

Type 2 diabetes and insulin use are associated with colorectal cancer in men

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There is an association between type 2 diabetes mellitus and colorectal cancer (CRC) among men, but not women, according to a new study in *Gastroenterology*, the official journal of the American Gastroenterological Association (AGA) Institute.

In 2000, the prevalence of [type 2 diabetes](#) was approximately 171 million worldwide, and 366 million people are projected to have the disease by 2030. Obesity, western-style diet and lack of [physical activity](#) are established risk factors for CRC. [Hyperglycemia](#) and hyperinsulinemia, which are especially pronounced during the early stages of type 2 diabetes, have been proposed as mediators for the association between CRC and type 2 diabetes. Although it is known that type 2 diabetes is associated with an increased risk of CRC, it is not clear if this association varies by gender or other factors.

"While our study supports an association of type 2 diabetes with colorectal cancer incidence among [men](#), our results also suggest that insulin use is associated with a slight, but not a substantially increased, risk of colorectal cancer among men with type 2 diabetes," said Peter T. Campbell, PhD, of the American Cancer Society and lead author of this study. "Prevention strategies should emphasize adherence to guidelines intended for the general population such as smoking cessation, [weight management](#), exercise and regular early detection exams."

In the final study of 73,312 men and 81,663 women, 1,567 men (227 with type 2 diabetes) and 1,242 women (108 with type 2 diabetes) were

diagnosed with colon or rectal cancer by 2007. Among men, type 2 diabetes was associated with increased risk of incident CRC compared to not having type 2 diabetes. CRC risk was higher for those participants with type 2 diabetes regardless of whether or not they used insulin.

Among women, type 2 diabetes and [insulin](#) use were not associated with CRC risk. These findings support recent observations that the association may be more prominent in men than in women, and raise the possibility of a stronger association among individuals with a family history of CRC. This finding could have clinical relevance if confirmed by other large studies. The authors speculate that the lack of an association between type 2 diabetes and CRC risk among women might relate to improved glucose control among women with type 2 diabetes in recent years.

Participants were selected from the Cancer Prevention Study II Nutrition Cohort, a prospective study of [cancer](#) incidence. In 1992 or 1993, 184,194 adult participants completed a detailed, self-administered questionnaire. Follow-up questionnaires were sent in 1997 and every two years thereafter.

Provided by American Gastroenterological Association

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