

alzheimer's disease and type 2 diabetes:

A growing connection



Alzheimer's disease and diabetes



Nearly 21 million Americans in the United States have diabetes, a disease that makes the body less able to convert sugar to energy. More than 6 million of these people don't even know they have it. Most people with diabetes have Type 2, which is linked to lack of exercise and being overweight.

When diabetes is not controlled, too much sugar remains in the blood. Over time, this can damage organs, including the brain.

Scientists are finding more evidence that could link Type 2 diabetes with Alzheimer's disease, the most common form of dementia and the seventh leading cause of death in the United States. Several research studies following large groups over many years suggest that adults with Type 2 diabetes have a higher risk of later developing Alzheimer's.

Alzheimer's disease is a progressive and fatal brain disorder that gradually destroys a person's memory and ability to learn, reason, make judgments, communicate and carry out daily activities. As Alzheimer's progresses, individuals may have changes in personality and behavior, such as anxiety, suspiciousness or agitation, as well as delusions.

More than five million people have Alzheimer's in the U.S., and that number will start to soar as baby boomers enter their 60's when the risk for Alzheimer's begins to rise. And people with diabetes may be at even greater risk for Alzheimer's.

High blood sugar often is an early warning sign



An estimated 54 million U.S. adults have prediabetes, or blood sugar levels that are higher than normal but not yet in the diabetic range. Most of these people will develop Type 2 diabetes within 10 years.

High blood sugar may also be a sign of insulin resistance. In this disorder, the body becomes unresponsive to insulin, a hormone that helps blood sugar move into cells and fuel vital processes. At first, the body makes more insulin to get the energy it needs. Eventually, the body is making all the insulin it can. If cells grow more insulin resistant, blood sugar will rise higher, and diabetes will develop.

Excess blood sugar and insulin can both damage the body. Doctors do not routinely measure insulin levels because the tests are complicated and expensive. Other signs of insulin resistance are:

- A big waist (at least 40 inches in men and 35 inches in women)
- Blood pressure above 130/85
- Low levels of HDL, or “good” cholesterol

Who gets diabetes?

While anyone can get diabetes, it tends to run in families and to affect certain ethnic groups more than others. Hispanic Americans are at greater risk for developing diabetes than other racial or ethnic groups:

- Hispanic Americans are at very high risk for developing Type 2 diabetes.
- The risk for developing diabetes over their lifetimes is higher for Hispanics than for any other ethnic group.
- Hispanics are almost twice as likely to develop diabetes as non-Hispanic whites.
- Diabetes rates more than double in Hispanics who are obese.
- Of those born in 2000, diabetes will affect half of all Hispanic females; four in 10 Hispanics and African Americans; and one in three Americans overall.

Who gets Alzheimer's?

- The greatest risk factor is increasing age - one out of eight people aged 65 and older have Alzheimer's and nearly one out of every two over age 85 has it.
- It is estimated that nearly 500,000 people under the age of 65 have early-onset Alzheimer's disease or other dementias.

- Family history can play a part in developing Alzheimer's. Research shows that those with a parent, brother or sister, or child with Alzheimer's are more likely to develop Alzheimer's. When diseases tend to run in families, either heredity (genetics) or environmental factors or both may play a role.

What is the Alzheimer's–diabetes link?

Doctors don't know yet what causes Alzheimer's disease or exactly how Alzheimer's and diabetes are connected. But they do know that high blood sugar or insulin can harm the brain in several ways:

- Diabetes raises the risk of heart disease and stroke, which hurt the heart and blood vessels. Damaged blood vessels in the brain may contribute to Alzheimer's disease.
- The brain depends on many different chemicals, which may be unbalanced by too much insulin. Some of these changes may help trigger Alzheimer's disease.
- High blood sugar causes inflammation. This may damage brain cells and help Alzheimer's to develop.

How to reduce the risk of diabetes



Preventing diabetes may not stop Alzheimer's from developing. But simple lifestyle changes can help avoid diabetes and cut the risk:

- losing at least 5 percent of body weight – just 10 pounds in someone weighing 200 pounds.
- exercising at least 30 minutes five days each week.
- eating a healthy, low-fat diet.

As immigrants adapt to and integrate with life in the U.S., they adopt habits of the mainstream culture, including eating a diet with less fiber and more prepared fast food.

Hispanics are less likely than non-Hispanic whites to regularly see a physician or community professional to help monitor and control their health. This may delay an early diagnosis of diabetes – and Alzheimer's disease – and prevent them from getting treatment when it is most effective.

It's important to work with your doctor to detect the first signs of diabetes or other health concerns. Test your weight, blood pressure, cholesterol and blood sugar regularly. Even if you get diabetes, treating it may help prevent other complications, such as Alzheimer's disease.



This brochure is meant to provide guidance, not to take the place of doctors' advice. Consult your doctor about any changes in condition or before making any decisions that may affect your health.

The Alzheimer's Association is the leading voluntary health organization in Alzheimer's care, support and research.

For reliable information and support, contact the Alzheimer's Association:

1.800.272.3900

www.alz.org

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