

Antioxidant beta-carotene use safe during radiation treatment for prostate cancer

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Despite past safety concerns, the antioxidant supplement beta-carotene, is safe to use during radiation therapy treatments for prostate cancer and does not increase the risk of prostate cancer death or metastases, according to a study in the May issue of the *International Journal of Radiation Oncology•Biology•Physics*, the official scientific journal of the American Society for Radiation Oncology (ASTRO).

The use of vitamin supplements and antioxidants is common, but the safety of using antioxidant supplements during radiation treatments for prostate cancer is controversial. Radiation therapy relies on the pro-oxidant effects of DNA, which involves damaging tumor cells while leaving normal cells unharmed. However, some scientists have suggested that supplemental antioxidants may weaken the oxidizing effects of radiation and potentially lead to cancer recurrence.

In the largest study to date of its kind, researchers followed 383 [prostate cancer](#) patients who were randomized to receive beta-carotene or placebo to determine if antioxidants could potentially counteract the pro-oxidant effects of radiation therapy and increase a patient's risk of death or metastases. The primary endpoint was prostate [cancer death](#) or bone [metastases](#).

Researchers found no significant differences in lethal outcomes among the patients who took the antioxidant beta-carotene versus those who did not.

"This study shows that antioxidant supplementation with beta-carotene during radiation therapy does not appear to detract from the benefit of radiation therapy." Danielle Margalit, MD, MPH, lead author of the study and a radiation oncologist at the Dana-Farber Cancer Institute in Boston, said. "It also suggests that patients may continue to eat a well-balanced diet that contains foods with natural sources of antioxidants at the recommended daily amount."

Provided by American Society for Radiation Oncology

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