

Physical exercise helps women with breast cancer to better tolerate chemotherapy

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Credit: George Hodan/public domain

Women with breast cancer who follow a physical exercise program during their chemotherapy treatment experience less side effects like fatigue, reduced physical fitness, nausea and pain. It is also less often necessary to adjust the dosage of their chemotherapy. This is shown by a study supervised by prof. dr. Neil Aaronson of the Netherlands Cancer Institute (NKI).

Chemotherapy can be very burdensome for patients. Because of the side effects, not all patients are able to complete their [chemotherapy](#) as originally planned, but require a dose adjustment. There are some indications that [physical exercise](#) might help reduce these side effects. Neil Aaronson of the NKI was interested in determining which type of physical exercise programs are most effective, and whether such programs can also help patients better tolerate their chemotherapy. He investigated these issues in a group of women with breast cancer who received [adjuvant chemotherapy](#). The research project, nicknamed PACES, was for a large part carried out by PhD student Hanna van Waart of Aaronson's research group, in close collaboration

with the Physical Therapy department of the NKI. The results of the project are now published in the *Journal of Clinical Oncology*.

Aaronson and Van Waart randomly divided 230 [breast cancer](#) patients into three groups. The first group followed a moderately intensive aerobic and strength [exercise program](#), under supervision of a trained physiotherapist. Women in the second group were assigned to a low intensity aerobic exercise program that they could follow at home, which was coached by a trained nurse or nurse practitioner. The third group did not follow any exercise program. The results of the study were clear. Both groups of women who followed an exercise program experienced less fatigue, loss of fitness, nausea and pain during their chemotherapy treatment. This effect was most pronounced in the group of women who followed the supervised, moderately intensive program. The women in this group were also the ones who endured their chemotherapy best; only twelve percent of them required a dose adjustment. In the control group, 34 percent of the [women](#) could not tolerate the chemotherapy and needed a dose adjustment.

Neil Aaronson: "In the past, patients who received chemotherapy were advised to take it slow. But actually, it is better for these patients to be as active as possible. Our study shows that even low intensity exercise has a positive effect on the [side effects](#) of the chemotherapy. That is good news for those who really don't feel like going to the gym. Small amounts of exercise are already beneficial compared to being non-active."

Aaronson stresses that no conclusions can be drawn yet as to the influence of exercise on the efficacy of the [chemotherapy treatment](#). Aaronson: "Women who followed the moderately intensive, supervised exercise program better tolerated the chemotherapy. But this doesn't necessarily mean that the outcome of their treatment will be more positive. More research is needed into the

relationship between the exact chemotherapy dosage received and long term survival and the chance of recurrence, before we can say anything about the positive effect of exercise on clinical outcomes."

Provided by Netherlands Cancer Institute

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