

# Estrogen therapy may be associated with kidney stones in postmenopausal women

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Use of estrogen therapy is associated with an increased risk of developing kidney stones in postmenopausal women, according to a report in the October 11 issue of *Archives of Internal Medicine*, one of the JAMA/Archives journals.

"Nephrolithiasis [[kidney stones](#)] is a common condition that affects 5 percent to 7 percent of [postmenopausal women](#) in the United States," according to background information in the article. "Because the process of kidney stone formation is influenced by a variety of lifestyle and other health-related factors, the true impact of estrogen therapy on the risk of kidney stone formation is difficult to infer from observational studies."

Using data from the national Women's Health Initiative study, Naim M. Maalouf, M.D., of the University of Texas Southwestern Medical Center, Dallas, examined data from two trials: 10,739 postmenopausal women with hysterectomy who received either an estrogen-only treatment or matching placebo and 16,608 postmenopausal women without hysterectomy who received either an estrogen plus progestin treatment or matching placebo. Data were collected for an average of 7.1 years in the estrogen-only trial and 5.6 years for the estrogen plus progestin trial.

A total of 335 cases of kidney stones were reported in the active treatment groups, while 284 cases occurred in the placebo groups. The beginning demographic characteristics and risk factors for kidney stones

were similar in the two groups, and the authors found that estrogen therapy was associated with a significant increase in risk of kidney stones. The corresponding annualized incidence rate per 10,000 women per year was 39 in the treatment group and 34 in the placebo group. Development of kidney stones was five times more common in women with a history of kidney stones at the beginning of the study, but was not significantly altered by estrogen therapy. In this trial, estrogen therapy increased the risk of development of kidney stones irrespective of age, ethnicity, [body mass index](#), prior hormone therapy use or use of coffee or thiazide diuretics.

The authors conclude that their results "indicate that estrogen therapy increases the risk of nephrolithiasis in healthy postmenopausal women. The mechanisms underlying this higher propensity remain to be determined. In view of the sizable prevalence of nephrolithiasis in this segment of the population, these findings need to be considered in the decision-making process regarding postmenopausal estrogen use."

**More information:** *Arch Intern Med.* 2010;170[18]:1678-1685.

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