

Lycopene may help prevent prostate cancer in african americans

July 14 2011

Lycopene, a red pigment that gives tomatoes and certain other fruits and vegetables their color, could help prevent prostate cancer, especially in African American men, according to new research at the University of Illinois at Chicago.

Lycopene is a potent antioxidant, and some studies have shown that diets rich in tomatoes may lower the risk of certain cancers, especially those of the prostate, lung and stomach.

"We're not setting out to treat cancer, but to prevent it, and we're hoping to do so with lycopene," said Richard van Breemen, UIC professor of [medicinal chemistry](#) and lead researcher on the study, published in the journal [Cancer Prevention Research](#).

According to van Breemen, the new study was the first of its kind to look solely at [African American men](#). Patients aged 50 to 83 who had a physical abnormality in their prostate were recruited from Chicago's Jesse Brown VA Medical Center and the University of Illinois Medical Center at Chicago. The men were scheduled for a [prostate biopsy](#) due to the abnormality and an elevated PSA, or [prostate specific antigen](#) level.

Since the biopsies were scheduled three to four weeks in advance, it gave van Breemen and his coworkers the opportunity to do a 21-day study without interfering with the patients' care.

Each day, half of the 105 participants received two gel capsules

containing 30 milligrams of lycopene, while the other half received placebo capsules that contained only [soybean oil](#). The lycopene approximated the amount that can be ingested daily by eating foods rich in tomato sauce, such as spaghetti and pizza, van Breemen said. The researchers wanted to see if lycopene would rise in the blood and prostate tissue, and if it could lower markers of oxidative stress -- a factor in many diseases, such as cancer and Alzheimer's, and in the body's normal aging process.

Oxidative stress injures cells within the body, while antioxidants help cells cope against the damage, van Breemen said.

After receiving lycopene or placebo for three weeks, all subjects underwent needle biopsies to diagnose BPH (benign prostatic hyperplasia, or enlarged prostate) or prostate cancer. Two additional biopsies were taken to measure lycopene and DNA oxidation, van Breemen said. The pathology indicated that 51 men had prostate cancer while 65 had BPH.

Men who received lycopene showed "a significant increase" of the antioxidant in the blood, van Breemen said, compared to the placebo control group.

Provided by University of Illinois at Chicago

Citation: Lycopene may help prevent prostate cancer in african americans (2011, July 14) retrieved 27 April 2024 from <https://medicalxpress.com/news/2011-07-lycopene-prostate-cancer-african-americans.html>

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