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In a recent study of postmenopausal women, those with the highest serum beta-carotene levels had a significantly lower risk of both colorectal and colon cancer.

HIGH BETA-CAROTENE LEVELS ARE ASSOCIATED WITH A REDUCED RISK OF COLORECTAL AND COLON CANCER IN POSTMENOPAUSAL WOMEN

Until recently, large population studies analyzing the connection between serum antioxidant levels and cancer risk have used only a single measurement at baseline. In a new study published in the *European Journal of Clinical Nutrition*, researchers used repeated measurements to assess the relationship between serum levels of eight antioxidants and the risk of colorectal cancer.

Participants included 5,477 adult women enlisted in the Women's Health Initiative study. Over a follow-up period of 12 years, repeated measurements of serum retinol, alpha-carotene, beta-carotene, beta-cryptoxanthin, lutein+zeaxanthin, lycopene, alpha-tocopherol, and gamma-tocopherol were taken.

Baseline measurements showed no significant association with risk of colorectal cancer, although higher baseline levels of beta-carotene were related (not statistically significant) to reduced risk of colon cancer. However, using repeated measurements of beta-carotene, the average of all measurements was significantly associated with a reduced risk of both colorectal and colon cancer of 46% and 53% respectively. The repeated measurements of other antioxidants did not reveal any significant relation to cancer risk.

The results of this study showed that baseline levels of antioxidant nutrients were not associated with risk of colorectal or colon cancer. However, using repeated measures, a relatively high serum level of β -carotene was inversely associated with risk of colon and colorectal cancer in postmenopausal women.

G C Kabat et al. Repeated measurements of serum carotenoid, retinol and tocopherol levels in relation to colorectal cancer risk in the Women's Health Initiative. European Journal of Clinical Nutrition (2012) 66, 549–554.