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Overweight and obese men have lower PSA values, even before they get prostate cancer

DURHAM, N.C. -- Men who are overweight or obese have lower concentrations of prostate-specific antigen (PSA) in their blood than their normal-weight counterparts, according to a new study led by Duke University Medical Center researchers.

The finding echoes earlier results on PSA concentrations found in obese and overweight men with prostate cancer and highlights the need to reconsider PSA threshold values for heavier patients, and to encourage those patients to get serious about losing weight.

The study released last year from our group showed that obese and overweight men with prostate cancer had deceptively low PSA scores compared to normal-weight men with prostate cancer, but we now have extended our findings to show that this trend holds true in the general screening population, said Marva Price, R.N., a family nurse practitioner and researcher in Duke's School of Nursing, the Duke Comprehensive Cancer Center and the Duke Prostate Center..

We found that mildly obese men's PSA scores were fourteen percent lower than normal-weight men, and moderately and severely obese men had 29 percent lower PSA values, Price said.

Doctors have proposed that overweight and obese men have lower PSA scores because their bodies have a greater volume of blood. Larger blood volumes dilute the amount of PSA in the bloodstream, making the concentration of PSA -- which is what is measured to screen for prostate cancer -- lower.

The latest results appear online in the Feb. 9, 2008 issue of the journal *Urology*. The study was funded by the United States Department of Defense.

PSA is considered the gold standard for detecting prostate cancer; it is a protein released into the blood by the prostate gland, and is elevated in the presence of cancer.

For this study, researchers looked at PSA scores among 535 men who took part in a free prostate cancer screening program. Seventy-three percent of the group was overweight or obese.

The prevalence of obesity in the United States has doubled in the past 15 years, Price said. Our study demonstrates yet another health danger that obesity poses. One in three Americans is obese, and a man who is 5'11" and weighs 215 pounds is considered obese.

The best advice clinicians can give their patients is to adopt healthier lifestyles, said Stephen Freedland, M.D., a urologist at Duke and the study's senior author. We tell patients to exercise three or four times a week, eat a healthier diet, high in vegetables and fruits, and keep getting screened, he said. However, to compensate for the lower PSA values, Freedland also recommends lowering the PSA threshold that is considered abnormal for obese men. If we don't do that, we may be missing cancers in obese men, which could lead to delayed diagnosis and poorer outcomes.

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Other Duke contributors to this study include Robert Hamilton, Cary Robertson, and Maureen Butts.
