



PRESS RELEASE

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Obesity and unhealthy lifestyles linked to more complex urinary problems

People who are obese and lead unhealthy lifestyles are more likely to suffer from a larger number of urinary problems, according to a population-based study of more than 5,000 men and women published in the May issue of the UK-based urology journal **BJU International**.

According to the Boston Area Community Health Survey (BACH), other health issues that increase the risk of multiple lower urinary tract symptoms include diabetes, high blood pressure and heart disease. Women who have had hysterectomies and other gynaecological surgery also face an elevated risk, as do men who have undergone prostate or bladder surgery.

People who are older and have a lower social economic status are also more likely to experience complex problems.

The study, which received funding from the National Institute of Diabetes, Digestive and Kidney Diseases – part of the USA's National Institutes of Health - looked at the urological symptoms of 5,506 residents in Boston, Massachusetts. All were aged between 30 and 70 and 42 per cent were male. 34 per cent were white, 32 per cent were black and 34 per cent were Hispanic.

All the participants took part in detailed one-to-one interviews, which included urological symptoms, other medical conditions, physical characteristics such as weight and waist circumference, education, income and behavioural and psychosocial factors.

By carrying out a statistical analysis of the results, the researchers were able to group the participants with urological symptoms into distinct patterns or clusters, four for the women and five for the men. Using this method enabled the team to examine the relationship between complex urological problems and other health conditions or lifestyle factors.

"The cluster analysis method is highly objective and make no assumptions about which men or women are more likely to suffer from these common conditions" explains Dr Raymond C Rosen, Senior Scientist at the New England Research Institutes in Massachusetts.

“These results will hopefully aid our understanding of why urological problems occur and how we can manage these conditions more effectively”.

Three-quarters of the women who took part in the survey reported at least one of the 14 urological symptoms included in the study.

Key findings included:

- Four female clusters were identified.
- The majority of the women who reported symptoms (54 per cent) fell into Cluster One which was characterised by storage problems, such as needing to go to the toilet frequently and getting up to go during the night. They had fewer overall symptoms than the women in the other clusters.
- Symptoms increased in number and severity until they reached Cluster Four, where women had the highest number of urological symptoms. Eight per cent of women fell into this cluster.
- The women who experienced symptoms had a higher Body Mass Index than the women who didn't and this peaked in Cluster Four, where the average BMI was 34.5 and just under 65 per cent were obese.
- Women in Cluster Four were four times more likely to suffer from diabetes than women who reported no urological symptoms.
- On average, symptomatic women were older than women who didn't report any symptoms and average ages in the more symptomatic clusters were higher.
- A woman's social economic status was much more likely to predict her level of urology symptoms than her race. For example, women in Cluster Four were more likely have a low social economic status.

Just over two-thirds of the men who took part in the study (69 per cent) reported urological symptoms.

Key findings included:

- Five male clusters were identified.
- Half of the men were assigned to Cluster One, which covered storage problems and included the male participants with the fewest number of symptoms. The number of symptoms increased in Clusters Two, Three and Four.
- Eight per cent of the symptomatic men fell into the highest category, Cluster Five, with an average of 10 symptoms per person.

- There was a significant increase in age across the groups – the average age of the men with no symptoms was 44, compared with 59 in Cluster Five.
- The researchers also noticed significant racial differences. Cluster Four had the lowest percentage of black and Hispanic men and Hispanic men were also under-represented in Cluster Five.
- 40 per cent of the men in Cluster Five came from the lowest social economic status group.
- Men were much more likely to find themselves in Cluster Five if they had a sedentary lifestyle, with 54 per cent recording the lowest levels of physical activity, compared with 20 per cent for men with no symptoms.
- Men in Clusters Three to Five reported significantly higher levels of diabetes, blood pressure and heart problems. For example, 40 per cent of men in Cluster Five reported problems with cardiovascular disease, compared with less than 20 per cent in Cluster One.
- 43 per cent of the men in Cluster Five were medically obese.
- There were no significant differences in smoking or alcohol consumption across the clusters, apart from the fact that Cluster Five contained a higher percentage of men who didn't drink (41 per cent). 26 per cent of men with no symptoms abstained, as did 25 to 30 per cent of the men in the other clusters.

“The findings of the BACH survey are very useful for clinicians and health promotion experts as they provide evidence of a wide range of factors that influence lower urinary tract symptoms, such as age, other illnesses, lifestyle, economic status and race” says Dr Rosen.

“They underline the importance of clinicians carrying out a thorough urological assessment of patients who fall into these high risk groups.”

“And they also provide a useful basis for future research into this highly complex area.”

The BACH Survey was carried out by investigators from the New England Research Institutes, led by Dr John B McKinlay. Their findings are summarised in two papers in **BJU International** – on the male and female studies - written in collaboration with urology experts from Cornell University in New York and the University of Texas and medical researchers from Pfizer Inc.

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Notes to editors

- Cluster analysis and lower urinary tract symptoms in men: findings from the Boston Area Community Health Survey. Cinar et al. **BJU International**. 101 1247-1256. (May 2008)
Do urological symptoms cluster among women? Results from the Boston Area Community Health Survey. Hall et al. **BJU International**. 101, 1257-1266 (May 2008).
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