

## Oestrogens for urinary incontinence in women

0:00 / 3:42

 Read podcast  
 transcript and more  
 (/podcasts/10.100  
 2/14651858.CD00  
 1405.pub3)


Urinary incontinence is the leakage of urine when coughing or exercising (stress urinary incontinence) or after a strong uncontrollable urge to urinate (urgency urinary incontinence). In women who have gone through the menopause, low oestrogen levels may contribute to urinary incontinence. The review found 34 trials including more than 19,000 women of whom over 9000 received oestrogen. The review found that significantly more women who received local (vaginal) oestrogen for incontinence reported that their symptoms improved compared to placebo. There was no evidence about whether the benefits of local oestrogen continue after stopping treatment but this seems unlikely as women would revert to having naturally low oestrogen levels. Trials investigating systemic (oral) administration, on the other hand, found that women reported worsening of their urinary symptoms. The evidence comes mainly from two very large trials including 17,642 incontinent women. These trials were investigating other effects of hormone replacement therapy as well as incontinence, such as prevention of heart attacks in women with coronary heart disease, bone fractures, breast and colorectal cancer. In addition, in one large trial women who did not have incontinence at first were more likely to develop incontinence. There may be risks from long-term use of systemic oestrogen, such as heart disease, stroke and cancer of the breast and uterus.

### Authors' conclusions:

Urinary incontinence may be improved with the use of local oestrogen treatment. However, there was little evidence from the trials on the period after oestrogen treatment had finished and no information about the long-term effects of this therapy was given. Conversely, systemic hormone replacement therapy using conjugated equine oestrogen may worsen incontinence. There were too few data to reliably address other aspects of oestrogen therapy, such as oestrogen type and dose, and no direct evidence comparing routes of administration. The risk of endometrial and breast cancer after long-term use of systemic oestrogen suggests that treatment should be for limited periods, especially in those women with an intact uterus.

[Read the full abstract...](#)

### Background:

It is possible that oestrogen deficiency may be an aetiological factor in the development of urinary incontinence in women. This is an update of a Cochrane review first published in 2003 and subsequently updated in 2009.

### Objectives:

To assess the effects of local and systemic oestrogens used for the treatment of urinary incontinence.

### Our use of cookies

We use necessary cookies to make our site work. We'd also like to set optional analytics cookies to help us improve it. We won't set optional cookies unless you enable them. Using this tool will set a cookie on your device to remember your preferences. You can always change your cookie preferences at any time by clicking on the 'Cookies settings' link in the footer of every page. For more detailed information about the cookies we use, see our [Cookies page](#).

**Selection criteria:**

Randomised or quasi-randomised controlled trials that included oestrogens in at least one arm in women with symptomatic or urodynamic diagnoses of stress, urgency or mixed urinary incontinence or other urinary symptoms post-menopause.

**Data collection and analysis:**

Trials were evaluated for risk of bias and appropriateness for inclusion by the review authors. Data were extracted by at least two authors and cross checked. Subgroup analyses were performed by grouping participants under local or systemic administration. Where appropriate, meta-analysis was undertaken.

**Main results:**

Thirty-four trials were identified which included approximately 19,676 incontinent women of whom 9599 received oestrogen therapy (1464 involved in trials of local vaginal oestrogen administration). Sample sizes of the studies ranged from 16 to 16,117 women. The trials used varying combinations of type of oestrogen, dose, duration of treatment and length of follow up. Outcome data were not reported consistently and were available for only a minority of outcomes.

The combined result of six trials of systemic administration (of oral systemic oestrogens) resulted in worse incontinence than on placebo (risk ratio (RR) 1.32, 95% CI 1.17 to 1.48). This result was heavily weighted by a subgroup of women from the Hendrix trial, which had large numbers of participants and a longer follow up of one year. All of the women had had a hysterectomy and the treatment used was conjugated equine oestrogen. The result for women with an intact uterus where oestrogen and progestogen were combined also showed a statistically significant worsening of incontinence (RR 1.11, 95% CI 1.04 to 1.18).

There was some evidence that oestrogens used locally (for example vaginal creams or pessaries) may improve incontinence (RR 0.74, 95% CI 0.64 to 0.86). Overall, there were around one to two fewer voids in 24 hours amongst women treated with local oestrogen, and there was less frequency and urgency. No serious adverse events were reported although some women experienced vaginal spotting, breast tenderness or nausea.

Women who were continent and received systemic oestrogen replacement, with or without progestogens, for reasons other than urinary incontinence were more likely to report the development of new urinary incontinence in one large study.

One small trial showed that women were more likely to have an improvement in incontinence after pelvic floor muscle training (PFMT) than with local oestrogen therapy (RR 2.30, 95% CI 1.50 to 3.52).

The data were too few to address questions about oestrogens compared with or in combination with other treatments, different types of oestrogen or different modes of delivery.

Share

**Our use of cookies**

We use necessary cookies to make our site work. We'd also like to set optional analytics cookies to help us improve it. We won't set optional cookies unless you enable them. Using this tool will set a cookie on your device to remember your preferences. You can always change your cookie preferences at any time by clicking on the 'Cookies settings' link in the footer of every page. For more detailed information about the cookies we use, see our [Cookies page](#).

Accept all

Configure

[FACEBOOK](https://www.facebook.com/sharer/sharer.php?u=https%3A%2F%2Fwww.cochrane.org%2FCD001405%2FINCONT_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN) [\\_\(HTTPS://WWW.FACEBOOK.COM/SHARER/SHARER.PHP?U=HTTPS%3A%2F%2FWWW.COCHRANE.ORG%2FCD001405%2FINCONT\\_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN\)](https://www.facebook.com/sharer/sharer.php?u=https%3A%2F%2Fwww.cochrane.org%2FCD001405%2FINCONT_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN)

[TWITTER](https://twitter.com/intent/tweet?url=https%3A%2F%2Fwww.cochrane.org%2FCD001405%2FINCONT_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN) [\\_\(HTTPS://TWITTER.COM/INTENT/TWEET?URL=HTTPS%3A%2F%2FWWW.COCHRANE.ORG%2FCD001405%2FINCONT\\_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN\)](https://twitter.com/intent/tweet?url=https%3A%2F%2Fwww.cochrane.org%2FCD001405%2FINCONT_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN)

[WHATSAPP](https://www.whatsapp.com/send?text=Oestrogens%20for%20urinary%20incontinence%20in%20women%20-%20Cochrane%20Review%20-%20https%3A%2F%2Fwww.cochrane.org%2FCD001405%2FINCONT_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN) [\\_\(WHATSAPP://SEND?TEXT=OESTROGENS%20FOR%20URINARY%20INCONTINENCE%20IN%20WOMEN%20-%20COCHRANE%20REVIEW%20-%20HTTPS%3A%2F%2FWWW.COCHRANE.ORG%2FCD001405%2FINCONT\\_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN\)](https://www.whatsapp.com/send?text=Oestrogens%20for%20urinary%20incontinence%20in%20women%20-%20Cochrane%20Review%20-%20https%3A%2F%2Fwww.cochrane.org%2FCD001405%2FINCONT_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN)

[EMAIL](mailto:?subject=Oestrogens%20for%20urinary%20incontinence%20in%20women&body=https%3A%2F%2Fwww.cochrane.org%2FCD001405%2FINCONT_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN) [\\_\(MAILTO:?SUBJECT=OESTROGENS%20FOR%20URINARY%20INCONTINENCE%20IN%20WOMEN&BODY=HTTPS%3A%2F%2FWWW.COCHRANE.ORG%2FCD001405%2FINCONT\\_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN\)](mailto:?subject=Oestrogens%20for%20urinary%20incontinence%20in%20women&body=https%3A%2F%2Fwww.cochrane.org%2FCD001405%2FINCONT_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN)

[LINKEDIN](http://www.linkedin.com/shareArticle?url=https%3A%2F%2Fwww.cochrane.org%2FCD001405%2FINCONT_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN&title=Oestrogens%20for%20urinary%20incontinence%20in%20women) [\\_\(HTTP://WWW.LINKEDIN.COM/SHAREARTICLE?URL=HTTPS%3A%2F%2FWWW.COCHRANE.ORG%2FCD001405%2FINCONT\\_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN&TITLE=OESTROGENS%20FOR%20URINARY%20INCONTINENCE%20IN%20WOMEN\)](http://www.linkedin.com/shareArticle?url=https%3A%2F%2Fwww.cochrane.org%2FCD001405%2FINCONT_OESTROGENS-FOR-URINARY-INCONTINENCE-IN-WOMEN&title=Oestrogens%20for%20urinary%20incontinence%20in%20women)

**Published:**

17 October 2012

**Authors:**

Cody JD, Jacobs ML, Richardson K, Moehrer B, Hextall A

Cody JD, Jacobs ML, Richardson K, Moehrer B, Hextall A. Oestrogen therapy for urinary incontinence in post-menopausal women. Cochrane Database of Systematic Reviews 2012, Issue 10. Art. No.: CD001405. DOI: 10.1002/14651858.CD001405.pub3

**Our use of cookies**

We use necessary cookies to make our site work. We'd also like to set optional analytics cookies to help us improve it. We won't set optional cookies unless you enable them. Using this tool will set a cookie on your device to remember your preferences. You can always change your cookie preferences at any time by clicking on the 'Cookies settings' link in the footer of every page. For more detailed information about the cookies we use, see our Cookies page .

#### Our use of cookies

We use necessary cookies to make our site work. We'd also like to set optional analytics cookies to help us improve it. We won't set optional cookies unless you enable them. Using this tool will set a cookie on your device to remember your preferences. You can always change your cookie preferences at any time by clicking on the 'Cookies settings' link in the footer of every page. For more detailed information about the cookies we use, see our [Cookies page](#).

[Accept all](#)[Configure](#)