

## **Daily Breakfast May Thwart Diabetes Onset**

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**Highlight:** Individuals may benefit from a regular breakfast even if the overall dietary quality is less than optimal.

### **Body**

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PHILADELPHIA-Individuals who eat breakfast on a daily basis are much less likely to develop type 2 [diabetes](#) than individuals who eat breakfast infrequently or not at all, according to results released at the 72nd Scientific Sessions of the American Diabetes Association.

The data also reveal that individuals may benefit from a regular breakfast even if the overall dietary quality is less than optimal.

"Emphasizing a daily healthy breakfast is a simple public health message with potential downstream benefits," said principal investigator Andrew Odegaard, PhD, Research Associate in the Division of Epidemiology and Community Health at the University of Minnesota in Minneapolis.

For the study, the investigators examined the relationship between the frequency of breakfast intake and the incidence of type 2 diabetes in individuals enrolled in the **Coronary Artery Risk Development in Young Adults (CARDIA) Study**. The **CARDIA study** is a population-based, prospective evaluation of cardiovascular disease risk factor evolution that enrolled 5,115 nondiabetic African-American and Caucasian women and men ranging from 18 to 30 years of age. Participants were first queried about their breakfast, snack, and other meal frequency habits at year 7.

While both the timing aspect and content of breakfast likely affect health, the role of breakfast habits in the development of type 2 diabetes has not been well studied, Dr. Odegaard observed.

After controlling for multiple variables at year 7 including age, sex, race, clinic, alcohol intake, cigarette smoking, physical activity, diet quality, fast food visits per week, and total energy intake, study participants who ate breakfast every day were 34% less likely to develop type 2 diabetes than individuals who ate breakfast zero to three days per week over 18 years of follow-up. The investigators defined diabetes as a fasting glucose level of 126 mg/dL or higher, a two-hour post-challenge glucose level of 200 mg/dL or higher, a hemoglobin A<sub>1c</sub> level of 6.5% or greater, or a prescription for an anti-diabetic medication.

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Daily breakfast eaters were also 43% less likely to become obese than individuals who ate breakfast infrequently or not at all and 40% less likely to develop abdominal obesity.

Higher diet quality was inversely associated with type 2 diabetes, but breakfast frequency predicted type 2 diabetes across the entire spectrum of diet quality.

The results also indicated that individuals who ate breakfast at least four to six times a week gained less weight than those who ate breakfast zero to three times a week over 18 years.

Study strengths included the use of valid, standardized, and detailed measurements of dietary practices and clinical measures among the study participants, the examination of a wide range of breakfast intake frequency, and a heterogeneous study population, Dr. Odegaard said.

"Overall, our data suggest that breakfast intake has a strong pleiotropic influence on metabolic pathways central in the development of type 2 diabetes and we need to conduct randomized trials to better understand the potential mechanisms and causality," he said.

## Classification

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