

# Breast-cancer survivors begin to challenge exercise taboos

Heather Kent

## In Brief • En bref

North America has about two million survivors of breast cancer, but little informed advice is available regarding a return to exercise and sports once a course of medical treatment for the disease ends. The lack of research involving the post-treatment phase means physicians tend to err on the side of caution when advising patients about resuming exercise. This may change, because scientists in British Columbia are testing the belief that women recovering from breast cancer should avoid vigorous exercise. The research is a collaborative effort in which several medical specialties are represented.

L'Amérique du Nord compte environ deux millions de femmes qui ont survécu au cancer du sein, mais il y a peu de conseils éclairés disponibles sur la reprise de l'exercice et de l'activité sportive une fois terminé le traitement médical de la maladie. À cause de l'absence de recherche sur la phase qui suit le traitement, les médecins ont tendance à pencher du côté de la prudence lorsqu'ils conseillent leurs patientes au sujet de la reprise des exercices. La situation peut changer parce que des scientifiques de la Colombie-Britannique mettent à l'épreuve la croyance selon laquelle les femmes qui se rétablissent d'un cancer du sein devraient éviter les exercices vigoureux. Des représentants de plusieurs spécialités médicales participent à cet effort de recherche en collaboration.

Dr. Urve Kuusk, a general surgeon with the BC Cancer Agency and one of the project investigators, describes the studies as "very innovative." Kuusk, who sees about 200 newly diagnosed breast-cancer patients each year, hopes that the projects will promote the idea of "getting women back to normal activity following breast-cancer treatment, without fear."

There are about two million survivors of breast cancer in North America, but in spite of the large number they often receive little informed advice regarding a return to exercise and sports once a course of treatment is completed. Because of a lack of research about the post-treatment phase, physicians tend to err on the side of caution when advising patients, Kuusk said. "The dogmas entrenched from the 1950s and '60s, of never do this and never do that, are pretty life limiting."

Sherri Niesen, a physiotherapist and PhD candidate who was instrumental in initiating the projects, adds: "Women are often told that they can't lift more than 10 pounds and shouldn't do any repetitive movements, including paddling [see sidebar]. We want to show women that, within reason, there are no limitations any more." Cardiac rehabilitation has only developed in the past 15-20 years and is now gaining acceptance, she notes, and breast-cancer rehabilitation may follow suit.

Researchers at the University of British Columbia (UBC) are challenging the traditional belief that women recovering from breast cancer should avoid vigorous exercise. Beginning in September 1995, investigators at UBC's Allan McGavin Sports Medicine Centre embarked on three sequential rehabili-

tative exercise studies that may eventually include more than 100 breast-cancer survivors.

The collaborative effort by specialists in exercise physiology, sports medicine, oncology, cardiology, psychology and rehabilitation medicine aims to determine these patients' recovery patterns related to cardiovascular fitness, pulmonary function, anaerobic capacity, strength and body-fat composition. Funding is being provided by the University Hospital Foundation's Pacific Spirit Run.

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The primary fear about vigorous exercise has been that women whose lymph nodes have been removed will experience lymphedema. In the past 10 to 15 years, Kuusk says, surgeons have become more cautious in excising lymph nodes, thus lessening the chance of swelling in the affected arm.

Although there appears to be a correlation between the number of nodes removed and the amount of

lymphedema, and it is thought that radiation of the axilla increases the risk of swelling in the arm, the causes of lymphedema are not well understood. Neither is the incidence well documented; Niesen says that the literature cites rates that vary from 6% to 62%.

Despite the lack of supporting data, lymphedema is frequently cited as a contraindication to active exercise

following medical treatment, says Dr. Susan Harris, a professor in UBC's School of Rehabilitation Sciences. Harris, who is also a breast-cancer survivor and a study participant, describes the current state of knowledge on lymphedema as "folklore."

Lymphedema can be unpredictable and irreversible, occurring anytime from 6 months to 10 years after treatment and causing pain and

## ABREAST IN A BOAT

Many of the women participating in the University of British Columbia's (UBC) breast-cancer study also took part in the World Dragonboat Racing Championships in Vancouver in July. Twenty-four paddlers formed the only all-women team — Abreast in a Boat — in the novice division and won the David C. Lam trophy for "building bridges between the community and the sport."

The team was the brainchild of Dr. Donald McKenzie, director of the applied physiology laboratory at UBC's Allan McGavin Sports Medicine Centre and principal investigator in the breast-cancer study series. McKenzie, a former competitive kayaker, also works with the Canadian Olympic kayaking team as a coach and physician.

The breast-cancer survivors began 2 months of weight training in February, then hit the water in April. They practised twice weekly until June with a quartet of coaches, including McKenzie, project researcher Diana Jespersen, Dr. Sue Buchan and Dr. Drew Mitchell.

The team exceeded McKenzie's expectation "that they would not be competitive"; the goal was

simply to try to complete the 300-m course in the heavy, 700-kg boat.

In some of their six races, however, they finished ahead of other boats. McKenzie says that the team represented a "visible expression of the rehabilitation research that

energizing," says Dr. Susan Harris, 47, who had what she calls a "mild case of breast cancer" almost 2 years ago.

Their ages ranged from 31 to 60. They had run the gamut of breast-cancer surgeries, from simple lumpectomy to bilateral mastectomy. Some completed treatment 10 years ago, others just a few months before joining the team. Only three had any competitive paddling experience.

One experienced paddler, Reni Gitshmann, 43, was training for her sixth season of dragonboating when she was diagnosed with breast cancer 4 years ago; she subsequently was advised not to continue the sport. Joining the Abreast in a Boat team meant coming full circle, and she seized the opportunity to resume the activity that she describes as addictive.

Following their success in Vancouver, the team was invited to race in Victoria and Seattle, and McKenzie is already planning for the 1997 season. He would like to take one or more teams to compete in Toronto, musing that he may need two or three boats. "If the need is there, we will meet that need," he says.

Walter Peain photo



Abreast in a Boat, a dragonboat team comprising 24 breast-cancer survivors

we are trying to do in sports medicine, and the extraordinary performances that are possible. We won just by being there."

Clustered in their vivid fuschia racing shirts, chatting while they waited to board their boat at Vancouver's False Creek, the women personified health, not life-threatening disease, and they radiated optimism. The joie de vivre and camaraderie were "incredibly en-



a debilitating loss of range of motion in the affected arm.

The first descriptive study at UBC began in September 1995. By June 1996, researchers had collected data from about 40 women (in a target group of 60 women) aged from 20 to 65 years who had completed treatment for stage 1 or 2 breast cancer at least 3 months earlier. The women are all self-referred to the study, mainly through breast-cancer support groups. A control group comprises women of similar age and activity levels who have not had breast cancer.

Subjects undergo a set of physical tests, including bilateral arm and

chest strength testing (in which a piece of computerized, variable-resistance exercise-testing equipment is used), skin folds, range-of-motion tests of shoulders and cardiovascular evaluation while riding a stationary bicycle. Emotional status is also probed through three psychological questionnaires; their results are determined by a psychologist with experience in the cancer field.

The second study, which got under way in July, is investigating two groups of newly diagnosed women, 30 with stage 1 disease and 30 with stage 2 disease. The same baseline measurements as in the first project will be recorded before the women

undergo surgery; Niesen says the participants could be seen "within days" of diagnosis.

Testing will be repeated regularly following the first radiation treatment, and again 2 weeks after the final radiotherapy session. Follow-up testing will continue every 2 months for a year to track cardiovascular and muscle-strength recovery patterns, as well as emotional health.

The third study, which is due to begin in January, will recruit another group of 40 women who have been treated for early-stage breast cancer — including removal of axillary lymph nodes and radiation — within the previous year. The primary goal will be to assess the impact of graduated exercise on shoulder range of motion, arm strength and the prevention of lymphedema. A secondary goal is to see if there are any differences in arm circumference, indicating swelling, between the "surgical" and "nonsurgical" arms.

The women will be randomly assigned to an exercise (treatment) or control (no treatment) group. Women in the treatment group will be instructed three times a week for 12 weeks in an exercise program designed to strengthen both arms; it will also emphasize cardiovascular exercise such as walking or cycling. At the end of the 3-month period, women in both groups will be retested to determine arm strength, arm circumference and shoulder range of motion.

The researchers hope to learn which levels of exercise are safe for women who have undergone lymph-node removal as part of their treatment. Niesen acknowledges that lymphedema is unpredictable, but hopes that a graduated exercise program may decrease the likelihood of swelling. She also thinks that graduated exercise throughout treatment will help patients tolerate the potentially gruelling effects better, allowing them to return more quickly to their former activities. ■

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**Dr. Donald McKenzie (rear), principal investigator of the breast-cancer study, mans the steering paddle for his dragonboat team, Abreast in a Boat.**