



Prostate cancer screening

(OCTOBER 1998)

TO THE EDITOR: I was somewhat concerned about a few of the comments made by Dr. Kenneth W. Vaughn, Jr, in his otherwise excellent article in the October 1998 issue.¹

If Dr. Vaughn had not been a member of the Clinic's Section of Preventive Medicine, I probably would not even be writing this letter. For it is exactly on the subject of preventive medicine as it relates to prostate cancer that I submit this information.

In his article, Dr. Vaughn states: "Dietary supplements such as vitamin B and vitamin E, beta carotene, and selenium *may* decrease the risk [of prostate cancer] *slightly*" (italics added). It is my firm opinion that the words "may" and "slightly" are completely inappropriate and, further, by not even mentioning lycopene (ie, the antiprostata cancer moiety present in tomato products), Dr. Vaughn is missing the boat on a very important element in the preventive war on prostate cancer.

Although papers going back over 20 years indicate that selenium can prevent prostate cancer, this matter was, I believe, settled 2 years ago by the study of Clark et al.² In a more recent paper, not available at the time that Dr. Vaughn wrote his article, Yoshizawa et al³ showed that men with higher selenium levels had approximately one third the amount of prostate cancer as men with lower selenium levels.

With respect to lycopene, Giovannucci et al⁴ showed conclusively that men who ingested the largest amounts of tomato-based products had significantly less prostate cancer than men who ate few tomato-based foods. More importantly, advanced, stage-D prostate cancer was present in only 14% of the anticipated cases. In his article, Dr. Vaughn did not even mention the protective role of tomato products or lycopene.¹

I have been interested in the role of food products in preventing cancer since serving on the nutrition faculty at the Harvard School of Public Health 30 years ago. Prostate cancer is the most serious of cancers in nonsmoking men. If all men ingested about 200 µg of selenium, reasonable

amounts of vitamin E and beta carotene, and good amounts of tomato products daily, it is my personal belief that consideration of prostate cancer as a serious, life-threatening disease would largely be eliminated. In this case, I would agree with Dr. Vaughn's conclusions regarding the necessity of prostate cancer screening.

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■ REFERENCES

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2. Clark LC, Combs GF Jr, Turnbull BW, et al. Effects of selenium supplementation for cancer prevention in patients with carcinoma of the skin. A randomized controlled trial. Nutritional Prevention of Cancer Study Group (published erratum appears in JAMA 1997; 277:1520). *JAMA* 1996; 276:1957-1963.
3. Yoshizawa K, Willett WC, Morris SJ, et al. Study of pre-diagnostic selenium level in toenails and the risk of advanced prostate cancer. *J Natl Cancer Inst* 1998; 90:1219-1224.
4. Giovannucci E, Ascherio A, Rimm EB, et al. Intake of carotenoids and retinol in relation to risk of prostate cancer. *J Natl Cancer Inst* 1995; 87:1767-1776.

IN RESPONSE: I certainly agree with Dr. Herschberg that there is some evidence that lycopene and higher selenium intake may reduce the risk of carcinoma of the prostate. Only a few small trials suggest lycopene benefit, but tomatoes are delicious and nontoxic. Selenium can be toxic, even at the usual supplemental dosage, and other beneficial or adverse relationships with other malignancies may yet be defined. Dr Yoshizawa himself, in the paper cited by Dr Herschberg, concluded that his work supported earlier findings that selenium may reduce the risk of carcinoma of the prostate and recommended further trials to test this relationship. At this time most urologists and physicians in preventive medicine do not recommend these interventions, but they may eventually prove helpful in reducing the risk of men's most common noncutaneous cancer.

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