



## Prostate Cancer Rates in African-American Men Studied

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A genetic difference and lower levels of D vitamin may contribute to the higher rates of prostate cancer in African-American men, according to a study reported in the Dec. 20 *Journal of the National Cancer Institute*.

Researchers led by Elizabeth A. Platz, ScD, MPH, of the department of epidemiology at the Harvard School of Public Health, evaluated 45,410 male health professionals. They followed these men, who were ages 40 to 75, for 10 years beginning in 1986. The group included 491 African Americans, 817 Asian Americans, 42,984 white Americans, and 1,128 men who had reported an unspecified ancestry.



Results of the study add to a growing body of evidence that African-American men have a greater risk of developing prostate cancer than any other racial group with 1.8 times more prostate cancer than white or Asian men. Although the reasons for the higher risk are still unclear, the major finding of this study was that it was not caused by any socioeconomic differences. All of the men in the study worked as doctors, pharmacists, optometrists, veterinarians, or other health professionals. This means that lifestyle and diet do not appear to be to blame.

"This study illustrates, yet again, that we really don't understand what the causes of the disparities are between African Americans and other populations and prostate cancer," says Durado Brooks, MD, program director of the prostate and colorectal cancer control department for the American Cancer Society (ACS).

The researchers did find a small difference in an androgen receptor gene that may have an influence on prostate cancer risk in African-American men. An androgen is one of a group of steroid hormones, including testosterone, which stimulate the development of the male sex organs. This particular androgen receptor gene is routinely evaluated in prostate cancer studies, Brooks says.

The researchers found the CAG repeat, which is part of the androgen receptor gene, was slightly shorter in the African Americans. Other studies of the CAG repeat also have found it to be slightly shorter in African-Americans than in other racial groups.

"This study confirms that there is some difference in this gene," says Brooks. But he adds that the gene is not the only explanation. "When the researchers put information about this gene into their equation, the difference in that gene only accounted for a very small portion in the difference in prostate cancer rates."

The researchers also say the short CAG repeat is unlikely to account for the large racial variation in risk for the disease. They say more study of this genetic difference is needed.

The study authors also report that lower levels of D vitamin in African-American men warrants further study as a possible risk factor. "Vitamin D may also influence the risk of prostate cancer. The active form of vitamin D can inhibit the growth of prostatic epithelial cells and African-American men had lower levels [of vitamin D]," they write. "Because circulating [vitamin D] levels are determined, in part, by sun exposure, our observation is consistent with the hypothesis that individuals with more skin pigmentation tend to have lower levels."

Prostate cancer is the second leading cause of cancer death among African-American men, who die from the disease at more than twice the rate of white men. The ACS estimates 198,100 new cases of prostate cancer will be diagnosed in American men of all races this year, and 31,500 men are expected to die of the disease.

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