

# Obesity raises odds for recurrence in breast cancer survivors, finds study

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Many breast cancer survivors take a hormonal drug after cancer

treatment to stave off a recurrence, but new research suggests these drugs may be less effective in women who are obese.

Breast cancer cells in hormone-positive breast cancers are fueled by the female sex hormone estrogen. Aromatase inhibitor medications lower estrogen levels by stopping an enzyme in [fat tissue](#) called aromatase from changing other hormones into estrogen.

When compared to breast cancer survivors of normal weight, women who were obese were 18% more likely to have a recurrence even when taking an [aromatase inhibitor](#), and this increased risk was even higher among survivors who were severely obese, the investigators found.

"Postmenopausal women with hormone receptor-positive breast cancer and obesity who are treated with aromatase inhibitors at are increased risk of having a recurrence of their disease," said study author Sixten Harborg, a researcher in the department of oncology at Aarhus University Hospital in Denmark.

However, he added, "Treatment with aromatase inhibitors is still the treatment choice for this patient group and lowers the rate of breast cancer recurrence and [death] in this patient group."

Exactly how, or even if, obesity increases the risk of breast cancer recurrence in women taking aromatase inhibitors is not fully understood yet. "Obesity can affect the response to [cancer treatment](#), as obesity alters drug metabolism and distribution," Harborg noted.

Fat cells store estrogen, and women who are obese have more fat tissue, which could explain why aromatase inhibitors are less effective at suppressing estrogen in these women.

"The underlying mechanisms are multifactorial, and further [clinical](#)

[studies](#) to understand how obesity is linked to breast cancer progression are needed," Harborg said.

For the study, the researchers analyzed data on 13,230 breast cancer survivors who had been diagnosed with hormone-positive breast cancer and were taking aromatase inhibitors to prevent a recurrence. Of these, there were 1,587 recurrences that took place during slightly more than six years of follow-up. Women who were obese or severely obese and were treated with aromatase inhibitors were more likely to have a recurrence of their cancer than their counterparts who were of normal weight, the findings showed.

Women who were overweight, but not obese, did have a greater risk of breast cancer recurrence, but the results were not considered statistically significant.

The study was published online Oct. 13 in [JAMA Network Open](#).

While more studies are needed to see how weight affects the risk of breast cancer recurrence in women taking [aromatase inhibitors](#), it is known that being overweight or obese increases the risk of complications after surgery to treat breast cancer, said Dr. Vivian Jolley Bea, section chief of breast surgical oncology in the department of surgery at NewYork-Presbyterian Brooklyn Methodist Hospital in New York City.

Many [breast cancer survivors](#) aren't aware that their weight plays a role in their risk for recurrence, but this knowledge can be empowering, said Bea.

"Maintaining a [normal weight](#), eating a [healthy diet](#) and getting regular exercise can help lower the risk of a breast cancer recurrence risk," she said.

There is overwhelming evidence linking obesity to 13 cancer types, and obesity also increases the risk of dying from cancer, said Dr. Carmen Calfa, a breast medical oncologist and medical co-director of Cancer Survivorship at Sylvester Comprehensive Cancer Center in Miami.

"Fortunately, unlike genetics and other risk factors, [body weight](#) is modifiable and [this study] highlights the importance of programs which incorporate nutrition and exercise...after a diagnosis of cancer," she said.

"This can empower women to play a critical role in reducing their risk of breast cancer recurrence," Calfa added.

**More information:** Sixten Harborg et al, Obesity and Risk of Recurrence in Patients With Breast Cancer Treated With Aromatase Inhibitors, *JAMA Network Open* (2023). [DOI: 10.1001/jamanetworkopen.2023.37780](#)

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