



ALZHEIMER'S DISEASE

Ask Your Pharmacist

Julie Christie has been nominated for the Best Actress award at this year's Oscars for her portrayal of a woman suffering from Alzheimer's in *Away From Her*. However, the Alzheimer's Association is not too happy with the comment she made in January in her acceptance speech at the Screen Actors Guild Awards. After thanking the film's cast and crew, she said: "If I've forgotten anybody, well, it's just that I'm still in character." The 66-year old actress has been urged by the Association not to joke about the disease.

For those affected by the unfortunate aspects of aging, the potential loss of memory, increased risk of dementia and Alzheimer's disease are no joking matter. According to the National Institutes of Health, Alzheimer's disease alone has affected 4 million people in the United States. All forms of dementia can have devastating consequences for individuals and their families.

But there is good news: Memory loss and dementia is decreasing among seniors, with people over the age of 70 finding fewer problems in those areas. Also, 7,406 seniors over the age of 70 were studied in 1993 where 12.2 percent showed memory problems and possibly early signs of Alzheimer's. Subsequently in 2002, a group of 7,104 people over the age of 70 took the same tests. They scored better in memory with only 8.7 percent showing some impairment.

The research paper is published in the online issue of the journal *Alzheimer's and Dementia* and is the work of two doctors from the Ann Arbor based University of Michigan Medical School. Lead author Dr Kenneth Langa, an associate professor of internal medicine, says: "Brain health among older Americans seems to have improved," and suggested, "education and wealth may be a big piece of the puzzle". He added that, "We also know cardiovascular health has a close link with brain health, so what we may be seeing here is the accumulated effects of better education and better cardiovascular prevention among the people who were over age 70 in 2002, compared with those who were over age 70 in 1993."

Multiple studies in 2007 have shown evidence of omega-3's impact in preventing and slowing down Alzheimer's. Eating fish regularly or having higher amounts of omega-3 in the blood are characteristic of

older people who have escaped dementia or Alzheimer's, according to research from France and the Netherlands. In the U.S., researchers at UCLA announced a new discovery regarding DHA, which is a fatty-acid abundant in fish oil's omega-3. The UCLA researchers proved DHA increases the production of the protein LR11, which destroys the protein that forms beta-amyloid, the main suspect behind Alzheimer's disease.

A recent study at Columbia University published in the January issue of the *Archives of Neurology*, by Dr. José A. Luchsinger, MD., studied 965 Manhattan residents without dementia, aged 65 and older and who received Medicare. Participants underwent physical and psychological examinations, including neuropsychological testing, from 1992 to 1994. During that period, 192 subjects developed Alzheimer's disease. As part of the study, researchers tracked the amount of folate consumed by the participants as part of their diet and through supplements. Their study concluded that higher folate intake was associated with lower risk of developing Alzheimer's disease.

Be it fish oils or folates, to understand the impact of nutrients in such degenerative diseases is to understand the role of the immune system in our well being. As we keep busy, lost in our own little worlds of activity, an army of cells works around the clock to keep us alive and well, defending the body against foreign invasion. Our immune system consists of millions of white blood cells called leukocytes. Some of these cells act non-specifically as front-line defenders, destroying any foreign material that enters the body. Other cells act specifically as messengers, to alert the whole immune system of danger. A person whose immune system cannot operate at optimum levels is said to be "immunocompromised." Keeping the immune system healthy is the first step in disease prevention. Adequate amounts of sleep, proper nutrition, and a healthy lifestyle are the most important adjustable factors of immune health. Above all, one needs to minimize the impact of free radicals and add to one's intake of free radical fighter nutrients called antioxidants.

In recent years medical research has linked free radicals and oxidative damage to these dreadful neurological disorders. Free radicals are any molecules with an unpaired electron. These molecules are highly reactive and if not eliminated will

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ALZHEIMER'S DISEASE (Continued)

contribute to dangerous chemical reactions. Free radicals, however, are a normal by-product of cellular metabolism. Food, drugs, endurance exercise, cigarette smoke, and environmental pro-oxidants can also initiate the production of free radicals. The body compensates for free radicals by generating enzymes and antioxidants. If there is a deficiency or an imbalance in the enzymes or antioxidant system, excessive free radical production will cause oxidative stress and serious cell damage.

An Antioxidant formula containing nutrients such as vitamins C and E, beta-carotene, N-acetylcysteine, zinc, manganese, and selenium can help reduce oxidative damage and excessive free radical production.

Poor dietary habits, nutrient deficiencies and an imbalance of essential fatty acids can also be implicated in loss of cognitive function. Nutritional supplements may help reduce the risk of cognitive decline.

DEFINITIONS

AGE-ASSOCIATED MEMORY IMPAIRMENT: *a decline in short-term memory that sometimes accompanies aging; also called benign senescent forgetfulness. It does not progress to other cognitive impairments as Alzheimer's disease does.*

DEMENTIA: *A group of symptoms characterized by a decline in intellectual functioning severe enough to interfere with a person's normal daily activities and social relationships.*

ALZHEIMER'S DISEASE: *The most common cause of dementia among older people. It is marked by progressive, irreversible declines in memory, performance of routine tasks, time and space orientation, language and communication skills, abstract thinking, and the ability to learn and carry out mathematical calculations. Other symptoms of Alzheimer's disease include personality changes and impairment of judgment.*

Docosahexaenoic acid (DHA) is an important polyunsaturated omega-3 fatty acid. Polyunsaturated fatty acids (PUFA) are essential for neurological and cognitive function. Low tissue levels of DHA have been found to increase risk factors for Alzheimer's disease.

PHOSPHATIDYLSERINE (PS) is a naturally occurring phospholipid found in the brain affecting various neurotransmitters including acetylcholine, serotonin, norepinephrine, and dopamine. Many researchers agree these neurochemical systems are involved in Alzheimer's disease and other age related cognitive disorders. Numerous clinical studies have shown that Alzheimer's patients taking PS showed positive results on attention, concentration, and memory.

Homocysteine has also been associated with dementia and Alzheimer's disease. Homocysteine is an amino acid produced by the catabolism of methionine. Years of research has shown that a high level of plasma homocysteine is associated with an increased risk of developing heart disease, strokes, and dementia. B vitamins, folic acid, vitamin B-12, and vitamin B-6 can reduce elevated homocysteine levels and may help enhance cognitive function and reduce the risk of dementia.

Don't neglect your diet. You are what you eat! If you eat nutrient deficient junk food all of your life you're going to feel like rubbish and function like rubbish. When you eat nutritious foods that provide adequate vitamins, minerals, essential fatty acids, protein, and fiber you can significantly reduce your risk factors to all of the degenerative diseases and have abundant energy and optimal cognitive function.

Before you rush out and buy these products, consider your diet. Fresh vegetables and fruits are excellent sources of antioxidants. Nutritionists suggest that the body will make better use of these nutrients in food form than in supplement form.

However, it is suggested that an antioxidant formula will add insurance that you are receiving good stores of these valuable nutrients. A recent study of physicians indicated that most are taking antioxidant supplements. It is also known that taking these nutrients in a combination formula will allow for better use of the individual nutrients. For instance, vitamin E and selenium work well together. Vitamin A and zinc seem to partner well also.

Free radicals and aging are part of life. Antioxidants are also a part of life. Eat well, consume fresh foods when possible, take your antioxidants daily, and don't worry about the minute actions of the body. While we can't stop the aging clock, we can certainly stall it a bit and enjoy the days by staying healthy and well nourished. For more quality information related to antioxidants and other anti-ageing supplements, come by our pharmacy. We are trained to help you make wise health choices and provide you with professional services and products to maximize your quality of life.