

Insulin resistance, type 2 diabetes linked to plaques associated with Alzheimer's disease

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People with insulin resistance and type 2 diabetes appear to be at an increased risk of developing plaques in the brain that are associated with Alzheimer's disease, according to new research published in the August 25, 2010, issue of *Neurology*, the medical journal of the American Academy of Neurology.

Insulin resistance, or the stage before diabetes, happens when insulin, a hormone in the body, becomes less effective in lowering blood sugar.

"[Type 2 diabetes](#) and [Alzheimer's disease](#) are two epidemics growing at alarming levels around the world," said study author Kensuke Sasaki, MD, PhD, with Kyushu University in Fukuoka, Japan. "With the rising obesity rates and the fact that [obesity](#) is related to the rise in type 2 diabetes, these results are very concerning."

The study involved 135 people with an average age of 67 from Hisayama, Japan. The participants had several diabetes glucose tests to measure [blood sugar levels](#). They were also monitored for symptoms of Alzheimer's disease over the next 10 to 15 years. During that time, about 16 percent developed Alzheimer's disease.

After the participants died, researchers examined their autopsied brains for the physical signs of Alzheimer's disease, called plaques and tangles. While 16 percent had symptoms of Alzheimer's disease while alive, a total of 65 percent had plaques.

The study found that people who had abnormal results on three tests of blood sugar control had an increased risk of developing plaques. Plaques were found in 72 percent of people with [insulin resistance](#) and 62 percent of people with no indication of insulin resistance. However, the study

did not find a link between diabetes factors and tangles in the brain.

"Further studies are needed to determine if insulin resistance is a cause of the development of these plaques," said Sasaki. "It's possible that by controlling or preventing diabetes, we might also be helping to prevent Alzheimer's disease."

Provided by American Academy of Neurology

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