

1: [Eur Urol](#). 2005 Apr;47(4):433-9; discussion 439-40. Epub 2005 Jan 19.

Effect of a nutritional supplement containing vitamin E, selenium, vitamin c and coenzyme Q10 on serum PSA in patients with hormonally untreated carcinoma of the prostate: a randomised placebo-controlled study.

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OBJECTIVE: To assess the effect of a nutritional supplement containing vitamin E, selenium, vitamin C and coenzyme Q10 on changes in serum levels of PSA in patients with hormonally untreated carcinoma of the prostate and rising serum PSA levels.

METHODS: **Eighty** patients were randomised to receive a daily supplement with either **vitamin E, selenium, vitamin C, coenzyme Q10 (intervention group)** or placebo over **21 weeks**. Serum levels of PSA were assessed at baseline (-2, -1, 0 weeks) and after 6, 13, 19, 20 and 21 weeks. Mean changes in log serum level of PSA, testosterone, dihydrotestosterone, luteinizing hormone and sex hormone binding globulin over 21 weeks between the verum and the placebo group were compared by analysis of covariance.

RESULTS: Seventy patients completed the study (36 verum; 34 placebo). Compliance was >90% in all patients. In the intervention group, plasma levels of vitamin E, selenium and coenzyme Q10 increased significantly over the 21 weeks study period. No significant differences in serum levels of PSA, testosterone, dihydrotestosterone, luteinizing hormone or sex hormone binding globulin ($p>0.2$) were observed between the intervention and control group.

CONCLUSION: Our results indicate that **supplementation of a combination of vitamin E, selenium, vitamin C and coenzyme-Q10 does not affect serum level of PSA or hormone levels** in patients with hormonally untreated carcinoma of the prostate.

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