

LYCOPENE CONTINUES TO SHOW PROMISE AS AN ANTIOXIDANT LINKED TO THE PREVENTION OF PROSTATE CANCER

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On March 6, 2002 the Journal of the National Cancer Institute featured an update from the *Health Professionals Follow-Up Study* (HPFS), showing that frequent tomato or lycopene intake was associated with a reduced risk of prostate cancer. The initial findings from the HPFS, which followed 47,363 male health practitioners (non-MD) from 1986 to January 31, 1992, had previously shown a correlation between lycopene intake and a reduced risk of prostate cancer. This most recent study of the same cohort demonstrated that this correlation persists with continued follow-up on these men for an additional six years, through to January 31, 1998. In short, the most recent data suggests that men who consume two or more servings per week of tomato sauce (the primary source of bioavailable lycopene) versus less than one serving per month, show a 23% reduction in risk of developing prostate cancer. Simply ingesting more lycopene from tomatoes, other tomato products or lycopene itself, was shown to reduce risk of prostate cancer by 16%, after controlling for other confounding variables such as total fruit and vegetable consumption and for olive oil use (a marker for Mediterranean diet). These values agree with those of the *Physicians' Health Study* (which measured blood levels of lycopene and other nutrients) and the original data compiled by E. Giovannucci in the first observations of the HPFS.

Lycopene is a powerful fat-soluble antioxidant (hence its high bioavailability from tomato sauce, which usually contains olive oil) and is known to concentrate in the prostate gland in humans, where it has been shown to participate in free radical scavenging and in the process of cellular differentiation. Both of these activities are involved in the prevention of the multi-step process of cancer development and are likely to be the way in which lycopene may act as a chemopreventive agent in the prostate gland. The initial data showed that men consuming 6.5 mg per day or more of lycopene, from any source, were deriving benefits in regards to the prevention of prostate cancer. Therefore, consuming the equivalent one to one and a half whole tomatoes per day, on average (make sure it is consumed with a little bit of fat to facilitate lycopene absorption) and/or the intake of lycopene from supplements, continues to be a prudent strategy for men to consider as part of a prostate cancer prevention campaign.

Reference: Giovannucci E et al, A Prospective Study of Tomato Products, Lycopene, and Prostate Cancer Risk. 2002. *J Natl.Cancer Instit* ; 94, 5 : 391-398