

Menopausal hormone therapy and breast cancer risk

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In the past decade, results from large prospective cohort studies and the Women's Health Initiative (WHI) randomized placebo-controlled hormone therapy trials have substantially changed thoughts about how estrogen alone and estrogen plus progestin influence the risk of breast cancer, according to a review published March 15 in the *Journal of The National Cancer Institute*.

Although [hormone therapy](#) is currently used by millions of women for [menopausal symptoms](#), there is still concern about hormone therapy–induced [breast cancer](#) risk. In addition, the effects of estrogen plus progestin vs estrogen alone on breast cancer are not completely understood.

To compare the effects of estrogen alone vs those of estrogen plus progestin on breast cancer risk, Rowan T. Chlebowski, M.D., Ph.D., of the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center and Garnet Anderson, Ph.D., at Fred Hutchinson Cancer Research Center at, looked at data from two randomized, placebo-controlled full scale clinical trials conducted in the WHI. One trial evaluated estrogen plus progestin in postmenopausal women with an intact uterus, and the other evaluated estrogen alone in postmenopausal women with prior hysterectomy. Estrogen plus progestin statistically significantly increased the risk of breast cancer. In contrast, estrogen alone use in postmenopausal women with a previous hysterectomy, statistically significantly decreased the risk of breast cancer.

The randomized clinical trial findings differ from the predominance of observational studies, which suggested that both estrogen alone and estrogen plus progestin increase breast cancer incidence. The authors propose that "an imbalance in the use of mammography with greater screening for hormone users could explain some of the increase in breast cancer incidence with estrogen alone seen in cohort studies because screened populations have more cancers detected than unscreened populations".

While the mechanisms underlying the different effects of estrogen alone and estrogen plus progestin are not completely understood, the authors state that preclinical and other clinical evidence suggests "the findings in the clinic, taken together with preclinical evidence, indicate that many breast cancers in post-menopausal women can survive only a limited range of [estrogen](#) exposures."

Provided by Journal of the National Cancer Institute

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