

# Daily breakfast is associated with a lower type 2 diabetes risk profile in children

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Regular consumption of a healthy breakfast may help children lower their risk of developing type 2 diabetes, according to a study published in this week's *PLOS Medicine*. The study, conducted by Angela Donin of St. George's University of London and colleagues, found an association between children who reported skipping breakfast most days and higher levels of known diabetes risk factors.

The researchers reached these conclusions after conducting a cross-sectional study of 4,116 primary school children 9-10 years old in the UK. The children responded to questions about how often and what they ate for breakfast, and blood tests measured [diabetes risk](#) markers such as fasting insulin, glucose, and glycated hemoglobin (HbA1c). Twenty-six percent of children reported not having breakfast every day.

Children who reported usually not having breakfast had higher fasting insulin (percent difference 26.4%, 95% confidence interval [CI] 16.6%–37.0%), higher [insulin resistance](#) (percent difference 26.7%, 95% CI 17.0%–37.2%), slightly higher HbA1c (percent difference 1.2%, 95% CI 0.4%–2.0%), and slightly higher glucose (percent difference 1.0%, 95% CI 0.0%–2.0%),) than those who reported always eating breakfast. Additionally, among children who completed a 24 hour dietary recall, those who reported eating a high fiber, cereal breakfast had lower insulin resistance than those eating other types of food, such as biscuit-based breakfasts.

Though a limitation of cross-sectional studies is the risk of identifying

false associations as a result of confounding factors, the associations identified in this study remained significant even after adjusting for potentially confounding factors such as socioeconomic status, physical activity, and body fat. Still, the authors note the need for future studies to demonstrate whether increasing breakfast consumption among children leads to improvements in their diabetes risk profile.

The authors say: "The observed associations suggest that regular breakfast consumption, particularly involving consumption of a high fibre cereal, could protect against the early development of [type 2 diabetes](#) risk...."

**More information:** Donin AS, Nightingale CM, Owen CG, Rudnicka AR, Perkin MR, et al. (2014) Regular Breakfast Consumption and Type 2 Diabetes Risk Markers in 9- to 10-Year-Old Children in the Child Heart and Health Study in England (CHASE): A Cross-Sectional Analysis. *PLoS Med* 11(8): e1001703. [DOI: 10.1371/journal.pmed.1001703](#)

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