

Living near fast food restaurants in South Asia may increase risk of type 2 diabetes

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Researchers find living near fast food restaurants in South Asia may increase risk of Type 2 diabetes. Credit: Yalinda De Almeida (CC BY 4.0, creativecommons.org/licenses/by/4.0/)

Globally, the prevalence of type 2 diabetes mellitus (T2DM) is increasing. A study publishing April 26th in the open access journal *PLOS Medicine* by Marisa Miraldo at Imperial College Business School, London, United Kingdom, and colleagues suggests that living near fast food restaurants increases the risk of developing Type 2 diabetes.

Food environments have an impact on diet and obesity-two risk factors for T2DM. However, the relationship between [food environments](#) and diet in low- and [middle-income countries](#) is poorly understood. To examine the associations between the density and proximity of healthy and unhealthy food outlets and diabetes, researchers linked cross-sectional health data with environment mapping surveys for 12,167 people living in Bangladesh and Sri Lanka from 2018-2020. They collected self-reported diabetes diagnosis histories and fasting blood glucose levels from residents of urban and rural districts. The researchers then mapped the food environment, collecting data on location and types of food retailer available within 300 meters of each participant's home, categorizing each type of food outlet as healthy or unhealthy.

The researchers found that a higher density of fast food outlets near an individual's home was associated with an 8% increase in their probability of a diabetes diagnosis. Having at least one fast food retailer in the proximity of one's home was associated with 2.14 mg/dL blood glucose increase. Additionally, women and high-income earners were more likely to have higher [diabetes mellitus](#) levels. The study was limited by several factors, including the self-reported data on diabetes diagnoses. The study also did not account for the actual diets of participants, which may have been sourced far from their homes, and may be confounded by other variables associated with diabetes. Future studies are needed to validate and expand on how food environments may impact individuals' diets and health.



Researchers investigate the link between Type 2 diabetes and proximity to fast food restaurants in South Asia. Credit: Thilak Wanasinghe (CC BY 4.0, creativecommons.org/licenses/by/4.0/)

According to the authors, "Our results show interventions targeting the environment may be effective in preventing diabetes, however, the heterogeneity of the effects found in our analysis suggests that more [specific interventions](#) may be needed. One-size-fits-all built environment interventions have not led to improved outcomes and future research is needed to evaluate which [food environment](#) interventions could improve diabetes outcomes in this geographical region and population".

"In South Asia diabetes affects 1 in 11 adults and causes 747,000

preventable deaths per year," Miraldo adds. "Our research shows living in proximity to at least one fast food outlet is associated with a 16% increase in the chance of being diagnosed with diabetes. With the number of people with diabetes in Southeast Asia projected to reach 113 million by 2030, it is imperative food and beverage companies and retailers step up their sustainability agendas to promote better diets and prevent diabetes."

More information: Food environment and diabetes mellitus in South Asia: A geospatial analysis of health outcome data, *PLoS Medicine* (2022). [DOI: 10.1371/journal.pmed.1003970](https://doi.org/10.1371/journal.pmed.1003970)

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