

THE ASSOCIATION OF DIET AND OTHER LIFESTYLE FACTORS WITH OVERACTIVE BLADDER: A LONGITUDINAL STUDY IN WOMEN.

Aims of Study

Very few longitudinal studies on incontinence have been conducted, and to date none have investigated lifestyle risk factors. The present study investigates the role of dietary and non-dietary lifestyle factors in the incidence of overactive bladder.

Methods

A random sample of 20,244 women aged 40 years and over living at home was sent a postal questionnaire on urinary symptoms and lifestyle. Two reminders were sent to non-responders at 4-week intervals (response rate 65%). The questions on urinary symptoms were developed for the study [1] in line with recommended standards [2]. A detailed investigation into non-response at baseline [3] found little evidence of non-response bias in the reporting of urinary symptoms. Responders to the first and second mailings of the baseline questionnaire were asked to complete a 130-item validated food frequency questionnaire [4] (response rate 65%). Follow-up data on urinary symptoms were collected in a postal survey one year later (response rate 91.2%). There was no difference in the year one drop out rate between baseline OAB cases and non-cases. Logistic regression was used to investigate the association of diet and other lifestyle factors with the incidence of overactive bladder (OAB). For the purposes of the study OAB was defined as one or both of the symptoms urge leakage ("a strong desire to pass urine that results in leakage of urine before reaching the toilet" at least several times a month), and urgency ("a strength of urgency once you feel the need to pass urine that is typically very strong or overwhelming").

Results

Follow-up data on urinary symptoms were collected from 6,424 women. Overall the prevalence of OAB at baseline was 16.3%, and increased with age. At the Year-1 follow-up the incidence rate of OAB was 9.2% (492 new cases). In the multivariate model there were significantly increased risks for onset of overactive bladder with being overweight or obese ($p=0.05$), smoking ($p=0.04$) and the consumption of fizzy drinks ($p=0.03$), while there were reduced risks with high consumptions of vegetables ($p=0.02$), bread ($p=0.001$) and chicken ($p=0.005$) (with additional adjustments made for age, physical functioning and presence of stress incontinence at baseline).

Conclusions

The present longitudinal study provides evidence that some aspects of diet and lifestyle may be independent risk factors in the aetiology of overactive bladder. The association with fizzy drinks confirms current clinical advice to reduce consumption. Lifestyle interventions such as weight loss, smoking cessation and a change in diet could also be important in the prevention and treatment of the condition.

References

- 1 Authors names removed to protect anonymity. An epidemiological study to establish the prevalence of urinary symptoms and felt need in the community: the Leicestershire MRC Incontinence Study. *Journal of Public Health Medicine* 2000; **22**:427-434.
- 2 Abrams P, Cardozo L, Fall M, Griffiths D, Rosier P, Ulmsten U et al. The standardisation of terminology of lower urinary tract function: report from the Standardisation Sub-Committee of the International Continence Society. *American Journal of Obstetrics and Gynecology* 2002; **187**:116-126.
- 3 Authors names removed to protect anonymity. An investigation into non-response bias in a postal survey on urinary symptoms. *BJU International* 2003, in press.
- 4 Bingham SA, Welch AA, McTaggart A, Mulligan AA, Runswick SA, Luben R et al. Nutritional methods in the European Prospective Investigation of Cancer in Norfolk. *Public Health Nutrition* 2001; **4**:847-858.

