

More Physical Activity, Less Sitting Linked to Lower Breast Cancer Risk

Regular physical was associated with a lower risk of breast cancer while more sedentary time had the opposite effect.

October 13, 2022 By [Sukanya Charuchandra](#)

Less physical activity and more sedentary time are associated with a higher risk of [breast cancer](#), according to study findings published in the [British Journal of Sports Medicine](#). These results held true for different tumor types and stages, supporting the recommendation that exercise could help curtail breast cancer development.

“Increasing physical activity and reducing sedentary time are already recommended for cancer prevention. Our study adds further evidence that such behavioral changes are likely to lower the incidence of future breast cancer rates,” the study authors suggested. “A stronger cancer-control focus on physical activity and sedentary time as modifiable cancer risk factors is warranted, given the heavy burden of disease attributed to the most common cancer in women.”

Numerous observational studies have found that lack of physical activity and a sedentary lifestyle are linked to a greater risk of breast cancer. However, thus far, ascribing a causal relationship has been difficult.

Brigid Lynch, PhD, of the University of Melbourne in Australia, and colleagues used the Mendelian randomization method to look for causation using measured variations in known genotypes. Using information on genetic variants, they examined whether physical activity and sedentary behavior over a lifetime would be causally linked to the development of breast cancer overall and specific tumor types.

The researchers used case and control data from the Breast Cancer Association Consortium, focusing on 130,957 women of European ancestry. These women participated in 76 studies that sought to understand inherited risk for breast cancer. Of these participants, 69,838 had breast cancer that had spread locally, 6,667 had tumors that were not invasive and 54,452 did not have breast cancer.

The team also used UK Biobank data to better understand genetic markers associated with levels of physical activity and sedentary living. These genetic variants were correlated with activity levels measured by trackers worn on the wrist.

A higher level of overall physical activity was linked to lower breast cancer risk. Greater genetically predicted physical activity was associated with a 41% lower likelihood of breast cancer, irrespective of menopause status and tumor type, grade or stage.

Vigorous physical activity was linked to a lower risk of premenopausal or perimenopausal breast cancer. Genetically predicted vigorous activity at least three days each week was associated with a 38% lower likelihood of breast cancer in comparison with no self-reported vigorous activity.

On the other hand, greater amounts of sedentary time were linked to a higher risk for hormone-receptor-negative breast tumors, as well as more risk for other tumor types. More genetically predicted sitting time was associated a 104% greater risk of triple-negative breast cancer.

There are plausible biological explanations for these findings, such as the association of physical activity levels with obesity, disordered metabolism, sex hormones and inflammation, [the researchers noted](#).

“Our study provides strong evidence that greater overall physical activity, greater vigorous activity and lower sedentary time are likely to reduce breast cancer risk,” the study authors wrote. “More widespread adoption of active lifestyles may reduce the burden from the most common cancer in women.”

Click here to read the study abstract in the [British Journal of Sports Medicine](#).

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