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No evidence that widely prescribed statins protect against prostate cancer

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A large community-based study refutes previous findings that statins – a top-selling drug class, worldwide -- might cut one's risk of developing prostate cancer by reducing production of the male hormones that fuel cancer growth.

Researchers from the New England Research Institutes found that while men using statins did indeed have lower blood levels of androgens such as testosterone, it was more likely attributable to poor health rather than the use of statins. Their findings are published in the August issue of *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research.

"The public health significance is that our study provides evidence that statins may not have a clinically meaningful impact on testosterone in the blood, although further studies should be done," said study author, Susan A. Hall, Ph.D., a research scientist at the New England Research Institutes. "That doesn't mean that statins may be lowering prostate cancer risk through one or more alternative pathways, but it doesn't appear to be working through reduction of male hormones,

Statins lower cholesterol and are commonly prescribed to treat and prevent heart disease. Since cholesterol is required for the production of male hormones researchers have theorized that statins may reduce production of these hormones. A large, recent study found that men using statin drugs were at lowered risk of developing metastatic or fatal prostate cancer, especially if the drugs were used over a long period of

time. But other studies on statin use and prostate cancer risk have had mixed results, according to Hall.

To study a narrow question – whether statin use reduces androgen concentrations in the blood – the researchers examined data from the Boston Area Community Health (BACH) survey, a population-based, NIH-sponsored, epidemiologic study. Data were collected between 2002 and 2005 on thousands of men and women with equal representation of African American, Caucasian and Hispanic populations.

The value of the BACH study, according to Hall, is that "we capture real world use of medications in the community, which might be a more realistic representation of their impact on the body, compared to outcomes seen in a clinical trial."

Hall's team studied the medical histories of 1,812 men, including 237 statin users, and analyzed their blood for "free" or unbound testosterone, for total testosterone, and for other associated compounds.

The researchers found no relationship between statin use and free testosterone and most of the other associated compounds. There was a significant association between statin use and level of total testosterone in the blood, but that association vanished when researchers considered the patients' age, body weight, and history of cardiovascular disease and diabetes. "We know that men with higher body mass index, diabetes and cardiovascular disease tend to have lower testosterone levels, and this largely accounted for the drop in testosterone in statin users," Hall said.

"In this study, statin use was just a marker for presence of other illnesses," she said. "This study may inform that debate, however, by suggesting that any protective pathway offered by statins, if it exists, is not through androgen suppression."

Source: American Association for Cancer Research