Pilates for a Post Surgical Breast Cancer Patient

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Receiving a diagnosis of breast cancer is devastating. Once the initial shock wears off you are thrust into a rapid paced education. It’s like trying to comprehend a new subject in an unknown foreign language and you have very limited time to do so. Initially, most of us do not realize the ramifications of our uneducated decisions and the limitations those decisions will create in our bodies. Scar tissue, numbness, nerve disruption, core weakness, loss of spinal support and stabilization, protective posturing, difficulty standing upright, arm range of motion limitations and discouragement of arm abduction and possible protracted shoulder/s are just a few of the symptoms we never dreamed would become our realities. To improve a survivor’s quality of life the BASI Pilates approach will be utilized based on the individual’s needs, goals and ability.
# TABLE OF CONTENTS

I. Cover Page 1  
II. Abstract 2  
III. Table of Contents 3  
IV. Anatomical Description 4-5  
V. Body 6-11  
VI. Bibliography 12
ANATOMICAL DESCRIPTION

Since every person is different and every cancer is unique to the patient not every treatment plan is the same. For the purpose of this paper we will be discussing a particular patient and the specific treatment received. We will be reviewing the side effects of lymph node removal, a double modified radical mastectomy with reconstruction surgery.

As you can see by the diagram to the left, there are many lymph nodes in the human body and when cancer has spread to one or more of these nodes an axillary lymph node dissection will occur. How many are taken is varied and is dependent on how many the individual has on the affected side/s.

An Axillary Dissection removes the fat pad located under the pectoralis major and minor muscles, which contain the lymph nodes.

A Modified Radical Mastectomy is the most common form of breast cancer treatment and can be single or double, meaning one or both breasts. The picture to the right shows the area to be removed, which includes all breast tissue, the nipple-areola complex and the fascia lining over the pectoral muscle. No chest muscle is removed which is important to the patient’s quality of life.
If a patient has selected breast reconstruction, it will depend on their status and the condition of their breast if it is immediately following their mastectomy or at a later date. In this case a DIEP (Deep Inferior Epigastric Perforator) Flap Breast Reconstruction was performed,

This is the name of the main blood vessel being used to reconstruct the breast that runs through the tissue. Fortunately, in this type reconstruction, no muscle is removed in the abdomen, only the skin, fat and blood vessels are harvested from the lower abdomen and transferred to the chest. This surgery is called a “free flap” procedure and microsurgery is required to reattach blood the supply to the newly constructed breast generally thru one artery and one or two veins. Again, the advances made in breast cancer means it is not always necessary to sever the rectus abdominus muscle to move it to the chest area to create a breast while keeping it “attached” to the blood supply. Advancement has improved the quality of life for breast cancer survivors. Thus the term, “free flap” meaning, microsurgery will reattach the vessels for blood flow.
POST SURGICAL BREAST CANCER AND PILATES

I am a 6-year breast cancer survivor and have personal knowledge and experience both physically and emotionally that I can draw from to rehabilitate a survivor after breast cancer surgeries and adjuvant therapies of chemotherapy, radiation and hormone therapy. Depending on the doctors and institutions where treatment occurred there is a difference in what survivors are given post treatment to rehabilitate their body into a healthy and functional one.

We are not a one dimensional being with only the physical to take into account. We need to look holistically at the whole person when it comes to working with a breast cancer survivor. The physical limitations are important aspects to improve, such as posture, range of movement, increased strength, stabilization and alignment in the client, but areas also of concern encompass the psychological aspects of emotional, self-consciousness, sadness and embarrassment of disfigurement in the surgical area. Thru the use of Pilates we can improve our client’s day to day function and aid them to restore their body to a healthy one.

Through the Breast Friends Support and Survivorship Group at MD Anderson in The Woodlands, Texas, I met a remarkable young woman, married with a 6 year old son, who lives in a rural town with sparse local amenities to assist her recovery. There are times in life when our paths cross that of another on a similar journey and it just clicks. This is just one example of such a person. Shannon is 33 years of age and received axillary lymph node removal under her right arm and a modified radical mastectomy in both breasts. Only her right breast was diagnosed with cancer, she still opted to remove both breasts in order to improve her survival rate. At the time of her double mastectomy, Shannon received breast reconstruction followed by adjuvant therapies of chemotherapy, radiation and a daily medication of Arimidex to reduce the body’s production of estrogen which she will take for 5 years.
Shannon was kind enough to allow me to access her posture. Due to both Axillary Lymph Node removal and Double Modified Radical Mastectomies, scar tissue is present in the surgical sites and has increased pain and tightness in her chest along with postural weakness in her shoulders and reduced range of motion in her right arm. Additionally, the DIEP Flap (Deep Inferior Epigastric Perforator) performed to reconstruct her breasts have caused her abdominals to weaken. Unfortunately, Shannon suffers from Lymphedema, which is a side effect of the axillary lymph node removal. Lymphedema is an accumulation of lymphatic fluid between cells that causes swelling in the arms. When lymph nodes are removed the fluids do not drain thru the system more efficiently than before surgery and the buildup of this fluid creates a tight sensation in her right arm and has also decreased the flexibility and adding to her already reduced range of motion.

With her decreased physical activity and post surgical complications she has moved into protective fatigue posturing, and has signs of a tight chest, a weak spine and weak lower abdominals and stabilization issues. Her post operative instructions were to wait a minimum 6 weeks before physical therapy of her shoulder and arms and 6 months for any abdominal work. She was not to lift over 10 lbs until she began physical therapy and was accessed. Unfortunately, Shannon was very sick during chemotherapy and extremely tired during radiation and has not begun her physical therapy. Since her surgery 10 months have passed and she is ready to begin physical therapy and attend a Pilate’s class.

In the past couple of months I have interviewed numerous post breast cancer patients who were or were not taking part in a regular exercise program. I have had the privilege of speaking with various physical therapists, BASI certified and non-BASI certified Pilates Instructors, a Radiation Oncologist and a Medical Oncologist who have all agreed that regular exercise can
only improve the quality of life of their patients, including those experiencing active
lymphedema. My concern would be to not do any harm with increased physical activity or
exacerbate the horrific condition of lymphedema in any person. These concerns prompted me to
interview the professionals and research what is currently being regarded as sound and prudent
advice from the field of medicine.

Kathryn Schmitz, PH.D., MP.PH., FACSM, and a lead author of cancer
recommendations and a presenter at the ACSM Annual Meeting in 2010 stated: “We’re seeing
better everyday function and overall higher quality of life for cancer survivors who exercise.”
Dr. Schmitz is an associate professor of Epidemiology and Biostatistics and a member of the
Abramson Cancer Center at the University of Pennsylvania School of Medicine. She also
concluded, “In preliminary observations, breast cancer survivors experienced improved body
image as a result of a regular physical activity program,” she said. “Add that to improved
fitness and strength, decreased fatigue, and increased quality of life, and exercise proves to be a
crucial part of recovery for cancer survivors”

In an article titled Weight Lifting in Women with Breast Cancer Related Lymphedema
published in The New England Journal of Medicine, Dr. Schmitz and a team of doctors and
contributors concluded: “In breast-cancer survivors with lymphedema, slowly progressive
weight lifting had no significant effect on limb swelling and resulted in a decreased incidence of
exacerbations of lymphedema, reduced symptoms, and increased strength.”

Feeling confidently prepared with understanding the patient’s unique needs, I am ready to
move forward utilizing the BASI Pilates method of creating a customized exercise program and
the following represents my recommendations:
The goal is to meet with Shannon and determine her true limitations. In our initial discussion, she provided me with her detailed current issues and depending on her range of motion, we would need to modify an exercise if necessary and in some cases remove an exercise/s from the repertoire until such time as she can safely move the affected portion of her body. The exercises below in the BASI block system of movements were based upon assumptions since I was unable to fully access her capabilities during our first visit. It is quite possible I might need to move at a much slower pace than originally planned and use dissociation of the involved body area. Versatility is a very important component of Pilates. That versatility allows us to make certain we do not stress any healing areas. A key to working with Shannon and any other post surgical breast cancer survivor is to remember everyone is different and every cancer impacts a person in a unique way. Being open to the individual is critical, watching for discomfort and listening for cues from the client is essential in order to move her through the repertoire comfortably and safely.

In order for Shannon to live a comfortably active life we must open and strengthen her shoulders/chest and improve her posture, as well as strengthening her abdomen, external hip rotators and back extensors. Due to her having active lymphedema, it would be best to measure from her hand to her upper arm on our first session and periodically from that point forward to determine if her lymphedema is being impacted. Additionally, her 5 year Arimidex hormone therapy has a side effect of joint and muscle pain and stiffness. From experience, Pilates helps the severity, however, her pain and stiffness may not completely disappear while on the hormone therapy, but it can be improved.
Recurrence is present in 7% of patients who remove the breast tissue. Exercise is vitally important in reducing the risk of recurrence, and Pilates can play a major role in improving one’s health and reducing that risk.
“The National Cancer Institute explains that exercise in general has been shown to be beneficial to cancer patients undergoing treatment and in recovery. However, many forms of exercise may be too high-impact for those suffering from fatigue and muscle weakness as a side effect. Pilates is a viable option for cancer patients because it is low-impact and features exercises that can be easily modified to suit a patient’s needs and abilities”.

When a woman sees her image and that image is deformed or altered in some way she must learn to accept those changes. It is not easy to do unless we can become focused on what we can change. Pilates is that opportunity for change, to improve a woman’s overall image of herself and see her whole person being altered into a physically fit and visually appealing form, lessening the focus on the imperfections.

“Rehab in a Pilates environment meets American College of Sports Medicine guidelines for optimizing psychological health in cancer patients. The guidelines state that the activity should be enjoyable, provide meaning and purpose, build confidence, facilitate a sense of control, develop challenging new skills, incorporate quality social interactions, and engage the mind and spirit. In addition, close supervision during Pilates sessions offers patients reassurance to continue mobility with detailed guidance and support.”

Pilates and my instructor have done that for me and I welcome the opportunity to help build that bridge for others and see the satisfaction in their accomplishments. While we may have had cancer, we don’t have to live in that dimension, we can create a new reality. BASI Pilates is that bridge, along with the 10 principles leading us to transformation:

- Awareness
- Concentration
- Efficiency
- Breath
- Control
- Flow
- Precision
- Balance
- Center
- Harmony

11
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