

CLINICAL EFFECTIVENESS OF LIFESTYLE INTERVENTIONS FOR ADULTS WITH URINARY INCONTINENCE: A SYSTEMATIC REVIEW OF RANDOMISED TRIALS

Hypothesis / aims of study

Urinary incontinence poses a considerable health care burden. A range of conservative treatments exist. In particular, alterations in lifestyle are relatively low cost and non-invasive and are frequently recommended either at the onset or later in the resolution of incontinence. For example, advice is commonly given to lose weight, adapt fluid intake including decreased caffeine and moderate alcohol consumption, be more physically active but restrict excessive heavy activity, stop smoking and avoid constipation and straining. However, published literature of lifestyle factors is sparse and such recommendations are rarely based on good evidence. We conducted a systematic review to provide some comparison data between lifestyle interventions and other therapies.

Study design, materials and methods

The review was driven by a protocol based on methodology recommended by the Cochrane Collaboration.[1] Published and unpublished studies were identified from the Cochrane Incontinence Group's Specialised Register of controlled trials (searched in July 2012). Randomised controlled trials, quasi-randomised (using alternate allocation) controlled trials, randomised cross-over trials of life style changes used in the management of urinary incontinence for adults were included. To be eligible, alterations in lifestyle must be introduced by a standardised treatment protocol. The alterations recommended by a leaflet or advice only were considered invalid and excluded. Comparators were other lifestyle interventions or pharmacological and other conservative therapies. Primary outcomes were individual report of symptom cure and improvement, condition-specific quality of life and adverse effects. Pooled estimates of treatment effect across studies and their 95% confidence intervals were calculated using a fixed effect model. Levels of evidence for each outcome measured at 12 months after the commencement of the treatment were assessed using the GRADE approach.[2] Two reviewers independently conducted study selection, data abstraction and the risk-of-bias assessment.

Results

Eleven studies were identified, reporting on the effect of weight loss (four studies), caffeinated drinks (three studies), fluid intake (three studies) and soy rich diet (one study). The majority of included studies had small sample size, with 60 or fewer participants, and short follow-up. Quality of outcome reporting was generally poor. Specified outcomes were not always reported or reported using diverse measures, making results difficult to interpret. Interventions for altering the type (caffeine) or amount of fluid consumption were heterogeneous and were not comparable across studies. All studies related to altering fluid consumption also suffered from low compliance to the study protocol among their participants.

The results demonstrated that weight loss programmes were associated with higher rates of improvement compared with a control intervention and the difference was statistically significant at 6 months (N = 304, 76% vs. 54%) and 18 months (N = 291, 75% vs. 62%), though not at 12 months (N = 298, 75% vs. 68%), after randomisation; no data were available for cure rates and quality of life. One small unpublished cross-over trial (N = 11) found no evidence of a difference that substituting decaffeinated drinks for caffeinated drinks improved quality of life using the ICIQ Overactive Bladder and ICIQ Overactive Bladder Symptoms Quality of Life instruments. Another cross-over trial (N = 84) using the Bristol Female Lower Urinary Tract Symptoms questionnaire suggested that, when fluid intake was decreased, quality of life improved but participants reported no significant difference in the impact of incontinence symptoms on their daily life compared with the baseline. No information was available for cure and improvement after altering the type or amount of fluid consumption. The study reporting on a differential effect of a soy rich diet did not address any of the specified primary outcomes.

For all interventions under study, adverse effects appeared relatively uncommon, although, with decreasing fluids, some participants experienced thirst, constipation, concentrated urine or headaches.

Overall, the GRADE level of evidence for all outcomes for all interventions was either 'low' or 'very low'.

Interpretation of results

For morbidly and moderately obese women weight loss may be associated with reduction in urinary incontinence. The degree of improvement in urinary incontinence may be contingent upon the magnitude of the weight loss. There were insufficient data to draw any conclusions as to whether altering the type or amount of fluid consumption or dietary factors was effective in treating urinary incontinence. No studies were identified with respect to the intake of alcohol, fizzy drinks or sweetened diet drinks, physical forces, physical activity, smoking cessation or constipation and straining.

Concluding message

Existing evidence for lifestyle changes for urinary incontinence is limited. Weight loss programmes in the management for urinary incontinence should receive research priority. Other lifestyle interventions require considerably more well designed trials.

References

1. Higgins JPT, Green S (editors). Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 updated March 2011. The Cochrane Collaboration, 2011. Available from www.cochrane-handbook.org
2. GRADE Working Group 2004. Grading quality of evidence and strength of recommendations. *BMJ* 2004; 328: 1490-1494.

Disclosures

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