Dietary risk factors for colon cancer in a low-risk population.

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Abstract
In a 6-year prospective study, the authors examined the relation between diet and incident colon cancer among 32,051 non-Hispanic white cohort members of the Adventist Health Study (California, 1976-1982) who, at baseline, had no documented or reported history of cancer. The risk of colon cancer was determined from proportional hazards regression with adjustment for age and other covariates. The authors found a positive association with total meat intake (risk ratio (RR) for > or =1 time/week vs. no meat intake = 1.85, 95% confidence interval (CI) 1.19-2.87; p for trend = 0.01) and, among subjects who favored specific types of meat, positive associations with red meat intake (RR for > or =1 time/week vs. no red meat intake = 1.90, 95% CI 1.16-3.11; p for trend = 0.02) and white meat intake (RR for > or =1 time/week vs. no white meat intake = 3.29, 95% CI 1.60-6.75; p for trend = 0.006). An inverse association with legume intake (RR for >2 times/week vs. <1 time/week = 0.53, 95% CI 0.33-0.86; p for trend = 0.03) was observed. Among men, a positive association with body mass index was observed (relative to the RR for tertile III (>25.6 kg/m2) vs. tertile I (<22.5 kg/m2) = 2.63, 95% CI 1.12-6.13; p for trend = 0.05). A complex relation was identified whereby subjects exhibiting a high red meat intake, a low legume intake, and a high body mass experienced a more than threefold elevation in risk relative to all other patterns based on these variables. This pattern of putative risk factors would likely contribute to increases in both insulin resistance (high body mass, high red meat intake) and glycemic load (low legume intake), a synergism that, if causal, implicates hyperinsulinemic exposure in colon carcinogenesis. The overall findings from this cohort identify both red meat intake and white meat intake as important dietary risk factors for colon cancer and raise the possibility that the risk due to red meat intake reflects a more complex etiology.