

In Control

Pilates helps cancer survivors return to life.

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With more than 2.4 million women and a small percentage of men living in the United States with breast cancer, it's essential to understand how to approach the dysfunctions and after-effects following breast cancer treatment. The latest research supports exercise to enhance the functional quality of life following breast cancer treatments.¹⁻⁹

Restoring strength and range of motion (ROM) in the chest, thoracic spine and shoulders is necessary for patients to [resume](#) self care and activities of daily living.^{3,4,10} As clients regain their independence, emotional empowerment can help drive the recovery period.⁸

But dealing with breast cancer from diagnosis through treatment and into remission takes a toll on a person's physical and emotional well-being. In many cases, the result is an aversion to movement or exercise. The gentle nature of Pilates can help.

Pilates is a safe, effective way to provide a low-intensity, low-impact workout for people recovering from breast cancer. It incorporates low load to recruit local stabilizers, which promotes stability and enhances neuromuscular control. In addition, Pilates offers exercises that can be modified to meet specific needs.

Many cancer side effects are diminished by Pilates' innate biomechanical principles: focused breathing, spinal and pelvic alignment coupled with positional awareness, ribcage positioning, and scapular mobility and stability. Exercises work the thoracic spine and shoulder girdle directly and indirectly, which improves shoulder ROM and mobility, as well as scapular strength and stability.

Emphasis on proper postural alignment, economy of movement, balance and coordination, and the integration of strength, stability and flexibility is present in each exercise. Focusing on postural alignment and kinesthetic awareness is beneficial as clients receive proprioceptive feedback, while re-educating and re-establishing connections between muscles, joints, nerves and the brain. Using the mind-body connection also helps patients address the emotional components of the disease and its aftermath.

The most common breast cancer-related issues that can be positively affected by Pilates exercise include:

Lymphedema. Studies show that 25 percent of women who undergo lymph node removal experience lymphedema.^{8,11} Lymphedema can also result from biopsies, radiation or post-surgical complications such as infection. Lymph fluid acts as part of the body's defense against infection. When nodes and channels are removed or augmented, excessive lymph fluid can accumulate and cause arm swelling if it doesn't drain properly.^{7,12,13}

Research shows that breathing helps drive the internal pump of the lymphatic system and supports its ability to release toxins from the body and balance immune function.^{7,12} Therefore, the breathing component of Pilates can have a positive impact on the lymphatic system. Coordinated breath with movement can also increase one's connection to the body. And activating the parasympathetic nervous system using deep breathing helps modulate stress.

Shoulder girdle deficits. Following surgical procedures such as a lumpectomy or mastectomy, dynamic stability of the shoulder complex is often compromised and results in muscle imbalances.^{8,14-16} Some reconstructive techniques use muscles and tissues from other parts of the body, which can unbalance structures that had been supported by these tissues. Therefore, you must know what type of procedure a client has undergone in order to anticipate post-procedure imbalances.

Restoring shoulder girdle mobility, strength and stability is essential for proper function following treatment. Emphasizing lumbo-pelvic mobility and stability creates a stronger support base when the upper extremity is challenged. Focusing on body awareness and thwarting compensation patterns can decrease the prevalence of problematic movement patterns.

Sarcopenia. Because many people are focused on the survival component of breast cancer, it's important to provide education about what comes after treatment.^{14,16-20} Sarcopenia, or a shift in body-mass index from muscle weight to fat weight, results from inactivity due to common side effects such as extreme fatigue, nausea, vomiting, hormonal imbalances and early menopause.^{15,16,18-21} This can have a dramatic effect on a patient's well-being and confidence.^{1,3,4,22} Pilates exercises designed to energize and encourage accomplishments benefit the body and mind.

Fatigue and postural degeneration. With Pilates' versatility, you have the ability to modify a patient's body position for exercises, despite extreme fatigue, postural degeneration or lymphedema. Many of the same exercises can be done in sitting, supine, standing, sidelying and prone. For

example, scapular stabilization activities in supine provide proprioceptive feedback to the scapula. Once local stabilizers are activated, the exercise is easily transitioned to a seated or standing position to work on functional stability. This positioning also helps reduce upper trapezius trigger points and abnormal holding patterns that result from pain aversion postures in the upper extremities.

Osteopenia/osteoporosis. Chemotherapy and breast cancer medications may incite early onset of menopause, resulting in osteopenia or osteoporosis. The low-impact nature of Pilates can combat these issues.²³

UNDER CONSIDERATION

Always obtain clearance from a patient's doctor before participating in any exercise program during and after breast cancer treatment. This step is important for patients with osteopenia or osteoporosis, since some Pilates exercises are contraindicated for this population.

In addition, several tips can ensure proper exercise progression. For instance, proceed slowly and establish postural stability in neutral positions. Gradually add similar exercises so you can monitor the client's response to new exercises.

Develop a plan based on the client's history, and be consistent with exercises. A methodical approach creates an effective, sustainable program that provides benefits for years.

Also, keep checking a client's physical and emotional state during and after treatment sessions. A key component of client education is teaching patients how the body feels when it's working properly. Patients who use good mechanics and alignment during therapy are more apt to carry those skills into everyday life. Since many clients experience some degree of body detachment after the emotional and physical process of treatment, positive reinforcement is essential.^{1,3,4,22}

Avoid overdoing it. Exercise can be energizing and relaxing at the same time. Increasing energy levels and reducing stress is important. Appropriate resistance should be dictated by the weaker side. Don't stress unstable, unsupported joints, and avoid taxing the body by overworking affected areas. Allow adequate recovery between sessions, based on client tolerance and endurance level.²⁴⁻²⁶ Enforce a painless workout. Pain shouldn't be a part of any exercise, especially since you can modify most moves. Guide patients through movements. You want patients to improve their physical status, not fall into compensatory patterns.

Exercise sessions should leave clients motivated and energized, and improve a sense of well-being.¹⁴ Group programming at early stages can provide a support system. However, it's important to be in a small group of 4 to 6 people with a trained rehabilitation clinician.

Pilates' harmonized, mindful movements can provide a "whole person" approach to recovery for breast cancer survivors.

For a list of references, go to www.advancweb.com/rehab and click on the references section on the home page.

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