 3 prescriptions of 15 pills of simvastatin, pravastatin, lovastatin, or atorvastatin vs nonusers, based on pharmacy dispensing records. The study found significantly fewer plaques and tangles in brains of those taking statins when compared to those who were not.

Oophorectomy Before Menopause May Increase Risk of Dementia

Two studies conducted at Mayo Clinic found that women who undergo unilateral or bilateral oophorectomy before menopause face almost a 2-fold increase in risk for dementia and parkinsonism when compared with those who retain their ovaries until the age of 50. Furthermore those who received estrogen replacement therapy (ERT) reduced their level of risk and had the same level of risk as those who retained their ovaries. Both studies used data from the Rochester Epidemiology Project, a large long-term integrated database of patient records. The first study included 1,489 subjects who had undergone oophorectomy (676 bilateral and 813 unilateral) and 1,472 age-matched women from the same population who had not had their ovaries removed. The researchers found the risk for dementia and parkinsonism did not differ between woman who had a bilateral or unilateral procedure. The second study included 2,327 patients who had surgical removal of their ovaries (1,252 unilateral and 1,075 bilateral) and 2,368 age-matched women. The study found a comparable level of risk associated with oophorectomy and parkinsonism as the first study.

Caffeine May Reduce Cognitive Decline in Women

Results of a recent study suggest that caffeine may reduce cognitive decline. However, this relationship was seen in women and not in men. Women who drank 3 or more cups of caffeine per day had less cognitive decline than women who drank a cup or less of caffeine. The study was led by Karen Ritchie, PhD, of the French National Institute for Health and Medical Research, in Montpellier, France. 4,197 women and 2,820 men were followed for four years.

Heavy Alcohol Use Increases Stroke Risk

Researchers at Tulane University School of Public Health and Tropical Medicine in New Orleans studied the relationship between alcohol use and risk of stroke. The 64,338 subjects were Chinese men who participated in the China National Hypertension Study. The study found that consumption of 35 or more alcoholic drinks per week resulted in a 22% increased risk for stroke and a 30% increased risk for stroke related deaths in comparison to non-drinkers.

New Physical Exercise Guidelines Issued

The American Heart Association and American College of Sports Medicine issued updated guidelines for physical activity in August. The report recommends moderately intense exercise for 30 minutes, 5 times per week or vigorous exercise at least 20 minutes 3 days per week. Moderately intensity activities include brisk walking, light jogging or other exercise that noticeably accelerates the heart rate. Vigorous activities cause rapid breathing and substantially increase the heart rate. For individuals 65 and older, the new guidelines also suggested weight lifting, improving strength, flexibility and balance training.

Download the complete report by visiting the American Heart Association Website at:
<http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.107.185649>

PreventAD.com is sponsored by Medical Care Corporation, a developer of cognitive assessment products for physicians and other health care professionals. The company's MCI Screen is the most accurate assessment tool for identifying memory loss at its earliest stage and is used by dementia specialists as well as primary care physicians around the world.