

Vasectomy may increase risk of aggressive prostate cancer

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Vasectomy was associated with a small increased risk of prostate cancer, and a stronger risk for advanced or lethal prostate cancer according to a new study from Harvard School of Public Health (HSPH). The researchers found that the association remained even among men who received regular PSA screening, suggesting the increased risk of lethal cancer cannot be explained by diagnostic bias. It is the largest and most comprehensive study to date to look at the link between vasectomy and prostate cancer.

The study appears online July 7, 2014 in *Journal of Clinical Oncology*.

"This study follows our initial publication on vasectomy and [prostate cancer](#) in 1993, with 19 additional years of follow-up and tenfold greater number of cases. The results support the hypothesis that vasectomy is associated with an increased risk of advanced or lethal prostate cancer," said co-author Lorelei Mucci, associate professor of epidemiology at HSPH.

Vasectomy is a common form of contraception in the U.S., with about 15% of men having the procedure. Prostate cancer is the second-leading cause of cancer death among U.S. men, so identifying risk factors for lethal prostate cancer is important for [public health](#).

The researchers analyzed data from 49,405 U.S. men in the Health Professionals Follow-up Study, who were followed for up to 24 years from 1986 to 2010. During that time, 6,023 cases of prostate cancer were diagnosed, including 811 lethal cases. One in four of the men in this study reported having a vasectomy.

The results showed a 10% increased risk of prostate cancer overall in men who had a vasectomy. Vasectomy was not significantly associated with risk of low-grade cancer. However, vasectomy was associated with a stronger risk of

advanced and lethal prostate cancer, with an [increased risk](#) of 20% and 19% respectively. Among men who received regular PSA screening, the relative increase in risk of lethal prostate cancer was 56%. The effect appeared to be stronger among men who had a vasectomy at a younger age.

Prior work on this topic raised concerns that the positive associations could be linked to bias. However, in the present study, the researchers had access to diverse information and could rule out potential biases, including that men who have vasectomies may seek more medical care in general, that they may have a higher rates of PSA screening, or that the association was due possible confounding by sexually transmitted infections.

In this study, 16 in 1,000 [men](#) developed lethal prostate cancer during 24 years of follow-up. Although the relative increase in the risk associated with vasectomy was significant, this translates to a relatively small increase in absolute difference in the risk of lethal prostate cancer, say the researchers. "The decision to opt for a [vasectomy](#) as a form of birth control is a highly personal one and a man should discuss the risks and benefits with his physician," said co-author Kathryn Wilson, research associate in the Department of Epidemiology at HSPH.

More information: "Vasectomy and risk of aggressive prostate cancer: a 24-year follow-up study," Mohammad Minhaj Siddiqui, Kathryn M. Wilson, Mara M. Epstein, Jennifer R. Rider, Neil E. Martin, Meir J. Stampfer, Edward L. Giovannucci, Lorelei A. Mucci, *Journal of Clinical Oncology*, [DOI: 10.1200/JCO](#) 2013.54.8446, July 7, 2014

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