

Breast Cancer Risk in Younger Women May Be Influenced by Hormone Therapy

NIH study could help to guide clinical recommendations for hormone therapy use among women under 55 years old.

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Scientists at the National Institutes of Health (NIH) have found that two common types of hormone therapy may alter breast cancer risk in women before age 55. Researchers discovered that women treated with unopposed estrogen hormone therapy (E-HT) were less likely to develop the disease than those who did not use hormone therapy. They also found that women treated with estrogen plus progestin hormone therapy (EP-HT) were more likely to develop breast cancer than women who did not use hormone therapy. Together, these results could help to guide clinical recommendations for hormone therapy use among younger women.

The two hormone therapies analyzed in the study are often used to manage symptoms related to menopause or following hysterectomy (removal of uterus) or oophorectomy (removal of one or both ovaries). Unopposed estrogen therapy is recommended only for women who have had a hysterectomy because of its known association with uterine cancer risk.

“Hormone therapy can greatly improve the quality of life for women experiencing severe menopausal symptoms or those who have had surgeries that affect their hormone levels,” said lead author Katie O’Brien, PhD, of NIH’s National Institute of Environmental Health Sciences (NIEHS). “Our study provides greater understanding of the risks associated with different types of hormone therapy, which we hope will help patients and their doctors develop more informed treatment plans.”

The researchers conducted a large-scale analysis that included data from more than 459,000 women under 55 years old across North America, Europe, Asia, and Australia. Women who used E-HT had a 14% reduction in breast cancer incidence compared to those who never used hormone therapy. Notably, this protective effect was more pronounced in women who started E-HT at younger ages or who used it longer. In contrast, women using EP-HT experienced a 10% higher rate of breast cancer compared to non-users, with an 18% higher rate seen among women using EP-HT for more than two years relative to those who never used the therapy.

According to the authors, this suggests that for EP-HT users, the cumulative risk of breast cancer before age 55 could be about 4.5%, compared with a 4.1% risk for women who never used hormone therapy and a 3.6% risk for those who used E-HT.

Further, the association between EP-HT and breast cancer was particularly elevated among women who had not undergone hysterectomy or oophorectomy. That highlights the importance of considering gynecological surgery status when evaluating the risks of starting hormone therapy, the researchers noted.

“These findings underscore the need for personalized medical advice when considering hormone therapy,” said NIEHS scientist and senior author Dale Sandler, PhD. “Women and their health care providers should weigh the benefits of symptom relief against the potential risks associated with hormone therapy, especially EP-HT. For women with an intact uterus and ovaries, the increased risk of breast cancer with EP-HT should prompt careful deliberation.”

The authors noted that their study is consistent with previous large studies that documented similar associations between hormone therapy and breast cancer risk among older and postmenopausal women. This new study extends those findings to younger women, providing essential evidence to help guide decision-making for women as they go through menopause.

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