

The disturbing links between too much weight and several types of cancer

By [Laurie McGinley](#)

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Smoking has been the No. 1 preventable cause of cancer for decades and still kills more than 500,000 people a year in the United States. But obesity is poised to take the top spot, as Americans' waistlines continue to expand while tobacco use plummets.

The switch could occur in five or 10 years, said Otis Brawley, a Johns Hopkins oncologist and former chief medical officer of the American Cancer Society. The rise in obesity rates could threaten the steady decline in cancer death rates since the early 1990s, he said.

Yet [only about half of Americans](#) are aware of the link between excess weight and cancer. And researchers are struggling to answer such fundamental questions as how surplus weight increases the risk of the disease and whether, conversely, losing weight helps prevent cancer or a recurrence.

Being obese and overweight — long implicated in heart disease and diabetes — [has been associated in recent years with an increased risk of getting at least 13 types of cancer](#), including stomach, pancreatic, colorectal and liver malignancies, as well as postmenopausal breast cancer. Researchers at the American Cancer Society say that [excess body weight is linked to about 8 percent of all cancers](#) in the United States and about 7 percent of cancer deaths.

Compared with people of normal weight, obese patients are more likely to see their [cancer come back and have a lower likelihood of survival](#). Perhaps most alarming, young people, who as a group are heavier than their - parents, are developing weight-related malignancies, including colorectal cancer, at earlier ages than previous generations, experts say.

'A complex interplay'

The precise link between cancer and excess weight isn't known, but researchers are focusing on the "visceral" fat that surrounds internal organs. Rather than being a harmless glob, this fat is a "metabolically active organ" that produces hormones such as estrogen, which is associated with a higher risk of breast and some other cancers, according to the American Institute for Cancer Research, a nonprofit group that focuses on diet, nutrition and cancer.

The fat also secretes proteins that drive insulin levels higher, which may spur cell growth and increase the possibility of cancer. And it can cause chronic inflammation, another risk factor for the disease, according to

the group.

“It’s a complex interplay of metabolism, inflammation and immunity,” said Jennifer Ligibel, a breast oncologist at the Dana-Farber Cancer Institute. “It creates an environment that is more permissive for cancer.”

About [7 in 10 Americans are overweight or obese](#), according to a 2015 article in JAMA Internal Medicine. People are considered overweight if they have a body mass index (BMI) of 25 to 29, and obese if they have a BMI of 30 or more.

The proportion of adults who are overweight has remained relatively stable in the past several decades, but the obesity rate has soared. In the early 1960s, almost 11 percent of men and nearly 16 percent of women were obese; in 2016, those percentages were 38 percent and 41 percent, respectively, according to the cancer society.

The risk of cancer rises along with excess weight. “It does appear that the risk is greater the more obese you are,” said Jonathan Wright, a urologist at Fred Hutchinson Cancer Research Center in Seattle. There is a link between being overweight and cancer, “but it is not as strong,” he said.

The type of cancer that is most strongly associated with obesity is endometrial, which develops in the lining of the uterus. Obese and overweight women are two to four times as likely to develop the disease as women of normal weight, and the risk rises with increased weight gain, according to the National Institutes of Health.

Meanwhile, people who are overweight or obese are about twice as likely to develop liver and kidney cancer, and about 1.5 times as likely to develop pancreatic cancer than normal-weight people, according to NIH.

In addition, [having too much belly fat — a larger waistline](#) — is linked to an increased risk of colorectal and some other cancers, regardless of body weight, the cancer society said.

Several researchers are running clinical trials to try to prove what many already believe — that losing weight reduces the odds of developing cancer or having a recurrence. There are some indications they may be right — [severely obese people who have bariatric surgery, for example, lessen their odds of getting cancer](#) — but much more data is needed.

Trials and studies

Carol Massey, who is 59 and was treated for breast cancer two years ago, is enrolled in a nationwide trial designed to see if losing weight makes it less likely breast cancer will come back. She has reduced her calorie intake, stepped up her exercise and gotten regular advice from a health coach based at Boston’s Dana-Farber Cancer Institute, which is leading the Breast Cancer Weight Loss Study, or BWEL.

To be eligible for the trial, women must have a BMI of 27 or higher. The study, which will enroll about 3,100 women, will compare Massey’s group — which gets supervised weight loss and health-education materials — with a group that receives only the educational materials.

Massey, who lives in Paola, Kan., said she quickly came to look forward to her coach's calls, which initially were once a week. "We got to be friends, she would ask about my family," she said. "One time, she even called me when she was on vacation in Cabo San Lucas" in Mexico.

Over time, the 5-foot-8 Massey lost 30 pounds. She is now 150 pounds.

Those are the kind of results Ligibel, the principal investigator, is hoping for. If the study shows that slimming down is associated with reduced recurrence, doctors could prescribe a weight-loss program as standard therapy for breast cancer patients — much as cardiac rehabilitation is urged for heart-attack patients. That could pave the way for insurance coverage.

Gail Folloder joined a 16-week program at University of Texas MD Anderson Cancer Center for heavier women at high risk of breast cancer because both of her parents had had cancer and she wanted to prevent it. The 67-year-old Houston resident underwent "hunger training," which uses continuous glucose monitoring to show participants when they need fuel and urges them to limit their eating to those times.

"The idea is to help people learn to eat only when they are really hungry," said Karen Basen-Engquist, a behavioral scientist at the cancer center. "We eat for all kinds of reasons — sometimes because we are with other people or because we are bored or stressed."

It worked for Folloder. "I used to say that I was hungry all the time but I really wasn't," she said. "Now I'm more in tune with my body."

Besides talking to a dietitian weekly, she stepped up her physical activity by using a hula hoop and an exercise bike. Folloder, who is 5-foot-9, went from 219 pounds to 191 pounds.

The women in Folloder's group will be compared to a "control" group that takes part in a weight-loss program but does not do blood sugar monitoring. Results are expected this year.

Fred Hutchinson's Wright is focusing on overweight and obese men with low-grade, slow-growing prostate cancer who have decided to take an "active surveillance" approach — which involves monitoring via blood tests, physical exams and biopsies — rather than treatment such as radiation or surgery. He is investigating whether keeping patients' glucose levels under control through weight loss will prevent the cancer from getting worse and improve survival. The goal is for participants to lose 7 percent of their body weight.

The study is based on the [Diabetes Prevention Program](#), which showed that people at high risk for Type 2 diabetes can prevent or delay the disease by losing a modest amount of weight through dietary changes and increased physical activity.

Finding the right diet

Steve Borden, 57, enrolled in the trial, called Prostate Cancer Active Lifestyle or PALS, last November and was assigned to a nutritionist and exercise physiologist to coach him on diet and exercise.

The 5-foot-10 Borden has lost 30 pounds and now weighs 198 pounds. His target is just 1,800 calories a day, and he regularly uses the treadmill and lifts weights. He said a recent test showed his PSA — for prostate-specific antigen, which when elevated can be an indication of cancer — has dropped slightly, although his doctors don't know whether that is connected to his weight loss.

In general, how much do people need to lose to improve their cancer odds? Ligibel of Dana-Farber said it is not clear but that data suggests a 5 percent reduction in body weight has a beneficial impact on blood sugar and inflammation.

For anyone wanting to reduce their cancer risk, avoiding weight gain in the first place is important, experts say. Brawley of Johns Hopkins said that the goal should be maintaining “energy balance” — consuming no more calories than are burned off through exercise and other activity.

Nutritionists say the key is cutting down on portion sizes, avoiding sugar and aiming for meals that are rich in vegetables, fruits and whole grains and beans and light on animal protein.

Anthony Perre, chief of outpatient medicine at Cancer Treatment Centers of America, said the Mediterranean diet — which emphasizes plant-based food, whole grains and olive oil — has been linked to improved cancer outcomes.

“But the diet that is the right one is the one that you can sustain over the long term,” he said. “Whether it’s Atkins, low-carb or low-calorie, they all work if you stick with them.”

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