Treating urinary incontinence in the elderly. Conservative measures that work: a systematic review
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CRD summary
This review evaluated the effectiveness of conservative treatment for stress, urge and mixed urinary incontinence in the community-based elderly. The authors appeared to conclude that behavioural therapy was an effective treatment, but the effects of drug therapy were unclear. These conclusions may not be particularly robust given the paucity of the evidence base reviewed.

Authors' objectives
To evaluate the effectiveness of conservative treatment for stress, urge and mixed urinary incontinence in the community-based elderly.

Searching
MEDLINE (1966 to 2001), EMBASE (1986 to 2001), the Science Citation Index (1988 to 2001), the Cochrane Library and PiCarta were searched; the search terms were reported. The search was limited to publications in English and Dutch. The reference lists of retrieved articles were used to identify further studies.

Study selection
Study designs of evaluations included in the review
Longitudinal cohort studies, before-and-after studies and randomised controlled trials (RCTs) were eligible for inclusion. Before-and-after studies and RCTs were included in the review.

Specific interventions included in the review
Studies of behavioural techniques and/or pharmacotherapy were eligible for inclusion. The included studies involving both therapy types looked at phenylpropanolamine versus pelvic floor exercises or oxybutynin (placebo-controlled) versus bladder sphincter biofeedback. The included studies of behavioural interventions alone involved bladder-sphincter biofeedback, pelvic floor exercises or bladder training.

Participants included in the review
To be eligible for inclusion, the studies were required to involve participants who were living in the community and aged 55 years or older.

Outcomes assessed in the review
No criteria for the outcomes were specified. The outcomes reported by the studies included in the review were changes in the number of urinary accidents, the patient's perception of the severity of their condition, cystometric measurements, side-effects and perineometry.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
Methodological quality was assessed using a modified Delphi-2 scale (see Other Publications of Related Interest), the details of which did not appear to be available. RCTs were required to achieve a score of 7 out of 9 to be eligible for inclusion in the review. Before-and-after studies required a score of 2.5 out of 3 to be included. Two reviewers, blinded to author and journal details, independently scored the quality of the studies. Any disagreements were resolved by consensus.
Data extraction
The authors did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

Methods of synthesis
How were the studies combined?
The studies were grouped according to the intervention and combined in a narrative.

How were differences between studies investigated?
Details of the studies were tabulated, while some differences between the studies were discussed in the text of the review.

Results of the review
Eight studies were included in the review, and a total of 643 participants appeared to have been involved. There were 4 RCTs and 4 before-and-after studies (one of which used participants from one of the RCTs).

Of 17 studies originally meeting the inclusion criteria, 9 were excluded for failing to meet the thresholds for methodological quality. There were no studies of drug therapy alone. One extended study found oxybutyrine therapy to have a significant effect on urge or mixed incontinence, but the effect of bladder-sphincter biofeedback was greater. Another study found phenylpropanolamine and pelvic floor exercises to be equally helpful for mixed or stress incontinence. Significant effects of bladder-sphincter biofeedback were found in 3 further studies, while pelvic floor biofeedback was shown to be effective in another. Bladder training was also an effective treatment in one study. All three behavioural therapies were effective in stress, urge and mixed incontinence.

Authors’ conclusions
Although the authors concluded that conservative therapy was effective for elderly patients with stress, urge or mixed incontinence, this statement appeared to refer to behavioural therapy rather than drug therapy, for which they stated there was insufficient high-quality evidence.

CRD commentary
The review question was clear and the inclusion criteria were well-defined. The search for primary studies involved several relevant databases, although language restrictions may mean that relevant studies were missed. No efforts were made to locate unpublished studies, and publication bias was not assessed. Methodological quality was assessed and the exclusion of poor-quality studies should have reduced bias within the review. Two reviewers appear to have independently assessed the primary studies, thus minimising the risk of introducing mistakes and bias at this stage. However, it was unclear how many reviewers were involved in selecting studies for inclusion in the review and in extracting the data. It is therefore unknown whether any steps were taken to minimise bias and errors in these processes. The studies were synthesised appropriately and some of their limitations were discussed.

Overall, the conduct of the review was reasonable and the authors’ conclusions are consistent with the evidence reviewed. However, their conclusions may not be particularly robust given the paucity of the studies reviewed.

Implications of the review for practice and research
Practice: The authors recommended behavioural therapy as first choice for treating incontinence in the elderly.

Research: The authors stated that further research to establish the relative effectiveness of the different behavioural therapies for different types of incontinence in the elderly, and also to investigate the clinical efficacy of pharmacotherapy, is required.
Bibliographic details

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Other publications of related interest

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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.