

Researchers study weight loss to reduce breast cancer

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Fat cells are source of estrogen, a hormone that fuels breast cancer in women after menopause.



(Photo: Getty Images)

SIOUX FALLS, S.D. — Lenee Gaddis was [one more statistic in a world of cancer](#).

She had breast cancer, which put her among the 600 South Dakota women who hear that diagnosis each year. More than 12%, about 1 in 8 women, develop breast cancer sometime in their lives, and 110 state residents die from it annually.

Against that backdrop, Gaddis went through surgery, radiation and drug-related therapy to endure everything science could throw at her problem.

Then she took part in a study that has made her a more encouraging statistic.

She became one of 24 breast cancer survivors who lost an average of 44 pounds in five months. In so doing, she and the other women have sharply cut the risk of the disease returning.

"I feel fortunate that I've gotten through everything and that I have pretty much a clean slate," Gaddis said.

The 53-year-old Sioux Falls woman is a mother of two. Her experience affirms an upside in work against a disease — cancer in all forms — that remains the No. 1 killer of South Dakotans.

On the world stage, the numbers are piling up. Tuesday is World Cancer Day, a day the Swiss-based Union for International Cancer Control calls attention to its forecast that "the global burden of new cancer cases will surge from 14.1 million in 2012 to 19.3 million by 2025."

Closer to home, Gaddis found reason to hope. She was diagnosed in 2008 with stage 3 breast cancer. She had a bilateral mastectomy, then radiation, chemotherapy and a hysterectomy as part of her treatment. It's typical for women to gain weight through that sequence, she said, and she gained 24 pounds.

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Colleen Doyle, American Cancer Society

Three years later, Dr. Amy Krie, medical oncologist at the Avera Cancer Institute here, called Gaddis with an invitation. "Would I participate in a clinical study? I said, 'Sure.'" That was July 2011. She and two dozen women would go on an Ideal protein diet, meet with coaches every week and give blood every two weeks. They were an average age of 67 and average weight of 220 pounds.

By that December, Gaddis lost 52 pounds. She went to her daughter Jessie's wedding in January 2012 in Mexico, feeling light and lighthearted. "I lost about a quarter of my weight," she said. She has more energy, less pain in her knees and, by slimming down, has taken a stand against the disease ever returning to her body.

Krie presented [results of the study at the 36th annual San Antonio Breast Cancer Symposium](#) late last year. Research shows that excess weight increases the risk of recurrence and death. Fat cells are a source of estrogen, a hormone that fuels breast cancer in women after menopause. At the same time, anti-estrogen therapies can make a woman heavier, adding to the difficulty of maintaining a good weight. Successful weight loss would have the potential to turn that equation around in a woman's favor.

"All but one of the women in this study were receiving endocrine therapy, making the significant weight loss remarkable," Krie said. Participants took part in the Ideal protocol in which they ate protein-based replacements for three of their four daily meals.

The diet restricted carbohydrates and was limited to 800 to 1,200 calories a day, compared to a common intake of 2,000 calories. Weight loss averaged 5.5 pounds the first week, then 2.14 pounds a week through week 19. "When they stay on this program, they're flipping their metabolism. The body is burning fat as a primary source of nutrition," said Kathy Bertsch, development consultant for Ideal Protein.

Krista Bohlen, research pharmacist for the Avera Institute for Human Genetics, said that in addition to the 24 women recovering from breast cancer, a companion piece of research is following eight women with cancer of the uterus. It's a 10-year project.

"We're all done now with the active weight loss. We'll follow them until 2021," Bohlen said.

Colleen Doyle, director of nutrition and physical activity for the American Cancer Society, said weight control has moved to the top of the list of recommendations for reducing cancer risk.

"One of the key changes is the evolution to an emphasis on encouraging a healthy dietary pattern, as opposed to individual foods or nutrients to reduce cancer risk," Doyle said in a statement the society e-mailed from the Twin Cities.

This particular study is closed, but it might set the stage for larger trials on low-carb diets for cancer survivors. Results so far underscore the importance of diet and exercise for breast cancer survivors and hasten what Krie said she hopes will be a willingness of insurance carriers to share the cost.