

# Abstract

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## Plasma Coenzyme Q10 levels and Prostate Cancer Risk: The Multiethnic Cohort Study.

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**BACKGROUND:** Coenzyme Q10 (CoQ10) is considered to be a potential anti-cancer agent, but epidemiological evidence regarding CoQ10 and prostate cancer risk is lacking. We examined the association of circulating CoQ10 levels with prostate cancer risk using pre-diagnostic blood samples.

**METHODS:** Each of the 307 cases was individually-matched to approximately 2 controls on age, ethnicity, geographic location, date/time of specimen collection, and hours of fasting, for a total of 596 controls. Logistic regression was used to compute odds ratios and 95% confidence intervals.

**RESULTS:** There was no overall statistically significant association of plasma CoQ10 levels with prostate cancer risk ( $P_{\text{trend}} = 0.50$ ). However, after matched sets in which controls had possible undiagnosed prostate cancer ( $\text{PSA} > 4.0$ ) were excluded, the odds ratios for quintiles 2-5 were all  $< 1.0$ .

**CONCLUSIONS:** The results suggest the possibility that moderate levels of circulating CoQ10 may be optimal for the reduction of prostate cancer risk; however, the findings were weak and not statistically significant. Since this is the first epidemiologic study of the association between CoQ10 and prostate cancer, further research on this topic is needed. Impact: If a nutritional factor like CoQ10 were determined to reduce prostate cancer risk, it would have considerable public health significance because of the very high incidence of this cancer.

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