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## [Intervention Review]

# Mechanical devices for urinary incontinence in women

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# ABSTRACT

#### Background

Incontinence can have a devastating effect on the lives of sufferers with significant economic implications. Non-surgical treatments such as pelvic floor muscle training and the use of mechanical devices are usually the first line of management, particularly when a woman does not want surgery or when she is considered unfit for surgery. Mechanical devices are inexpensive and do not compromise future surgical treatment.

### Objectives

To determine whether mechanical devices are useful in the management of adult female urinary incontinence.

### Search methods

For this second update we searched the Cochrane Incontinence Group Specialised Register, which contains trials identified from the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, MEDLINE in process, ClinicalTrials.gov, WHO ICTRP and handsearching of journals and conference proceedings (searched 21 August 2014), EMBASE (January 1947 to 2014 Week 34), CINAHL (January 1982 to 25 August 2014), and the reference lists of relevant articles.

#### **Selection criteria**

All randomised or quasi-randomised controlled trials of mechanical devices in the management of adult female urinary incontinence determined by symptom, sign or urodynamic diagnosis.

#### Data collection and analysis

The reviewers assessed the identified studies for eligibility and risk of bias and independently extracted data from the included studies. Data analysis was performed using RevMan software (version 5.3).

#### **Main results**

One new trial was identified and included in this update bringing the total to eight trials involving 787 women. Three small trials compared a mechanical device with no treatment and although they suggested that use of a mechanical device might be better than no treatment, the evidence for this was inconclusive. Four trials compared one mechanical device with another. Quantitative synthesis of data from these trials was not possible because different mechanical devices were compared in each trial using different outcome measures. Data from the individual trials showed no clear difference between devices, but with wide confidence intervals. One trial compared three groups: a mechanical device alone, behavioural therapy (pelvic floor muscle training) alone and behavioural therapy combined with a mechanical



device. While at three months there were more withdrawals from the device-only group, at 12 months differences between the groups were not sustained on any measure.

#### Authors' conclusions

The place of mechanical devices in the management of urinary incontinence remains in question. Currently there is little evidence from controlled trials on which to judge whether their use is better than no treatment and large well-conducted trials are required for clarification. There was also insufficient evidence in favour of one device over another and little evidence to compare mechanical devices with other forms of treatment.

# PLAIN LANGUAGE SUMMARY

#### Mechanical devices for urinary incontinence in women

Urinary incontinence is involuntary loss of urine. The common types are stress and urge incontinence. Mechanical devices are made of plastic or other materials. They are placed within the urethra or vagina in order to stop or control the leakage of urine. This review of trials found that using mechanical devices might be better than no treatment but the evidence is weak. There was not enough evidence to recommend any specific type of device or to show whether mechanical devices are better than other forms of treatment such as pelvic floor muscle training.