Carbohydrate intake, glycemic index and prostate cancer risk.

Vidal AC, Williams CD, Allott EH, Howard LE, Grant DJ, McPhail M, Sourbeer KN, Hwa LP, Boffetta P, Hoyo C, Freedland SJ.

Abstract

BACKGROUND: Reported associations between dietary carbohydrate and prostate cancer (PC) risk are poorly characterized by race.

METHODS: We analyzed the association between carbohydrate intake, glycemic index (GI), and PC risk in a study of white (N = 262) and black (N = 168) veterans at the Durham VA Hospital. Cases were 156 men with biopsy-confirmed PC and controls (N = 274) had a PSA test but were not recommended for biopsy. Diet was assessed before biopsy with a self-administered food frequency questionnaire. Logistic regression models were used to estimate PC risk.

RESULTS: In multivariable analyzes, higher carbohydrate intake, measured as percent of energy from carbohydrates, was associated with reduced PC risk (3rd vs. 1st tertile, OR = 0.41, 95% CI 0.21-0.81, P = 0.010), though this only reached significance in white men (p-trend = 0.029). GI was unrelated to PC risk among all men, but suggestively linked with reduced PC risk in white men (p-trend = 0.066) and increased PC risk in black men (p-trend = 0.172), however, the associations were not significant. Fiber intake was not associated with PC risk (all p-trends > 0.55). Higher carbohydrate intake was associated with reduced risk of high-grade (p-trend = 0.016), but not low-grade PC (p-trend = 0.593).

CONCLUSION: Higher carbohydrate intake may be associated with reduced risk of overall and high-grade PC. Future larger studies are needed to confirm these findings. Prostate 75:430-439, 2015. © 2014 Wiley Periodicals, Inc.

© 2014 Wiley Periodicals, Inc.

KEYWORDS: carbohydrates; glycemic index; prostate cancer