

Patients with lower urinary tract symptoms more likely to suffer from metabolic syndrome

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Researchers have determined that individuals with mild to severe symptoms of lower urinary tract symptoms (LUTS) are more likely to suffer from metabolic syndrome (MetS), a collection of cardiovascular risk factors thought to be linked by insulin resistance). LUTS encompass voiding (incomplete emptying, weak stream, intermittency, straining) and storage (frequency, urgency, nocturia) difficulties.

In a study published in the August 2009 issue of *The Journal of Urology*, researchers from the New England Research Institutes, Watertown, Massachusetts; the Department of Urology, Northwestern University, Chicago, Illinois; Cornell University, Weill Medical College; Pfizer Inc, New York, New York; and [Pfizer](#) Ltd, Sandwich, United Kingdom, explored the possible association of LUTS with MetS using data from the Boston Area Community Health Survey. 2,301 men 30 to 79 years old were interviewed and analyses were conducted on 1,899 men who provided blood samples. Body measurements and blood pressure readings were done, and self-reported medical histories were taken.

The authors state, "These findings have important diagnostic and management implications. Patients who present with components of metabolic dysfunction should be routinely queried with respect to urological function, particularly voiding symptoms such as intermittency, incomplete emptying and nocturia, as well as the degree of associated bother. Sexual dysfunction symptoms, particularly erectile dysfunction,

are similarly reported by the majority of men with MetS and should be routinely evaluated."

LUTS were assessed using the American Urological Association symptom index (AUASI), a clinically validated measure of urological symptoms. The AUASI was categorized into two groups as none or mild symptoms (AUASI less than 8) versus moderate or severe symptoms (AUASI 8 or greater). In this analysis MetS was defined as the presence of three or more of the five characteristics of 1) waist circumference greater than 102 cm; 2) systolic blood pressure 130 mm Hg or greater or diastolic blood pressure 85 mm Hg or greater, or antihypertensive medication use; 3) HDL cholesterol less than 40 mg/dl or lipid medication use; 4) self-reported type 2 diabetes or increased blood sugar or diabetes medication use; 5) triglycerides greater than 150 mg/dl.

An increased odds ratio of 1.68 for metabolic syndrome was observed in men with mild to severe LUTS symptoms compared to those with few or no symptoms. A statistically significant association was observed between the metabolic syndrome and a voiding symptom score of 5 or greater (odds ratio 1.73), but not for a storage symptom score of 4 or greater (odds ratio 0.94). Increased odds of the metabolic syndrome were observed even with mild symptoms, primarily for incomplete emptying, intermittency and nocturia. These associations were observed primarily in younger men (younger than 60 years) and were null in older men (60 years or older).

In an Editorial Comment accompanying the article Dr. Brett A. Laven, Clinic of Urology, Milwaukee, states that "The findings presented become increasingly significant as society weighs the costs of delivering health care to a population with an increased incidence of obesity/MetS. It has been estimated that more than 1 billion people are currently overweight and the prevalence in children has considerably increased. The possibility of pharmaceutically targeting the adipokine system, thus

influencing a neuroendocrine pathway that might impact LUTS, is intriguing."

More information: The article is "Association of Lower [Urinary Tract](#) Symptoms and the Metabolic Syndrome. Results From the Boston Area Community Health Survey" by Varant Kupelian, Kevin T. McVary, Steven A. Kaplan, Susan A. Hall, Carol L. Link, Lalitha Padmanabhan Aiyer, Patrick Mollon, Nihad Tamimi, Raymond C. Rosen and John B. McKinlay. It appears in *The Journal of Urology*, Volume 182, Issue 2 (August 2009) published by Elsevier.

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