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**Estrogen alone and joint symptoms in the Women's Health Initiative randomized trial.**

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**Source**

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**Abstract**

**OBJECTIVE:**

Although joint symptoms are commonly reported after menopause, observational studies examining exogenous estrogen's influence on joint symptoms provide mixed results. Against this background, estrogen-alone effects on joint symptoms were examined in post hoc analyses in the Women's Health Initiative randomized, placebo-controlled, clinical trial.

**METHODS:**

A total of 10,739 postmenopausal women who have had a hysterectomy were randomized to receive daily oral conjugated equine estrogens (0.625 mg/d) or a matching placebo. The frequency and severity of joint pain and joint swelling were assessed by questionnaire in all participants at entry and on year 1, and in a 9.9% random subsample (n = 1,062) after years 3 and 6. Logistic regression models were used to compare the frequency and severity of symptoms by randomization group. Sensitivity analyses evaluated adherence influence on symptoms.

**RESULTS:**

At baseline, joint pain and joint swelling were closely comparable in the randomization groups (about 77% with joint pain and 40% with joint swelling). After 1 year, joint pain frequency was significantly lower in the estrogen-alone group compared with the placebo group (76.3% vs 79.2%, P = 0.001), as was joint pain severity, and the difference in pain between randomization groups persisted through year 3. However, joint swelling frequency was higher in the estrogen-alone group (42.1% vs 39.7%, P = 0.02). Adherence-adjusted analyses strengthen estrogen's association with reduced joint pain but attenuate estrogen's association with increased joint swelling.

**CONCLUSIONS:**

The current findings suggest that estrogen-alone use in postmenopausal women results in a modest but sustained reduction in the frequency of joint pain.

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