Pilates for Post-Mastectomy Patients

Written by: Laura Bradley
Abstract

“You don’t know how lucky you are to be able to lift your arm over your head.”

A patient said to me as I reached up to draw the curtain in the physical therapy studio at the Weill Cornell Medical School’s Iris Cantor Women’s Health Center. This patient was undergoing chemotherapy for breast cancer and had recently had a double mastectomy. She was coming to see the Director of Physical Therapy, Amy Shapses, for a diagnosed shoulder strain.

As Amy’s assistant, I worked with many other patients suffering from shoulder strains. Because Amy specializes in women’s health at one of the leading research centers for breast cancer, the vast majority of her patients are post-mastectomy. Most often they come to physical therapy because they are experiencing extreme tightness, pain, and very little range of motion in their shoulder girdle.

While working with these patients, I heard them speak gratefully about their decreased pain, increased range of motion, increased strength, sense of relief, and greater quality of life after physical therapy. That made me realize how important it is that they continue in a program that encourages each of these elements. The importance of a continued, post-rehabilitation program became even more evident when I saw patients returning to therapy months and even years after having been discharged. Without a continued program of mobilizing and strengthening the effected tissues, their painful symptoms returned.

Pilates is an excellent way for these post-mastectomy patients to continue working towards, and maintaining a healthy, balanced body.
Table of Contents:

I.  Anatomical Description
II.  Common Complications
III.  Case Study
IV.  Desired Results
V.   B.A.S.I. Conditioning Program
VI.  Testimonials
VII.  Conclusion
VIII. Bibliography
Anatomical Description

Breast cancer is one of the leading causes of death in women. According to the American Cancer Society, one in every eight women developed breast cancer in 2007. Rapidly increasing rates of its incidence have lead to major concerns about its cause and prevention. While researches have not yet pinpointed the exact causes of breast cancer, they have discovered risk factors linked to the disease.

Some risk factors include age, race, family history, reproductive history, weight, physical activity, environment, lifestyle, and diet. Many of these factors are unavoidable, though their presence does not always mean that cancer will develop. Such unpredictability leads to the most important protective measure: early detection. Women are encouraged to perform self-exams and have regular mammograms to detect any irregularities.

When breast cancer is detected, a mastectomy is typically performed to remove the affected tissues. The type of surgery depends on the stage of the cancer, size of the tumor, size of the breast and whether the lymph nodes are involved. The four surgeries include: Lumpectomy, Total Mastectomy, Modified Radical Mastectomy, and Radical Mastectomy.

A Lumpectomy is also called breast-sparing surgery, breast conserving surgery, segmental mastectomy, or partial mastectomy. In this operation, the surgeon removes the cancer, but not the breast. The underarm lymph nodes may be removed as well. If the lymph nodes are removed, a separate incision – called axillary lymph node dissection - is made. In most cases, radiation treatment will follow surgery to ensure that all cancer cells in the breast are destroyed.
The entire breast is removed during a Total Mastectomy. Breast tissue lies between the collarbone and ribs, from the side of the body to the breastbone in the center. In most cases, lymph nodes under the armpit are also removed to prevent the spread of cancer cells.


A Modified Radical Mastectomy also involves removal of the entire breast. In addition, lymph nodes and the lining over the chest muscles are often removed. This procedure differs from the more invasive Radical Mastectomy in that the chest muscles are not removed. Until the mid-1970s, virtually all women in the US with breast cancer underwent a Radical Mastectomy, but advances in breast screening technology have led to a dramatic decline in its use. It is no longer common today, except in the most extreme cases.
After the mastectomy, the patient can decide to have reconstructive breast surgery, wear a prosthesis or do neither. If the patient chooses reconstruction, a plastic surgeon may be present at the time of the mastectomy to immediately begin rebuilding the shape of the breast. Reconstructive surgeries include saline or silicone implants, or the transplantation of existing body tissue.

Reconstruction with existing tissue involves moving skin, muscle, and fat from another part of the body to form a breast shape. These tissues can be taken from the lower abdomen, back, or buttocks. The type of reconstruction deemed best for the patient is dependent on age, body type, the type of surgery conducted and personal preference.

Breast implants are plastic sacs filled with silicone or saline. The placement of the implant can be either sub-muscular or sub-glandular. Sub-glandular implants are placed behind the breast, but in front of the muscles and fibrous tissues that line the front of the ribs and chest wall. Sub-muscular implants are placed behind both the breast and the major muscle groups of the chest. Sub-muscular implants are more optimal for breast screenings because the implant doesn’t obstruct the view of mammary glands and breast tissue.
Common Complications

After surgery, patients are usually given a pamphlet of stretches to do at home, along with a pain killer prescription. All too often, surgeons fail to encourage patients to begin physical therapy immediately after surgery to mobilize the joint. Early stretching and strengthening helps break down scar tissue and encourages positive muscle recruitment, making it less likely that the woman will begin a compensation pattern that could result in tightness, weakness, and imbalances.

These compensations are common reactions to fear and pain. Some mastectomy patients have described anxiety simply when walking down the street, out of concern that someone will bump into the affected side. This overprotection of the injured side leads to a tighter and tighter shoulder girdle.

In addition to shoulder strains, patients often experience lymphedema - swelling of the arm due to a buildup of fluid. Lymphedema can result from any breast surgery that involves axillary lymph node dissection or radiation, due to the alteration of normal lymph fluid drainage from the arm. The first symptom is tightness, followed by swelling in the hand or arm of the side that was treated for breast cancer.

There is no good way to predict who will develop lymphedema. It can occur right after surgery, or months, or even years later. The potential for developing lymphedema remains throughout a woman's lifetime. With care, lymphedema can often be avoided or kept under control. Injury or infection involving the affected arm or hand can contribute to the development of lymphedema or aggravate existing lymphedema. Preventive measures should focus on protecting the arm and hand. Patients are also told to avoid repetitive actions such as shoveling snow, moving lawns, or washing a car.

Case Study

Help...I had a bi-lateral mastectomy three weeks ago with lymph node removal on the right side. I was given a pamphlet with exercises to do, which I am doing faithfully but I am so sore and achy by the end of the day that it seems impossible to move. I have soreness in chest area, under the arm from armpit to elbow and rib area. I also wish I was able to lift my groceries and pick up my grandson. I have always been active, and was a competitive swimmer...any suggestions would be so greatly appreciated.
Thank you, Susan

Desired Results

The shoulder socket is shallow with a wide surface area, making it a highly mobile joint but less stable than most others. Building strength within a wide range of motion is key. My goal with Susan was to build sufficient strength in her pectoral muscles for her to pick up her groceries and the flexibility to lift them up to her cabinets. Because the
shoulder affects the movement of the scapula down the back, a fuller range of motion would also contribute to alleviating the discomfort in her armpits and ribs.

Pilates teaches efficient and safe movement in all planes of motion. With practice, the body learns correct alignment while gaining strength and mobility. Placing emphasis on building strength in all planes of motion would assist Susan in maintaining stability in her shoulder during spinal rotation, flexion and extension. This versatility is what makes the Pilates method so beneficial to recovery. It reinforces proper movement patterns that can be integrated into everyday life.

Pilates exercises can be easily modified or adjusted according to restrictions. By maintaining the essence of the originally choreographed movement, a modification can achieve the same muscular objective. Modifications can allow the client freedom to work in a wide range of movement that is both safe and effective. It is important to build trust and confidence in your client so that they are willing to release unnecessary fear and tension in the effected side.

Part of building trust is recognizing personal and physical boundaries and limitations. Breasts are very personal organs, often associated with feelings of femininity, motherhood, and sex appeal. Being diagnosed with breast cancer and having a mastectomy is an emotionally devastating experience. For these reasons, it is particularly important to remain sensitive to your clients’ needs and abilities. It is also important to establish a safe and comfortable environment where the client feels free to openly communicate.

Another common struggle for post-mastectomy patients is battling fatigue. Cancer treatment is so physically taxing that even the most active patients struggle with weariness and exhaustion. Most studies mention exercise as being one of the best ways to combat post-mastectomy fatigue and a recent study in the Journal of Clinical Oncology cited improved survival rates for breast cancer patients who included exercise in their recovery.

Sarah Stolker, the cancer rehab program manager at SSM Rehabilitation Hospital in St. Louis, says she always recommends exercise to help cancer patients, especially those suffering from fatigue. Stolker recommends interval training as the best way to build endurance. Low repetitions are also recommended for mastectomy patients who are at risk of lymphedema. The Pilates Method encourages the integrity of performing a movement as opposed to doing many repetitions.

**BASI-based Conditioning Program**

The BASI system is structured to ensure that the whole body is strengthened in all planes of movement in each session. Injuries and imbalances are viewed in the context of the entire body as opposed to looking at one single part. The body is viewed as a cohesive assembly of interconnected parts. Whole body awareness will help to prevent further injury from occurring.

BASI emphasizes the importance of working in a pain-free range with integrity and clarity. The depth of this method works quickly to re-train old habits and develop new patterns that will continue to reinforce a more balanced body. By building a deep understanding of fundamental movement exercises, you can then begin to add layers over
a strong foundation. With a strong foundation, the body is more readily able to learn to move properly.

In Susan’s first 10 sessions I walked her through the fundamental level workout. She was able to support her own weight in a cat stretch, but could not stretch her arms above her head in rest position. We began strengthening her shoulder and chest muscles through: Supine Arm Series, Scapula Glide, Shoulder Adduction Sitting Side and Forward, and Shrugs. She started working towards Shoulder Stretch I and II on the Ladder Barrel.

By her next 10 sessions she was able to do Front Support, Shoulder Push, Elephant, Sitting Arm Series, Shoulder Stretch Lying Side, Prone I, Shoulder Stretch and Overhead Stretch in the Pole Series.

Now that I’ve worked with her for 30 sessions, she can do Down Stretch, Up Stretch, Arm Series Standing, Back Support, Shoulder Stretch on the Cadillac, and Prone II.

Susan is back to simming, scooping up her three-year-old grandson and re-wallpapering her kitchen. We are working towards Long Stretch, Balance Control Front, Frog back and Full Pike. She is determined to achieve Hanging Back!

Testimonials

“Eve Gentry is famous in Pilate's circles as being fully rehabilitated by Joseph Pilates after a radical mastectomy. With Joseph’s method, Eve restored full mobility and function to her upper body.”

Michelle Larsson, Core Dynamics
http://www.coredynamicspilates.com/about_us/bios.html

“My story begins in late September when constant and continuing scares with breast cancer lead [me] to take the major step of a prophylactic double mastectomy. I wanted the threat gone and some peace back in my life without living in constant fear. Early in October I had my surgery and everything went well. I was now facing some extensive recovery and rehab time…My surgery was substantial and my doctor warned me to go slow with reestablishing my exercise routine…Now, only two months after my surgery, People marvel at my range of motion and positive outlook… I could not have traveled this path alone.”

Meri Schlagel
http://www.pilatesbykahley.com/PilatesByKahley/testimonials.jsp

“Priest, 47, a relocation director who lives in Franklin, has been doing Pilates for five years. Her surgical procedure involved moving a flap of muscle from her back to her chest. To ease the back pain she felt afterward — a common occurrence with this type of surgery — Priest and her instructor pursued a plan that allowed her to alleviate the discomfort and also regain her strength. “I became stronger every day, and now, a little over a year later, I am doing Pilates and lifting weights several times a week… I would recommend it to anyone going through a diagnosis of cancer. It made all the difference for me.” Health-care providers are increasingly emphasizing to cancer patients the
importance of exercise for their health and mental well-being. A doctor must prescribe physical therapy. For those in search of other ways of rehabilitating their bodies after the rigors of cancer treatment, Pilates, for some, can fill the gap…Some of those living with the disease are finding the lengthening and strengthening exercises of Pilates fit the bill when it comes to helping them regain the footing they lost when their doctor broke the news of their diagnosis.”


Conclusion

The healing benefits of Pilates are not only physical, but mental as well. When the body is balanced, it is possible to begin finding balance in life. We live through our bodies, seeing, hearing, feeling, and sensing our way through life. Our muscles absorb circumstance by memorizing our stance, muscular tension and the physical response that was created. The body digests information.

Doing Pilates is about getting to know yourself. You can learn so much about your self and others by listening to what your body is telling you. It’s a lifelong encounter of meeting yourself over and over. You have to embrace, get to know, and accept your injuries and imbalances to work past them. To know your body, is to know yourself.
Bibliography

Books


Journals


Interviews


Websites

<http://www.cancer.org/docroot/CRI/content/CRI_2_6X_Lymphedema_5.asp>


“Mastectomy”

<http://en.wikipedia.org/wiki/Radical_mastectomy>