

Could nasal insulin be an effective therapy for Alzheimer's?

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Can insulin, the hormone used for nearly a century to treat diabetes, improve cognition, memory and daily function in people with mild cognitive impairment or mild dementia due to Alzheimer's disease?

Rush University Medical Center is testing this innovative potential treatment as part of a new nationwide study.

Neurologists at the Rush Alzheimer's Disease Center are conducting an 18-month clinical trial testing a type of insulin delivered in a nasal spray – which is used to treat diabetes in some patients – in the Study of Nasal Insulin to Fight Forgetfulness (SNIFF).

The randomized, phase II/III study will examine the safety and efficacy of nasal insulin at planned intervals as a treatment for mild cognitive impairment and mild dementia due to Alzheimer's disease.

Insulin irregularities may contribute to Alzheimer's disease development

"There is growing evidence that insulin carries out multiple functions in the brain and that poor regulation of insulin may contribute to the development of Alzheimer's disease." said Dr. Neelum Aggarwal, a neurologist at Rush and the lead investigator of the study in the Chicago area.

"Insulin resistance, reduced cerebrospinal fluid insulin levels and reduced brain insulin signals have been found in Alzheimer's patients, which suggests that a therapy aimed at correcting these deficiencies may be beneficial," says Aggarwal.

Short-term clinical [trials](#) of the nasal insulin approach have shown promise in improving cognition, memory and daily function. In addition, the gender of the person may play a role on the insulin effect on memory functioning.

Nasal insulin currently is not approved by the Food and Drug Administration for the treatment of Alzheimer's disease and it is not known if nasal insulin can change the course of the disease.

Study participants will be given a [nasal spray](#) device with either insulin or a placebo.

Participants will be randomly assigned to the treatment or the placebo group for 12 months. Neither the study participants nor study staff will know who is receiving active treatment with insulin and who is receiving the placebo.

After the 12-month period, all participants will be given active nasal insulin in an "open label" period for an additional six months.

In addition, the phase II/III study will examine the safety and tolerability of nasal [insulin](#) at planned intervals.

SNIFF Trial at Rush Seeks 275 Participants

Rush is one of 30 SNIFF research sites nationwide and one of only two in Illinois.

The SNIFF trial at Rush seeks to enroll 275 adults, aged 55 to 85 years, who have been diagnosed with amnesic [mild cognitive impairment](#) (aMCI) or early Alzheimer's disease. Patients who volunteer for the study cannot be enrolled in another clinical trial during the study period.

According to the National Institute of Aging, more than 5.3 million people in the U.S. are suffering from Alzheimer's, and two out of three Americans with Alzheimer's disease are women. Every 70 seconds, another person develops this [disease](#).

The SNIFF study will be conducted at U.S. academic institutions that are affiliated with the Alzheimer's Therapeutic Trial Institute. The research is sponsored by the ATRI through a grant from the National Institute on Aging (NIA).

More information: For more information about the SNIFF trial, please contact research coordinator Judy Phillips at 312-942-0050.

Provided by Rush University Medical Center

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