

**Efficacy and safety of oral estriol for managing postmenopausal symptoms.** -  
Takahashi K - *Maturitas* - 15-FEB-2000; 34(2): 169-77 (From NIH/NLM MEDLINE)

**Abstract:**

**OBJECTIVE:** to assess the therapeutic efficacy and **safety** of oral **estriol** for the treatment of climacteric symptoms in postmenopausal women. **METHODS:** 68 postmenopausal women with climacteric symptoms received oral **estriol**, 2 mg/day, daily for 12 months. We evaluated the degree of climacteric complaints with **estriol** therapy; serum levels of gonadotropins, estradiol (E2) and lipids; biochemical markers of bone metabolism; blood pressure; and side effects both at baseline and during treatment. Climacteric symptoms were assessed according to the menopausal index (MI), a version of the Kupperman index that had been modified for Japanese women. **RESULTS:** oral **estriol** therapy significantly reduced total MI scores. The greatest relief was noted for hot flushes, night sweats, and insomnia. **Estriol** treatment significantly lowered serum follicle stimulating hormone (FSH) and luteinizing hormone (LH) concentrations but did not affect any of the other parameters (lipids, bone, liver and blood pressure) during the study period. Slightly vaginal bleeding occurred in 14.3% of those who underwent natural menopausal women. Histologic evaluation of the endometrium and ultrasound assessment of the breasts following 12 months of **estriol** treatment found normal results in all women. **CONCLUSION:** **Estriol is a safe and effective alternative for relieving climacteric symptoms in postmenopausal Japanese women.**

**Citation:**

**Efficacy and **safety** of oral **estriol** for managing postmenopausal symptoms.**  
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**Estriol: safety and efficacy.** - Head KA - *Altern Med Rev* - 01-APR-1998; 3(2): 101-13  
(From NIH/NLM MEDLINE)

**Abstract:**

While conventional hormone replacement therapy provides certain benefits, it is not without significant risks. **Estriol** has been found to provide some of the protection without the risks associated with stronger estrogens. Depending upon the situation, **estriol** may exert either agonistic or antagonistic effects on estrogen. **Estriol** appears to be effective at controlling symptoms of menopause, including hot flashes, insomnia, vaginal dryness, and frequent urinary tract infections. Results of research on its bone-density-maintaining effects have been contradictory, with the most promising results coming from Japanese studies. Estriol's effect on cardiac risk factors has also been somewhat equivocal; however, unlike conventional estrogen prescriptions, it does not seem to contribute to hypertension. Although **estriol appears to be much safer than estrone or estradiol**, its continuous use in high doses may have a stimulatory effect on both breast and endometrial tissue.

**Citation:**

**Estriol: safety and efficacy.**

Head KA - *Altern Med Rev* - 01-APR-1998; 3(2): 101-13

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**Review of the endometrial safety during intravaginal treatment with estriol.** - Vooijs GP - *Eur J Obstet Gynecol Reprod Biol* - 01-SEP-1995; 62(1): 101-6 (From NIH/NLM MEDLINE)

**Abstract:**

To gain more insight into whether intravaginal treatment of local urogenital complaints with the mild-acting oestrogen **estriol** is capable of inducing proliferation of the endometrium, the results of the clinical studies that have been published over the years have been pooled. Of a total of 19 studies that initially had been selected, four were excluded from the analysis because no baseline biopsies were available, two because endometriae had been evaluated using methods other than with histology, and one study because a sustained-release preparation was used. Pooling of 12 studies (214 subjects) revealed a reasonable amount of long-term data on intravaginal **estriol** treatment with 61 evaluable biopsies after 6 months and 58 after 12 months. In addition, 13 biopsies were available after 2 years. It appeared that intravaginal **estriol** treatment using the recommended dosages did not result in endometrial proliferation. All 337 post-baseline biopsies that have been reported in the literature were classified as atrophic. **It can be concluded that single daily treatment with intravaginal estriol in the recommended doses in postmenopausal women is safe and without an increased risk of endometrial proliferation or hyperplasia.** Consequently, there is no need to add sequential progestogens with these preparations and no withdrawal bleedings will be induced.

**Citation:**

**Review of the endometrial safety during intravaginal treatment with estriol.**  
Vooijs GP - *Eur J Obstet Gynecol Reprod Biol* - 01-SEP-1995; 62(1): 101-6  
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**Efficacy and safety of estriol replacement therapy for climacteric women.** - Yang TS  
- *Zhonghua Yi Xue Za Zhi (Taipei)* - 01-MAY-1995; 55(5): 386-91 (From NIH/NLM  
MEDLINE)

**Abstract:**

BACKGROUND. As an estrogen derivative, **estriol** is rather effective in the relief of climacteric symptoms due to estrogen deficiency. When given one dose a day, it will not provoke endometrial proliferation and shedding. Thus, it is suitable for postmenopausal women who no longer want to have uterine bleeding and for those with comparatively higher risk of endometrial hyperplasia. In the aspect of postmenopausal osteoporosis, the prevention of further bone loss due to estrogen deficiency is also important and to be evaluated. METHODS. We collected 20 patients, aged 44-62 years, who had undergone either natural or surgical menopause and were treated with **estriol** succinate (Synopause; Organon; Holland 2 mg/tab) 2 mg/day for 2 years, with relief of climacteric symptoms evaluated after the first 3 months of treatment. Bone mineral density (BMD) of lumbar spine was measured using quantitative computed tomography (QCT) after one and two years of treatment, respectively. RESULTS. **Estriol** was very effective in the improvement of major subjective climacteric complaints in 86% of patients, especially hot flush and insomnia within 3 months. The atrophic genital changes caused by estrogen deficiency were also improved satisfactorily. No subjective symptoms induced by the therapy were seen. The rate of uterine bleeding was low, complained by only one patient. However, our study did not show the preventive effect of **estriol** against osteoporosis. CONCLUSIONS. **Estriol** can be a safe and effective alternative in the relief of climacteric symptoms for postmenopausal women, but it cannot prevent the bone loss.

**Efficacy and safety of estriol replacement therapy for climacteric women.**  
Yang TS - *Zhonghua Yi Xue Za Zhi (Taipei)* - 01-MAY-1995; 55(5): 386-91  
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**Safety and efficacy of oestriol for symptoms of natural or surgically induced menopause.** - Takahashi K - *Hum Reprod* - 01-MAY-2000; 15(5): 1028-36 (From NIH/NLM MEDLINE)

**Abstract:**

To assess the **safety** and efficacy of oestriol in relieving post-menopausal symptoms 53 post-menopausal Japanese women with climacteric symptoms, 27 with natural menopause (group I) and 26 with surgically induced menopause (group II), received oral oestriol, 2 mg daily for 12 months. Clinical parameters including Kupperman index (KI) and the degree of satisfaction with symptomatic relief; serum concentrations of oestradiol, FSH and LH; serum lipids; blood pressure; bone mineral density, serum calcium (Ca), alkaline phosphatase (ALP), and urinary Ca were compared between the two groups. Oestriol improved KI in groups I and II by 49 and 80% respectively. Satisfaction with treatment was 85% in group I and 93% in group II. For both parameters, values were significantly different between groups I and II ( $P < 0.05$  for both). Serum concentrations of oestradiol, FSH and LH changed in group I versus group II 6 months after initiation. A significant decrease in serum ALP and Ca/Cr was observed in group I at 6 months. Except for serum triglycerides, oestriol had no significant effect on lipids. Systolic and diastolic blood pressures were significantly decreased in group I at 3 months versus baseline. Slight vaginal bleeding occurred in 14.3% of group I. Histological evaluation of the endometrium in all women of group I and ultrasound assessment of the breasts following 12 months of oestriol treatment found normal results in all women. Therefore, oestriol appeared to be safe and effective in relieving symptoms of menopausal women. The beneficial biochemical effects of oestriol were marked in the natural menopause. Overall, oestriol may serve as a good choice for hormone replacement therapy to protect against other climacteric symptoms in post-menopausal women who do not need medication for osteoporosis or coronary artery disease.

**Citation:**

**Safety and efficacy of oestriol for symptoms of natural or surgically induced menopause.**

Takahashi K - *Hum Reprod* - 01-MAY-2000; 15(5): 1028-36  
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Note: Ovestin is estriol manufactured in Europe by Ortho-Gynest

**The treatment of postmenopausal vaginal atrophy with Ovestin vaginal cream or suppositories: clinical, endocrinological and safety aspects.** - Kicovic PM - *Maturitas* - 01-DEC-1980; 2(4): 275-82 (From NIH/NLM MEDLINE)

**Abstract:**

Seventy-four postmenopausal women presenting with vaginal atrophy were treated with either Ovestin vaginal cream (Group A, 23 women: 1 mg/day E3; Group B, 30 women: 0.5 mg/day E3) or vaginal suppositories (Group C, 21 women: 0.5 mg/day E3), applied daily for 3 wk (A and B) or 2 wk (C) before retiring. Ten women from A and 10 from B applied a maintenance dose (1 application twice weekly) during wk 4-16. Effects on vaginal cytology, cervical mucus and clinical and colposcopic findings were studied. Endometrial biopsies were done in 16 patients (A) before and after 3 wk of treatment, and, in 8 of the cases, at 16 wk. A routine laboratory screening program was performed before and after 16 wk of treatment in 10 patients (A). Plasma samples for hormone level determinations were obtained in 32 patients. Clinical and colposcopic findings showed a beneficial effect of treatments, confirmed by vaginal smears, and persisting during maintenance therapy. Effect on cervical mucus was slight to moderate. No side effects occurred and tolerance was very good. Endometrium remained atrophic under treatment. Screening program revealed no abnormalities. Treatments induced a sharp rise in plasma E3, followed by a gradual decline. Gonadotropins were slightly suppressed. E1, E2, PRL and SHBG capacity remained unchanged.

**Citation:**

**The treatment of postmenopausal vaginal atrophy with Ovestin vaginal cream or suppositories: clinical, endocrinological and safety aspects.**

Kicovic PM - *Maturitas* - 01-DEC-1980; 2(4): 275-82

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**The effects of oral estriol on the endometrium in postmenopausal women.** - Granberg S - *Maturitas* - 25-JUN-2002; 42(2): 149-56 (From NIH/NLM MEDLINE)

**Abstract:**

**OBJECTIVES:** To study the long-term effects of oral **estriol** tablets on the endometrium of postmenopausal women by TVS and histology. **METHOD:** This was a cross sectional, parallel-group, multicenter trial of 241 postmenopausal women, out of whom 125 were treated with oral **estriol** and 116 were untreated controls. Endometrial histology using Pipelle biopsies and/or dilatation and curettage (D&C) was taken, endometrial thickness was assessed by use of transvaginal ultrasound (TVS), and the relation between endometrial thickness and histology was calculated. **RESULTS:** No statistically significant differences between the two groups were found in endometrial histology. There were found more polyps in the oral **estriol** group (14.0%) as compared with the control group (2.9%). The mean endometrial thickness in the oral **estriol** group was 3.0 mm compared with a mean value of 2.4 mm in the control group: P=0.01. **CONCLUSIONS:** No clinically relevant difference was found between the endometrium status (assessed by histology and TVS) of postmenopausal women on long-term oral **estriol** therapy and untreated controls. **This trial supports the endometrial safety of maintenance treatment with oral estriol tablets.** However, there are signs, not statistically significant, that may be associated with more endometrial polyps in postmenopausal women than if therapy is not given and that TVS is a useful instrument for the diagnosis.

**Citation:**

**The effects of oral estriol on the endometrium in postmenopausal women.**  
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