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High blood sugar causes Alzheimer's in non-diabetics

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Singapore: A new study by the University of Arizona (UA), US, highlighted that elevated blood sugar levels are linked to risk for developing Alzheimer's disease. The research has been published in the journal Neurology.

Although the link between diabetes and Alzheimer's has been established for a long time, the research conducted by UA scientists revealed that elevated blood sugar levels in non-diabetic individuals also might indicate a higher risk for developing Alzheimer's disease.

The researchers used fluorodeoxyglucose (18F) positron electron tomography, or FDG PET, a medical imaging technique that produces three-dimensional images of metabolic activity in the brain. Fasting serum glucose levels, which is the blood sugar levels following several hours of not eating, were routinely acquired as part of the FDG PET protocol.

The researchers studied data on 124 cognitively normal, non-diabetic adults with a family history of Alzheimer's disease. The individuals, who ranged in age from 47-to-68, were among participants in a larger study, led by Dr Eric Reiman, executive director of the Banner Alzheimer's Institute in Phoenix, US, looking at a variety of Alzheimer's risk factors, including genetic risk. The link between high blood sugar and reduced brain metabolism existed regardless of whether individuals carried the Apolipoprotein E4 gene variant, an established risk factor for the development of Alzheimer's disease.

Dr Alfred Kaszniak, professor of psychology, University of Arizona, and co-author of the study, said that, "There have been studies that have linked diabetes to Alzheimer's disease as a risk factor. What was not known when we began this work is whether that risk was only at levels of blood sugar that qualify for diagnoses of diabetes, or in the borderline or pre-diabetic range, or would we also see a relationship across the so-called normal range of blood glucose?"