

Unhealthy insulin levels may boost breast cancer risk

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Study of postmenopausal women suggested hormone levels mattered more than excess weight.

(HealthDay)—After menopause, unhealthy insulin levels may predict breast cancer risk even more than excess weight, new research suggests.

The new findings suggest "that it is metabolic health, and not [overweight](#) per se, that is associated with increased risk of breast cancer in postmenopausal [women](#)," said study co-author Marc Gunter. He is an associate professor of cancer epidemiology and prevention at Imperial College London School of Public Health in England.

While high [insulin](#) levels often occur in overweight or obese women, some very heavy women have normal levels of the hormone, experts say. And some normal-weight females have metabolically unhealthy insulin levels.

The study was published Jan. 15 in the journal *Cancer Research*.

To assess insulin's role in breast cancer risk, Gunter studied more than 3,300 women without diabetes, 497 of whom developed breast cancer over eight years. He analyzed information on their weight, fasting insulin levels and insulin resistance, in which the body does not respond properly to insulin. Insulin helps the body use digested food for energy. A body's inability to produce insulin or use it properly leads to diabetes.

Overweight for the study was defined as a body mass index (BMI) of 25 or more. BMI is a calculation of body fat based on height and weight.

"The women who are overweight but who do not have metabolic abnormalities [as assessed by [insulin resistance](#)] are not at increased risk of breast cancer compared to [normal-weight] women," Gunter said.

"On the other hand, normal-weight women with metabolic abnormalities were at approximately the same elevated risk of breast cancer as overweight women with [metabolic abnormalities](#)," he added.

Gunter said this seemingly strong link between insulin and breast cancer is not a reason for women to ignore excess pounds. Being overweight or obese does increase the chances of developing insulin problems, he said.

In his study, high fasting insulin levels doubled the risk of breast cancer, both for overweight and normal-weight women.

In addition, women who were overweight and insulin-resistant had an 84 percent greater risk of breast cancer than overweight women who weren't insulin-resistant, he found.

Other research has found that up to 10 percent of women at a healthy weight may have insulin problems, he said.

Gunter said more research is needed to explain the findings. Insulin can cause cells, including cancer cells, to grow, so that could be a factor, he said. Other hormones related to insulin can also be higher in overweight women, and they could contribute to [breast cancer risk](#), he said.

The overall findings are not surprising, said Dr. Courtney Vito, associate clinical professor of surgical oncology at City of Hope Cancer Center in Duarte, Calif.

"Fat is not inert," she said. "It is a metabolically active organ and we've known this from many other studies." There is much that experts still don't know about fat, she said.

The study is interesting, Vito said, although she agreed that more research is needed before the results can be considered conclusive. She played no role in the study.

Gunter's earlier research also found that higher insulin levels boost [breast cancer](#) risk in postmenopausal women. What may surprise some is the information about higher [cancer risk](#) in slender women with insulin problems, said Dr. Allison DiPasquale, a fellow at City of Hope, who wasn't involved in the study.

Future studies, DiPasquale said, should look more closely at four subgroups: [overweight women](#) with and without insulin problems and normal-weight women with and without insulin problems.

Meanwhile, all three experts agreed the take-home point for women is to eat a healthy diet and to exercise regularly, so weight and [insulin levels](#) are more likely to stay normal.

More information: To learn more about insulin resistance, visit the [American Diabetes Association](#).

[Abstract](#)

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