

Obesity, alcohol consumption and smoking increase the risk of second breast cancer

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It is well known that survivors of breast cancer have a much higher risk of developing a second breast cancer than women in the general population have of developing a first breast cancer. However, little is known about what lifestyle factors may make survivors more vulnerable to a second cancer.

A new study by researchers at Fred Hutchinson Cancer Research Center, published online Sept. 8 in the *Journal of Clinical Oncology*, has found that obesity, alcohol use and smoking all significantly increase the risk of second [breast cancer](#) among breast cancer survivors.

"We found that obese [women](#) had a 50 percent increased risk, women who consumed at least one alcoholic drink per day had a 90 percent increased risk, and women who were current smokers had a 120 percent increased risk of developing a second breast cancer," said lead author Christopher I. Li, M.D., Ph.D., an associate member of the Public Health Sciences Division at the Hutchinson Center. Li, an epidemiologist, primarily studies what causes breast cancer and how it can be prevented.

His study adds to a small but growing body of evidence that obesity (a [body mass index](#) of 30 kg/m² or more), alcohol consumption (consuming at least seven drinks a week) and current smoking may be important risk factors for second breast tumors. The research also suggests that current smokers who imbibe at least seven drinks a week may be at particularly high risk of second breast cancer.

"Our study results afford breast cancer survivors three ways to potentially reduce their risk of second cancers: Stay at a normal weight, don't smoke and drink in moderation," he said.

Both obesity and alcohol use are associated with increased levels of circulating estrogen, and this is thought to be the primary means through which they confer an increased risk of breast cancer, since estrogen can fuel breast cancer growth. The link between smoking and breast cancer may be attributed to carcinogens in [tobacco smoke](#).

For the study, Li and colleagues assessed body mass index, alcohol use and smoking status in 365 women who were diagnosed with both a first and a second breast cancer, and compared them to 726 matched controls diagnosed with only a first breast cancer. Obesity, alcohol use and smoking data were collected from medical record reviews and participant interviews. The study participants, all from the Seattle/Puget Sound region, were first diagnosed with breast cancer between the ages of 40 and 79.

"Breast cancer now has a greater than 90 percent five-year survival rate in the United States, resulting in a large and ever-growing number of survivors. Since these women are at two to six times greater risk of developing a second cancer compared to women in the general population, it is important to understand factors that may increase that risk," Li said. "We know that [lifestyle factors](#) such as obesity, smoking and heavy alcohol consumption are linked with a number of life-threatening diseases in addition to cancer, and so reducing or eliminating these factors could have the added benefit of reducing a survivor's risk of developing a second breast cancer."

Source: Fred Hutchinson Cancer Research Center ([news](#) : [web](#))

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