

# Breast cancer intervention reduces depression, inflammation

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A psychological intervention for newly diagnosed breast cancer patients with symptoms of depression not only relieves patients' depression but also lowers indicators of inflammation in the blood.

Those are the findings of a new study by researchers at the Ohio State University Comprehensive Cancer Center - James Cancer Hospital and Solove Research Institute (OSUCCC-James) and the Ohio State University Department of Psychology involving patients with stage II or III [breast cancer](#).

Patients who received a psychological therapy that reduced stress and enhanced their ability to cope experienced significant relief of depressive symptoms. Moreover, that improvement was followed by a reduction in markers of [inflammation](#).

"Previously, we knew that inflammation was associated with depression-like symptoms among cancer patients, and that both are problematic, but we did not know whether treating depression would affect inflammation," says co-author Barbara L. Andersen, professor of psychology and an OSUCCC-James researcher.

"Inflammation is considered to be a cancer promoting factor, and both depression and inflammation predict increased risk of cancer death."

Patients in the control group received only health and psychological assessments of their condition over the 12-month study period and

showed no improvement in depression or inflammation indicators.

The findings are published online in the journal [Psychosomatic Medicine](#).

"This study shows that by helping breast cancer patients with depression, they will also experience less inflammation," says study leader Dr. William E. Carson, III, professor in the division of [surgical oncology](#) and associate director for clinical research at the OSUCCC-James.

First author Lisa Thornton, a post-doctoral researcher in the Department of Psychology, noted that 25 to 30 percent of cancer patients experience significant symptoms of depression. "Our findings underscore the importance of including psychological interventions in the comprehensive care of cancer patients who experience significant distress," Thornton says.

The study's patients were participating in a larger clinical trial testing the effects of the same intervention on disease endpoints. Previously published findings showed that the intervention reduced the risk of breast cancer recurrence and death.

This follow-up study examined records from 45 patients who entered the trial with clinically significant symptoms of depression.

Twenty-three of the patients had been randomized to receive the psychological intervention plus the assessment. The remaining 22 patients received only the assessment, which consisted of a personal interview and questionnaires that evaluated mood, fatigue, health status and the influence of pain on quality of life. Blood samples were taken to assess inflammation levels, which were determined using counts of overall white blood cells and neutrophils, and the ratio of two categories of immune cells.

All patients were assessed upon starting the trial, then at four, eight and 12 months.

For the intervention, groups of eight to 12 patients and two psychologists met weekly for four months and monthly for eight months.

By the study's end, [patients](#) receiving the intervention showed significant declines in symptoms of depression, fatigue, and pain and in the markers of inflammation.

"Significant anxiety or depressive disorder symptoms are usually not recognized and might even be trivialized as a 'normal' response to cancer. However, those with clinical [depression](#) need treatment, as symptoms may not remit or even when they do, it can take months," Andersen says.

Source: The Ohio State University ([news](#) : [web](#))

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