

Another potential risk factor for developing dementia and Alzheimer's disease in women

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A hormone derived from visceral fat called adiponectin may play a role as a risk factor for development of all-cause dementia and Alzheimer disease (AD) in women, according to a study published Online First by the *Archives of Neurology*.

The number of people affected by [dementia](#) worldwide is estimated to double over the next 20 years from the current number of about 36 million people, the authors provide as background information in the article. AD is the most common form of dementia. The authors write that data suggest an association between [insulin resistance](#) and inflammation, hallmarks for [type 2 diabetes](#), and development of dementia. "An additional potential factor that may contribute to the onset of AD and all-cause dementia is adiponectin. Adiponectin is a hormone derived from visceral fat, which sensitizes the body to insulin, has anti-inflammatory properties, and plays a role in the metabolism of glucose and lipids."

Thomas M. van Himbergen, Ph.D., from the [Lipid Metabolism](#) Laboratory, Human Nutrition Research Center on Aging, Tufts University, Boston, and colleagues measured levels of glucose, insulin, and glycated [albumin](#), as well as [C reactive protein](#), lipoprotein associated phospholipase A2, and adiponectin in the plasma of patients at the 19th biennial examination (1985 – 1988) of the Framingham Heart Study.

The 840 patients (541 women, median age of 76 years) were followed-

up for an average of 13 years and evaluated for signs of the development of AD and all-cause dementia. During that time, 159 patients developed dementia, including 125 cases of AD. After adjustment for other dementia risk factors (age, apoE genotype, low plasma docosahexaenoic acid, weight change) only adiponectin in women was associated with an increased risk of all-cause dementia and AD.

"It is well established that insulin signaling is dysfunctional in the brains of patients with AD, and since adiponectin enhances insulin sensitivity, one would also expect beneficial actions protecting against cognitive decline," the authors write. "Our data, however, indicate that elevated adiponectin level was associated with an increased risk of dementia and AD in women."

"One of the main features of adiponectin is that it has been shown to play a role in the sensitization of insulin and therefore may become a therapeutic target for the treatment of T2D (type 2 diabetes). Surprisingly, a higher adiponectin level was found to be a predictor of all-cause and vascular mortality. In concurrence with the mortality findings, the current investigation shows that an elevated [adiponectin](#) level is also an independent predictor for all-cause dementia and AD in women," the authors conclude.

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