

Research pinpoints biological risk factor in obesity-related cancers

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It is estimated that more than a third of the new cancer cases expected to occur in the U.S. in 2013 will be related to obesity, physical inactivity, and poor nutrition. Thanks to the work of one Steinhardt researcher, we may better understand why.

Nutritional epidemiologist Niyati Parekh's latest research study, which appeared in the journal *Cancer Epidemiology, Biomarkers, and Prevention*, concludes that disturbances in body insulin and [glucose levels](#) are associated with an increased risk of [obesity](#)-related cancers, and offers suggestions for clinicians to screen for these disturbances to aid in the prevention of such cancers.

"There is convincing evidence in the literature that body fatness is linked to cancer of the esophagus, pancreas, colorectum, breast (post-menopausal), and some other cancers," explains Parekh, assistant professor of public health nutrition at both Steinhardt and NYU Langone Medical Center.

According to Parekh, obesity creates disruption of insulin regulation.

"Insulin is responsible for regulating [blood glucose](#), which serves as a fuel for cell growth," she says. "Obese individuals are more likely to have higher concentrations of both insulin and glucose, an undesirable condition that may promote cancer cells to grow, multiply, and spread rapidly, as compared to individuals who do not have these abnormalities."

Parekh's project used the offspring generation data from the renowned Framingham Heart Study, a 60-year research study initially seeking to identify the common factors or characteristics that contribute to cardiovascular disease.

"What's most promising about these conclusions is that we may be able to contribute to the eventual development of guidelines and prevention strategies for cancers related to obesity," Parekh says. "Based on our findings, we recommend a lifestyle that may alleviate disturbances in insulin and glucose, as a [cancer](#) control tool in the context of the nation's obesity problem."

The study's co-authors included: Maya Vadiveloo, a doctoral candidate in Steinhardt's Department of Nutrition, Food Studies, and Public Health; Richard Hayes, director of the Division of Epidemiology and a professor in the Departments of Population Health and Environmental Medicine; and Yong Lin and Grace Lu-Yao of Rutgers.

More information: Metabolic Dysregulation of the Insulin–Glucose Axis and Risk of Obesity-Related Cancers in the Framingham Heart Study-Offspring Cohort (1971–2008)

Niyati Parekh, Yong Lin, Maya Vadiveloo, Richard B. Hayes, and Grace L. Lu-Yao. *Cancer Epidemiol Biomarkers Prev* Published OnlineFirst September 24, 2013; [DOI: 10.1158/1055-9965.EPI-13-0330](https://doi.org/10.1158/1055-9965.EPI-13-0330)

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