

Heart disease may be a risk factor for prostate cancer

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In a large analysis of men participating in a prostate drug trial, researchers at the Duke Cancer Institute found a significant correlation between coronary artery disease and prostate cancer, suggesting the two conditions may have shared causes.

If confirmed that [heart disease](#) is a risk factor for [prostate cancer](#), the [malignancy](#) might be combated in part by [lifestyle changes](#) such as weight loss, exercise and a [healthy diet](#), which are known to prevent heart disease.

"What's good for the heart may be good for the prostate," said Jean-Alfred Thomas II, M.D., a post-doctoral fellow in the Division of Urology at Duke and lead author of the study, which appears online this month in the journal *Cancer Epidemiology, Biomarkers & Prevention*.

Coronary artery disease kills more adults in the United States than any other cause, accounting for one in four deaths. Risk factors include inactivity, obesity, high blood pressure and cholesterol, cigarette smoking, and diabetes.

Similarly, prostate cancer is a common killer. It's the second-most lethal cancer for U.S. [men](#), behind lung cancer, with about 240,000 new cases diagnosed a year, and 34,000 deaths. Previous studies exploring the relationship between coronary artery disease and prostate cancer risk have found conflicting results, making it difficult to determine whether the malignancy is fueled by poor lifestyle choices.

In the current study, the Duke team used data from 6,390 men enrolled in a large study called REDUCE, a four-year, randomized trial to test the prostate cancer risk reduction benefits of a drug called dutasteride. All the study participants had a prostate biopsy at the two- and four-year marks, regardless of their PSA levels. They also provided a detailed medical history that included their weight, incidence of heart disease, alcohol intake, medication use and other factors.

Among the men in the study, 547 reported a pre-enrollment history of [coronary artery](#) disease. This group of men tended to be older, heavier and less healthy, with higher baseline PSA levels, plus more diabetes, hypertension and high cholesterol. The men were also much more likely to develop prostate cancer, even after accounting for all the baseline differences.

Having [coronary artery disease](#) increased the men's risk of prostate cancer by 35 percent, with the risk rising over time. The group was 24 percent more likely to be diagnosed with prostate cancer within the first two years of the study than men who reported no heart disease, and by four years into the study, this group's prostate cancer risk was 74 percent higher.

"We controlled for a number of [risk factors](#), including hypertension, taking statins or aspirin," Thomas said. "We don't have a good grasp on what's causing the link, but we are observing this association."

Stephen Freedland, M.D., associate professor of surgery and pathology in the Division of [Urology](#) at Duke and senior author of the paper, said the study had some shortcomings. Notably, it relied on data from a previous trial that didn't account for factors such as diet, physical activity and severity of heart disease that may have influenced the results. But Freedland said the study eliminated a screening bias common in previous findings that correlated prostate cancer and heart

disease using men with high PSA levels.

"This is giving us a lot of good ideas for what to look at next," Freedland said, noting that the overlap between prostate cancer and other diseases associated with poor health habits is a focus of his research group.

Provided by Duke University Medical Center

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