

Obesity linked to higher risk of prostate cancer progression

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Even when treated with hormone therapy to suppress tumor growth, obese men face an elevated risk of their prostate cancer worsening, researchers at Duke University Medical Center have found.

The research, reported at the American Urological Association annual meeting Sunday (May 15, 2011), advances the link between obesity and prostate cancer, which has generated research interest in recent years as the incidence of both conditions remains high and often overlaps.

"Over the past decades, there has been increasing prevalence of obesity in the U.S. and Europe, and a high rate of prostate cancer that is the second-most lethal cancer for men," said Christopher J. Keto, M.D., a urologic fellow at Duke University Medical Center and lead author of the study.

An estimated one in six U.S. men will be diagnosed with prostate cancer during his lifetime, according to the [American Cancer Society](#); additionally, one in three U.S. men are obese.

To examine the role obesity may play in prostate cancer, Keto and colleagues at Duke identified 287 men whose diseased prostates had been removed at five U.S. Department of Veteran Affairs hospitals from 1988-2009.

Because their cancers had reappeared, the men had also been given androgen deprivation therapy (ADT). The chemical inhibits production

of the male hormone testosterone, which fuels [prostate tumors](#).

Men in the study group who were overweight or obese had a three-fold increased risk of [cancer progression](#) compared to normal-weight men, despite receiving the same treatment.

Additionally, overweight men had more than a three-fold increased risk of their cancer spreading to the bone compared to normal-weight men, while [obese men](#) had a five-fold increase in the risk of [metastases](#).

Keto said additional studies are needed to determine why heavy men fare worse than normal-weight men, even when treated similarly. One area of scrutiny may be the dosage of ADT.

"We think perhaps obese men may require additional ADT," Keto said. "The dose is the same regardless of weight, while most drugs are dosed according to weight."

Stephen J. Freedland, M.D., associate professor of urology in the Duke Prostate Cancer Center and senior author of the study, said the findings build upon the Duke group's broader research efforts into the connection between obesity and prostate cancer.

"By being thematic in our research we can really get to the bottom of something," Freedland said. "The study supports a growing body of literature showing that obese men with prostate cancer do worse. Our next step is to figure out why."

Freedland said knowing that heavy men are at higher risk for bad outcomes could lead to better interventions. He said the Duke group has launched a new trial to test the effects of diet and exercise on overweight and obese men whose prostate cancer treatment includes hormone therapy.

"If [obesity](#) is bad for [prostate cancer](#), we may have to be more aggressive in our treatment," he said. "Ultimately, we aim to learn why, which in turn can lead us to better treatments for these [men](#)."

Provided by Duke University Medical Center

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