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With the aging of the population and in the absence of preventive therapies, the incidence of Alzheimer's disease is increasing. Therefore the study (and therefore the need for change accordingly) of environmental factors that influence Alzheimer's is important as a tool for deeper understanding of the pathogenesis of the disease, but also for social, political and economic

reasons.

Numerous environmental factors have been associated with Alzheimer's disease, among them diet. The nutritional epidemiological data are conflicting. Higher intake of vitamin C, E, B6, flavonoids, unsaturated fats and fish and higher levels of vitamin B12 and folic acid and moderate alcohol consumption have been associated with reduced risk of Alzheimer's disease or slow mental impairment. However, other studies have found that the risk for Alzheimer's or cognitive impairment is not associated with intake of antioxidants (like vitamin C, E and carotenoids), B6, fatty acids, flavonoids and vitamin B12 levels.

One of the possible causes of these conflicting investigations is the fact that they examine isolated nutrients and not as part of an overall diet. The total consideration of a diet, offers the advantages of taking account of several nutrients simultaneously incorporating possible interactions and avoiding multiple comparisons. Such a diet is the Mediterranean Diet or Cretan Diet.

**The Mediterranean, and in particular, the Cretan diet is characterized by high intake of vegetables, legumes, fruits, cereals, moderate to high fish intake, high intake of polyunsaturated fatty acids (mainly in the form of oil), low intake of saturated fatty acids and low intake of meat, dairy products and moderate alcohol consumption, mainly in the form of wine and generally during meals.**

The Mediterranean diet is associated with reduced risk of cardiovascular disease, several types of cancer and overall mortality. In a population study of seniors aged over 65 years in Manhattan, New York (who were examined with psychometric tests and neurological assessments every year ~ 1.5) 226 participants were diagnosed with Alzheimer's disease at first assessment, 262 had the disease during 4 (up to 14) years of follow-up and 1794 participants never showed symptoms of the disease. At baseline we recorded their dietary habits and calculated the extent to which they followed a Mediterranean diet on a scale of 0-9 with higher score representing better adherence to the Mediterranean Diet.

**Compared with those who did not comply with the Mediterranean Diet, those that only partially followed had 20% lower risk of developing Alzheimer's disease, while those who complied fully had about 40% less chance of developing Alzheimer's disease.**

**In another study in the same population, we examined the effect of Mediterranean diet after the development of Alzheimer's disease. Patients who had already developed the disease and followed the Mediterranean diet only partially, extended their survival by 1.5 years, while those who complied fully lived about 4 years longer.**

Overall, it appears that a higher compliance with the Mediterranean diet is associated with reduced risk for Alzheimer's disease incidence. In addition, compliance with the principles of the Mediterranean diet appears to have positive effects even after the onset of Alzheimer's disease and more specifically, prolongs survival.

The positive effects of Mediterranean diet may stem from the interaction of many different

elements of healthy eating and realized by oxidative, inflammatory and / or vascular biological mechanisms.

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### Related Links:

2010 February: "Mediterranean diet may lower risk of brain damage that causes thinking problems". American Academy of Neurology Press release. <http://www.aan.com/press/index.cfm?fuseaction=release.view&release=796>

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2010 February: "Mediterranean diet may be a key to avoiding stroke, dementia". ABC. <http://abcnews.go.com/Health/AlzheimersNews/mediterranean-diet-hold-key-avoiding-stroke-dementia/story?id=9780494>

2010 February. " Study identifies food combination associated with reduced Alzheimer's disease risk". American Medical Association JAMA and Archives press release. <http://pubs.ama-assn.org/media/2010a/0412.dtl#1>

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2010 April: "Health discovery: the anti-Alzheimer's diet". AARP. [http://bulletin.aarp.org/yourhealth/discoveries/articles/health\\_discovery\\_the\\_anti\\_alzheimer\\_s\\_diet.html](http://bulletin.aarp.org/yourhealth/discoveries/articles/health_discovery_the_anti_alzheimer_s_diet.html)

2010 April: " Aging: Diet may be linked to lower Alzheimer's risk in older people". The New York Times. <http://www.nytimes.com/2010/04/20/health/research/20aging.html?hpw>

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