

THE **CANCER**

AND

X E R C I S E S I O



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Erika Vance, personal trainer, works with Brenda Hines, cancer survivor, during her first Moving On session at the Lynne Brick facility in Owings Mills, MD.

As the benefits of exercise in cancer recovery and prevention become better documented, fitness facilities can play a role in cancer recovery efforts.

Julie Main, general manager of Santa Barbara Athletic Club in Santa Barbara, CA, realized first-hand the benefits of exercise in preventing and treating cancer.

During her 1993 cancer treatments, she continued her exercise regimen and showed resilience that amazed her doctors. Her experience led her in 1994 to develop one of the best-known cancer exercise programs in existence today—Cancer Wellfit.

The program runs in twice-a-week sessions over the course of 10 weeks and includes progressive resistance strength training, specialty strength training, group exercise and one-on-one training. The patients also attend classes in mind/body conditioning, aquatic therapy and

movement therapy such as Pilates, yoga and Tai Chi.

Main, like other club owners and managers, seized the opportunity to help cancer patients. With more than 1.3 million people being diagnosed with cancer this year, according to the American Cancer Society, fitness facilities can provide a source of healing to a large group of individuals. But unfortunately, not enough cancer patients are turning to exercise yet. Only 39 percent of women being treated for breast cancer reported eating a low fat diet and exercising at recommended levels, according to a 2002 study of 86 women reported in the Mayo Clinic Proceedings. The problem? Few had the confidence to change their lifestyle without guidance.

“Exercise should be part of the coun-

seling that every woman receives when coming into breast cancer treatment,” says Victoria Mock, DNSc, AOCN, associate professor at the Johns Hopkins University School of Nursing. She was the principal investigator in a 2001 preliminary study involving 48 women undergoing breast cancer treatment and the effects of walking on their recovery. The study found that walking 20 to 30 minutes at least three times a week reduced fatigue, anxiety and sleep issues, all common problems associated with people undergoing cancer treatments.

“For a long time, we have been recommending rest for patients with fatigue who were undergoing cancer treatment. There is mounting evidence now that exercise will help reduce fatigue if people begin

NINECTION

By Pamela Kufahl, editor

The Studies Say...

- Death rates from all cancers dropped by 1.1 percent from 1993 to 2002 due to prevention, earlier detection and better treatments. The decline was most pronounced among white men. —2005 *Report to the Nation on the Status of Cancer*
- Moderate exercise can improve the function of women undergoing supplemental therapy (radiation or chemotherapy) after breast cancer surgery, helping them avoid a decline in physical health that often can occur post surgery. —2000 study by the Ottawa Regional Cancer Center in Ottawa, Canada and presented at the 23rd annual San Antonio Breast Cancer Symposium
- Postmenopausal women who are not overweight or obese and who do moderate exercise on a regular basis reduce their risk of breast cancer by about 20 percent. —2003 study by the Fred Hutchinson Cancer Research Center
- Overweight women were 30 percent to five times more likely to die from their breast cancer than normal-weight women. They were also more likely to develop new cancer than normal-weight women. The study did not determine whether losing weight after diagnosis improved survival rates. —2002, *Journal of Clinical Oncology* (Vol. 20, No. 15)
- Walking for 20 to 30 minutes three times a week can reduce fatigue for women undergoing breast cancer treatment. —2001 study published in *Cancer Practice*.
- Women with tumors that are sensitive to estrogen have a lower risk of dying if they perform moderate levels of exercise than those who exercise less. Women who exercised three to five hours each week had a 92 percent survival rate after 10 years compared to an 86 percent survival rate for women who exercised less than one hour a week. —2005, *Journal of the American Medical Association* (Vol. 293, No. 20: 2479-2486)
- Women who finished a post-treatment program for breast cancer that involved 12 weeks of regular exercise had more energy and felt better about their bodies than less active women. —May 2005, *Journal of Clinical Oncology* (research by Brown University School of Medicine)
- Men who gain weight rapidly (three-and-a-half pounds per year) between ages 25 and 40 are twice as likely to have a return of prostate cancer after prostate cancer surgery than men who gained weight more slowly. In addition, men who are obese at age 40 when diagnosed with prostate cancer have a higher risk of recurrence of their prostate cancer. —2005, University of Texas M.D. Anderson Cancer Center
- Women with a BMI of 30 or more were 1.5 times more likely to develop multiple myeloma (a bone marrow cancer) than those with lower BMIs. Women with the most weight, waist circumference or hip circumference had twice the risk of thinner women. —September 2005, *Epidemiology*

Training Facilities for Cancer Exercise Specialists

Cancer Exercise Training Institute

3269 Forest Ct.

West Linn, OR 97068

503-502-6776

www.thecancerspecialist.com/home.htm

Cost: \$395, but the early-bird discount (30 days or more prior to class) is \$350. Groups of five or more pay \$295 each.

Rocky Mountain Rehabilitation Institute

Ben Nighthorse Campbell Center

19th St. at 10th Ave.

Greeley, CO 80639

970-351-1876

www.unco.edu/rmcri/

Cost: \$800 per person

an exercise program before treatment or early on in their treatment," she said in the report.

Exercise can be especially important for women who've undergone chemotherapy treatments, according to a recent report. The study found that women who have gone through chemotherapy gained an average of 5 to 8 pounds during treatment. Those women who only had surgery or post-surgery radiation did not report weight gain. In addition, chemotherapy-induced weight gain generally involves gaining fat rather than lean and fatty tissue like in typical weight gain, according to a report by the American Cancer Society. This finding causes concern because being overweight can contribute to the recurrence of cancer (see *Why Exercise May Help Prevent Cancer*, page 36).

"Studies on patients undergoing cancer treatment have shown that regular exercise improves physical function, self-esteem and confidence, and can help to reduce the side effects from treatment," says Dr. Harry Raftopoulos, an oncologist and assistant professor of medicine in the division of Medical Oncology at New York Presbyterian Hospital. Raftopoulos, the hospital's director of respiratory oncology, wrote a book titled *Exercises for Chemotherapy Patients* that offers nutrition advice and walking and exercise programs tailored to the needs of cancer patients.

"Just the act of exercising can help you

feel like you have more control over your body and your life—an important issue for people who are living with the fears that come with a cancer diagnosis," says Raftopoulos.

Cancer Specialties

Fitness professionals have recognized the need for cancer exercise programs. Cathy McNair, a cancer survivor and a certified personal trainer, specializes in cancer exercise. She teaches free strength and stretch classes called Focused Fitness Training at Team Survivor Northwest in the Seattle area. The nonprofit organization pays her a reduced rate to teach the classes.

McNair had great reception from oncologists about her ideas for an exercise program, but they were leery of referring patients to people they didn't know. That's why McNair joined up with the nonprofit organization to provide exercise to patients referred to the nonprofit by doctors.

"It does seem to be a growing field," McNair says about cancer exercise programs. More personal trainers are interested in working with special populations, she says, including cancer patients.

She credited the growing popularity of this area to the idea that instead of encouraging cancer patients to rest and conserve energy as doctors had done in the past, doctors have begun encouraging exercise to alleviate fatigue. This is similar to the

change that occurred 50 years ago with cardiac patients who prior to then had been encouraged to rest after surgery but now are encouraged to exercise after an operation. The change for cancer patients has only occurred recently. Five years ago when McNair was diagnosed with cancer, she was not told to exercise.

"I wish more physicians said 'Go out and exercise.' Then, programs like mine would be overrun," McNair says. She has a group of about 20 cancer survivors that attend classes regularly. "That's such a small number for a city this size."

Attracting cancer patients is easier when the fitness facility is affiliated with a physical therapy practice that already receives referrals from doctors. The Gainesville Health & Fitness Center in Gainesville, FL, has been offering a program at both its club and physical therapy practice for the past year. Once cancer patients have finished their rehabilitation treatment at the physical therapy location and are cleared to exercise by their physical therapist and doctor, they are referred to the club's free, eight-week program. The circuit program is designed for each patient's ability level based on recommendations from the patient's physical therapist, says Debbie Lee, marketing director for the Gainesville club.

The personal trainers at this club are not certified in cancer exercise, but by the time patients get to the club's program, they don't need intense modification of exercise. Otherwise, they wouldn't have been cleared by the physical therapy group to exercise, Lee says.

However, anyone working with cancer survivors needs to have a general knowledge of the special conditions that affect these individuals, says Andrea Leonard-

For Cancer Patients Exercise Can...

- Reduce anxiety and depression
- Reduce symptoms of fatigue, nausea, pain and diarrhea
- Improve mood
- Boost self esteem
- Build a better body image
- Improve blood flow to legs and reduce the risk of blood clots
- Prevent osteoporosis

Bruno, a certified personal trainer and cancer exercise specialist. Bruno co-wrote *Essential Exercises for Breast Cancer Survivors* and a handbook for fitness professionals, *The Cancer Exercise Handbook*. She is also president of Cancer Exercise Training Institute, which trains fitness professionals to work with cancer patients.

The special training not only helps personal trainers work with patients without harming them, but it also helps increase the likelihood that a doctor might refer a patient to that personal trainer or fitness facility, she says.

One of the most important parts of working with cancer patients is getting their doctors' buy-in, as Lynne Brick found out back in the early 1990s when she started the Breast Wellness Center for women undergoing breast cancer treatments. The program ended after about four years because she couldn't get referrals from doctors.

"Doctors had huge misconceptions about what we do at health clubs," Brick says.

However, Brick is trying it again. This time, she's partnering with a Baltimore hospital, Mercy Medical Center. The Moving On program, which launched last month, offers exercise for women who have undergone breast cancer treatments including mastectomies. The women are evaluated at the hospital and complete three additional sessions at the hospital—one focusing on aerobics, one on flexibility and one on strength. The women are then referred to the Lynne Brick clubs where they receive free workouts with a level three personal trainer (meaning the trainer has received specialized training to work with this group) for a month. The first few workout sessions involve their physical therapist and the personal trainer. After each session, the club sends information about the session to Mercy Medical Center, says Maureen McBeth, women's health program manager at the Center for Restorative Therapies at the hospital.

After their month is up, the women can join the Lynne Brick facility at a reduced rate, says Brick. She plans to establish a memorial fund to pay for memberships of any women undergoing cancer treatments as long as they have approval from their doctors.

Program Cost

Many facilities offer cancer exercise programs free of charge for a limited period of time. After the initial program

Health Issues That Could Limit Exercise For Cancer Patients

- Electrolyte imbalances
- Bone loss
- Nerve damage
- Lymphedema (arm swelling)

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Why Exercise May Help Prevent Cancer

Fat is your enemy. We've all believed that for years. Research now shows that may be true in more ways than once thought. Fat may increase a person's chance to get cancer, some studies show.

Being overweight and inactive accounts for one-quarter to one-third of breast cancer, colon cancer, endometrial cancer, kidney cancer and esophageal cancer worldwide, according to estimates in a February 2002 report by the World Health Organization's International Agency for Research on Cancer. That equates to about 102,000 to 135,000 cases in the United States.

The more fat cells a person has, the more estrogen is present in the person's body since fat cells make small amounts of estrogen. Estrogen can feed some types of breast cancer. Excess fat around the stomach increases cancer risk more than excess fat on the hips and thighs.

Fat is an active substance that is constantly producing and secreting hormones and other "growth factors," according to Dr. George Bray of the Pennington Biomedical Research Center in Louisiana. Therefore, the cells in an obese person's body may grow and divide at an accelerated rate, causing them to divide more often than in a thinner person's body. A greater number of these divisions could increase the chance that a random mutation could occur, leading to cancer.

Another theory about how fat cells can contribute to cancer is that overweight women produce more insulin, which is thought to stimulate cell division and replication.

By exercising, individuals not only decrease their fat deposits, but they also regulate hormone levels that could cause breast and prostate cancer. In addition, exercise speeds the digestive process, shortening exposure of the bowel lining to harmful substances that could cause colon cancer, some studies show.

is over, the facilities hope the cancer survivors will join the club.

"There's such an emotional side to cancer recovery," says Lee. "That's why we offered this for free."

All patients exiting Gainesville's physical therapy center receive 30 days free at the club after finishing rehabilitation, says Lee. The club management decided that cancer patients—particularly breast cancer patients, which make up the majority of their cancer patient group—needed more time to become comfortable in the club setting, so the club expanded the free membership for them to eight weeks. Although the transition to membership rate for other types of rehab patients is high at the club, the one-year-old cancer exercise program is too new to determine its conversion rate, Lee says.

Cancer patients at Santa Barbara Athletic Club can attend two 10-week sessions for free. After that, the cancer survivors can repeat another session for a \$75 fee. Between sessions, participants can buy a full club membership for a discounted rate of \$12.50 per week. Spouses or significant others can purchase full memberships at the discounted rate of \$75 during the

time the participant is in the group. After completing the program, participants can join the club at the normal fee minus the registration fee.

Except under special circumstances, Bruno charges for her sessions.

"Just because someone has cancer doesn't mean it's a death sentence, and it doesn't necessarily mean that they are out of work," the cancer survivor says.

In addition, many people with various medical conditions need a personal trainer but can't afford one, she says. When people can't pay Bruno's individual rates, they can attend group classes or apply for grants from nonprofit organizations that work with cancer patients, such as the Lance Armstrong Foundation and the Susan G. Komen Foundation. Still, Bruno knows that not everyone will reach out for this financial help. That's why she put together a book and home exercise video that patients can purchase for \$50.

What Works

Regardless of whether or not a fitness facility charges for its cancer exercise program, the program that is offered needs to be sound. Cancer survivors need a combi-

nation of strength training and cardiovascular exercise, says Raftopoulos.

"With cancer patients, there's loss of muscle mass, so strength training is helpful, but aerobic exercises are important," he says. His book includes exercises that can be done seated or while chemo is being administered.

Bruno recommends strength training, flexibility exercises and cardio for cancer patients. When to do each depends on each patient's needs and physical limitations at the time. She also says that mind/body exercise can be beneficial. Pilates focuses on the core, which is affected in breast cancer surgery. Yoga can help with range of motion and stretching not to mention help patients to alleviate stress.

In fact, some Pilates studios are offering programs specifically for cancer survivors. The Pilates Center in Fairfield, NJ, and Pilates on Fifth in New York, NY, both offer the Pink Ribbon Program, which was developed by Doreen Jones, a cancer exercise specialist and a breast cancer survivor.

Some women-only circuit facilities are also training to better work with cancer patients. When Bruno recognized that the women-only locations were the perfect spot for women going through treatments, she decided to empower the staff so they could customize their 30-minute circuit for these women when they came in.

"They've done surprisingly well because they are passionate about helping these women," says Bruno.

Individualizing a program for cancer patients is critical for all types of fitness facilities, Bruno says. For example, if a patient doesn't have range of motion in one of his or her arms, a personal trainer must deal with that issue first before engaging the patient in an exercise regimen and helping them on their road to recovery.

"Not to scare people away from working with cancer patients, but knowledge is power, and if you are going to work with this population, then you better darn well know what you are doing," says Bruno. "There are 1.3 million cases diagnosed a year. You are providing a service that is well needed." ●