

# Exercise and yoga improves quality of life in women with early-stage breast cancer

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Two studies report that exercise and yoga can help maintain and in some cases improve quality of life in women with early-stage breast cancer. The first study found that resistance and aerobic exercise improved physical fitness, self-esteem and body composition, and that resistance exercise improved chemotherapy completion rates.

The second study demonstrated that yoga was particularly beneficial for women who were not receiving chemotherapy during the study period. Both studies will be published online September 4 in the *Journal of Clinical Oncology*.

## Resistance and Aerobic Exercise

In the first study, Canadian investigators explored the effects of exercise on quality of life, physical fitness and body composition in women receiving chemotherapy for early-stage breast cancer. This study, the Supervised Trial of Aerobic versus Resistance Training (START) trial, is the largest to date to explore the effects of exercise during chemotherapy and one of the first to evaluate a regimen of resistance exercise.

Researchers divided women into three groups: supervised resistance exercise three times weekly (82 women), supervised aerobic exercise three times weekly (78), and no aerobic or resistance exercise, also known as the “usual care” group (82). The median duration of chemotherapy and exercise was 17 weeks. Participants were surveyed at

the beginning and middle of chemotherapy and up to four weeks after completing treatment.

They found that resistance exercise was better than usual care for improving muscle strength, lean body mass and self-esteem. Aerobic exercise was better than usual care for improving aerobic fitness, self-esteem and body fat percentage. Exercise did not cause lymphedema or other adverse side effects.

“Breast cancer patients can exercise while they’re receiving chemotherapy and achieve meaningful benefits in terms of physical fitness, body composition and self-esteem,” said lead author Kerry Courneya, PhD, professor and Canada research chair in physical activity and cancer at the University of Alberta.

Unexpectedly, the study found that women in the resistance exercise group had the best chemotherapy completion rate. The percentage of women who received 85 percent or more of their recommended chemotherapy dose was 78 percent in the resistance exercise group, 74.4 percent in the aerobic exercise group and 65.9 percent in the usual care group. Although it is unclear why exercise may improve chemotherapy completion rates, the authors speculate that exercise may cause an increase in white blood cell counts, which could allow chemotherapy treatments to continue on schedule. The authors caution that this finding should be replicated before it is considered reliable.

## **Benefits of Yoga**

In the second study, researchers compared various quality of life measures between 84 women with early-stage breast cancer who took a weekly yoga class for 12 weeks and 44 women who did not take yoga. This was the first study to evaluate the benefits of yoga in an ethnically diverse population of women with breast cancer (primarily Hispanic and

African-American women). About half of the women received chemotherapy or radiation therapy during the study period, the remainder had either already completed treatment or not required it. Overall, the women had lower than average levels of quality of life at the beginning of the study.

“Yoga can promote better quality of life for women with breast cancer by helping them connect with others and feel calmer,” said lead author Alyson Moadel, PhD, assistant professor in the department of epidemiology and population health at the Albert Einstein College of Medicine. “Because yoga was well-received by all cultural and socioeconomic groups, it has the potential to help many women with early-stage breast cancer.”

Among all women in the study, those who did not take yoga reported a drop in social well-being scores (a measure of perceived support from and closeness with others) compared with those who took yoga. All other measures (physical, functional, emotional and spiritual well-being; fatigue; anxiety/sadness; irritability; and confusion) did not differ significantly between the groups. As expected, the benefits of yoga were greater in women who adhered to the prescribed regimen and took more classes.

However, among women not undergoing chemotherapy, those taking yoga reported improved overall quality of life as well as better emotional well-being and mood compared with those not taking yoga, who experienced declines in quality of life, mood, and social and spiritual well-being.

“Given the physical and emotional challenges for women undergoing chemotherapy, they may need more yoga to experience these quality of life benefits,” explained Dr. Moadel. “If attending frequent classes isn’t feasible, women should consider using videotapes at home or doing

breathing exercises while they receive treatment.”

In an editorial accompanying both studies, Wendy Demark-Wahnefried, PhD, RD, LDN, of the school of nursing and department of surgery at Duke University Medical Center, writes “These results suggest that the timing of lifestyle interventions may be key if [quality of life] is the primary outcome. They point to the challenges in developing effective interventions that must overcome the host of barriers in patients who are under active treatment. Behavioral interventions that are instituted in these patients come during a period when patients are saddled with competing time constraints and also when their emotional and physical energies are being drained. However, such interventions also may demonstrate their greatest impact during this time of treatment.”

Source: American Society of Clinical Oncology

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