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Higher Dietary Glycemic Load Linked to Worse Colon Cancer Survival

Researchers have identified a link between higher dietary glycemic load and total carbohydrate intake and increased risk of cancer recurrences or death among stage 3 colon cancer patients, a finding that suggests that diet and lifestyle modification can have a role in improving patient survival, according to a study published November 7 in the *Journal of the National Cancer Institute*.

The role of one's lifestyle behavior has been shown to play an important role in the development of colorectal cancer. Risk factors, such as obesity and physical activity have been shown to directly influence insulin levels and recent studies have shown a direct link between host factors that lead to hyperinsulinemia and cancer recurrence and mortality in colorectal cancer survivors; however, the influence of glycemic load and other related dietary intakes have on the survival of colon cancer patients is unknown.

In order to determine the effects that glycemic load and total carbohydrate intake have on the survival of stage III colon cancer patients, Jeffrey A. Meyerhardt, M.D., M.P.H., of the Dana-Farber Cancer Institute in Boston and colleagues, performed an observational study on 1,011 stage III colon cancer patients who reported their dietary intake both during and 6 months after participating in an adjuvant chemotherapy trial. The researchers assessed the influence of glycemic load, glycemic index, fructose, and carbohydrate intakes on both mortality and recurrence of the disease.

The researchers found that increasing dietary glycemic load and total carbohydrate intake where both linked with increased cancer recurrence and death and survival of the patients had a distinct correlation with overweight and obese patients. "Given that patients who consume high glycemic loads or carbohydrates after cancer diagnosis may have consumed a similar diet before diagnosis, we cannot exclude the possibility that individuals with these dietary exposures acquire tumors that are biologically more aggressive."

In an accompanying editorial, Neal J. Meropol, M.D. and Nathan A. Berger, M.D. both of the Division of Hematology and Oncology at University Hospitals Case Medical Center and Case Western Reserve University School of Medicine in Cleveland note that these new clinical findings are consistent with an observation more than 50 years ago that cancer cells are "avid sugar consumers." "Although not definitive regarding the impact on colorectal cancer recurrence, the convergence of clinical observations and biology provides a compelling justification to test-hypothesis-driven interventions in prospective randomized clinical trials," the authors write, adding that the study reinforces that, "the epidemiologist is an essential member of the translational science team in oncology."

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