

Better controlled diabetes is associated with preserved cognitive function after stroke

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Better glucose control can help people with diabetes who have a common type of stroke to preserve their cognitive function, according to a study accepted for presentation at ENDO 2020, the Endocrine Society's annual meeting. The abstract will be published in a special supplemental issue of the *Journal of the Endocrine Society*.

"As the population is aging, the prevalence of diabetes and stroke is increasing, and both diseases are [risk factors](#) for [cognitive dysfunction](#) and dementia," said lead study author Tali Cukierman-Yaffe, M.D., M.Sc., a physician and researcher at the Sheba Medical Center and the Sackler School of Medicine of Tel Aviv University in Tel Aviv, Israel. "Identifying modifiable risk factors that are associated with cognitive dysfunction in people with type 2 diabetes who experience a lacunar stroke has major public health implications."

Lacunar strokes are a common type of stroke that occurs deep in the brain. A lacunar stroke occurs when an artery that provide blood to the brain's deep structures is blocked.

Cukierman-Yaffe and her colleagues conducted a post-hoc analysis of data from 942 people 30 years of age or older with diabetes who had a lacunar stroke and participated in the Secondary Prevention of Small Subcortical Strokes (SPS3) trial. The researchers examined hemoglobin A1c, a glucose control index that provides an estimate of average glucose levels in the three months prior to blood test, and scores on the Cognitive Assessment Screening Instrument (CASI) score over time among participants.

Better glucose control at baseline and during follow-up was associated with greater cognitive function and less [cognitive decline](#), while worse glucose control was linked with poorer cognitive function and steeper cognitive decline. Every 1% increase in baseline A1C was linked with a 0.06 lower standardized CASI z-score. Higher baseline A1C values were linked with lower cognitive scores over time, and a 1% increase in A1C over time corresponded to a CASI score decrease of 0.021 during follow-up.

All these numbers remained statistically significant after the authors adjusted for age, sex, education, race, depression, hypertension,

hyperlipidemia, body mass index, cardiovascular disease, [obstructive sleep apnea](#), diabetic retinopathy, nephropathy, insulin use, and white matter abnormalities.

"Intervention studies are needed to investigate whether tighter glucose control may slow the rate of cognitive decline in this population," Cukierman-Yaffe said.

Provided by The Endocrine Society

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