

# Dementia and Diabetes- A Double Whammy in Old Age



Dr. Vinod Kumar, President Emeritus  
Alzheimer's & Related Disorders Society of India

## Epidemiology

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[www.manoa.hawaii.edu/acap/](http://www.manoa.hawaii.edu/acap/)

Dementia and diabetes are age-related global epidemics. Both are chronic disorders and are serious obstacles to healthy aging. Dementia has additional challenges of unawareness of early symptoms, confusion with normal aging, disease progression despite medications, and dependence on caregivers. The prevalence of dementia doubles every five years after the age of 65. The prevalence of diabetes is 5 times greater among people aged 45-64 compared to those aged 18-44.



In 2030, approximately 80 million people will have dementia, and approximately 450 million people will have diabetes. In 2050, approximately 150 million people will have dementia, and approximately 750 million people will have diabetes.



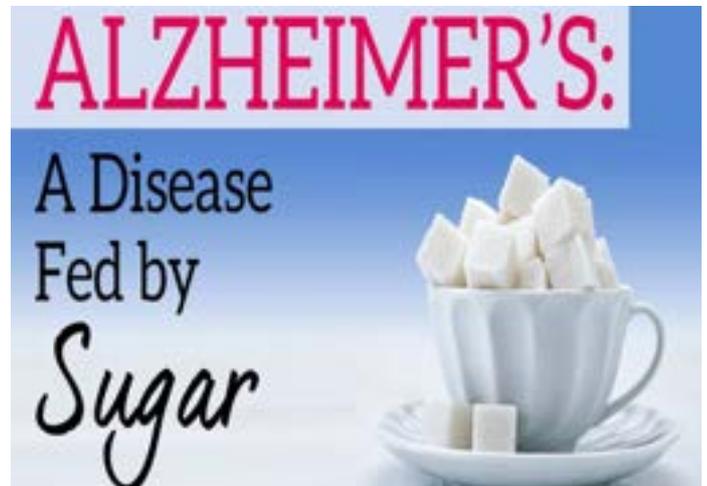
This article examines a possible link between dementia and diabetes. It also illustrates how dementia impedes healthy aging among older adults with diabetes and vice versa.

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## The Link between Dementia and Diabetes

There is overwhelming evidence that dementia occurs among people with diabetes more frequently and faster compared to people without diabetes. Cognitive decline is even recognized as a complication of diabetes that can lead to mild cognitive impairment (MCI) and dementia. The suggested link between Alzheimer's disease (AD) and type 2 diabetes is believed to be quite robust. The trigger mechanism is believed to be insulin resistance that causes neuronal inflammation and consequent neuronal dysfunction in the brain.

Others say that AD is a disease predominantly fed by sugar, and AD is simply "a diabetic state of the brain." The link between dementia and diabetes is further supported by several observations that suggest many antidiabetic agents have beneficial effects on the brain of dementia patients. Diabetes is also linked to vascular dementia, which has an additional trigger: hyperglycemia-induced damage to blood vessels, including those in the brain.



**80%** of people with Alzheimer's have insulin resistance or type 2 diabetes

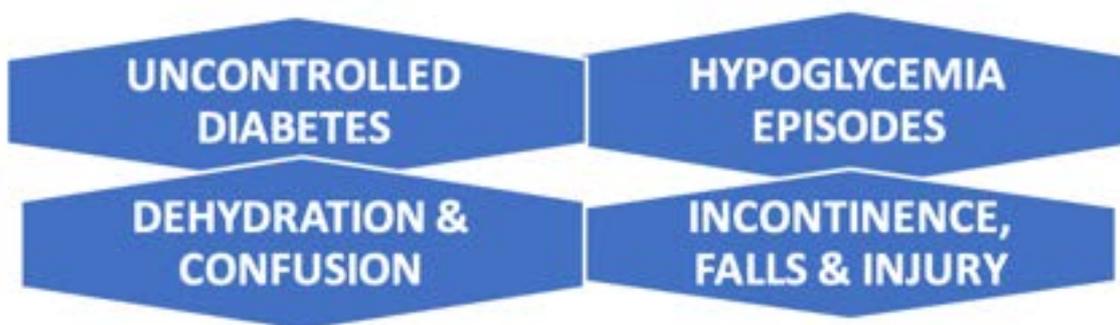


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## How does the double jeopardy of dementia and diabetes impact the quality of life in old age?

When patients with diabetes develop dementia, the chances of diabetes spiraling out of control or dangerous episodes of hypoglycaemia (low blood sugar) increase because such patients may forget taking antidiabetic medications, take them in wrong doses, or take them twice by mistake. This will also happen if an onset of dementia prevents them from properly identifying their medications or correctly calculating and administering drug dosages. Forgetting a meal can also trigger hypoglycemia, and frequent forgetting of water intake in the presence of high blood sugar can trigger dehydration and even confusion.

When dementia patients develop diabetes, chances of uncontrolled diabetes, hypoglycaemia, dehydration and confusion would again increase because such patients would not be able to effectively self-manage their diabetes.



## Recommendations for such patients and their care providers:

Individuals with diabetes should be screened annually for cognitive impairment, and changes should be addressed.

Treatment should be individualized for older adults with diabetes, taking into account the person's geriatric syndromes, frailty status, hypoglycaemic vulnerability and remaining life expectancy. Certain antidiabetic drugs are specially claimed to be beneficial for cognitive impairment.

Caregivers need to be trained on the special care needs of elders with dementia and diabetes.