Rehabilitation's Role in Treatment of Breast Cancer



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Introductions

- I graduated from the University of Florida in 2003 and I have been in the medical field for 26 years, 23 as an OTR/L
- This subject means so much to me, because I am a breast cancer survivor and was diagnosed in 2024
- I started my pelvic health certification in January 2024 and was diagnosed with cancer in May 2024, I finished my certification while going through surgeries and doctors' appointments, I took my capstone exams 5 days prior to starting chemotherapy
- I hope I can shed some insight into this topic, because to say it hits home is an understatement

Introductions and Topics to Discuss

- I am a breast cancer survivor. I want therapists to understand how this diagnosis affects every aspect of your life
- Having a good support system is crucial in this journey, it is also important to understand how the therapeutic use of self is crucial during this difficult time since there are scars/trauma that the client is experiencing daily, even after the difficult treatment is over
- As a survivor, you mourn the person you were prior to breast cancer and must embrace the new “you,” this webinar will address the multiple roles that a rehab provider can have in this journey both as pre-rehab and post-surgical: range of motion, lymphedema, exercise, energy management strategies, daily task modifications, pelvic floor therapy, cognitive interventions, and emotional and stress management interventions

What to Know about Breast Cancer

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Breast Cancer

- Diagnosis and treatment are based on what type of biomarkers there are:
  - HER2 positive or negative
  - Progesterone (PR) positive or negative
  - Estrogen (ER) positive or negative
- Types of Breast Cancer:
  - Ductal Carcinoma In Situ
  - Invasive Ductal Carcinoma
  - Tubular Carcinoma
  - Mucinous Carcinoma
  - Papillary Carcinoma
  - Lobular Carcinoma In Situ
  - Invasive Lobular Carcinoma
  - Paget's Disease Of The Breast
  - Inflammatory Breast Cancer
  - Phyllodes Tumors Of The Breast
  - Her-positive Breast Cancer
  - Triple Negative Breast Cancer
  - Luminal A Breast Cancer
  - Luminal B Breast Cancer

Menon G, Alkabban FM, Ferguson T. Breast Cancer. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing; February 25, 2024.

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Breast Cancer

Common Types:

- **Ductal carcinoma:** Starts in the milk duct and is the most common type
- **Lobular carcinoma:** Starts in the milk producing glands
- **Ductal carcinoma in situ (DCIS):** non-invasive cancer contained in the duct
- **Invasive carcinoma:** Cancer that spreads into the surrounding breast tissues
- **Paget's disease**

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Warning Signs and Symptoms

- A new lump or thickening in the breast or underarm
- Changes in breast size, shape, or color
- Skin dimpling, puckering, or redness
- Nipple changes, inversion, or unusual discharge

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Breast Cancer

- There are many different treatment options and based on the biomarkers and labs; the medical oncologist and breast surgeon will establish your client's plan
- This can take time to get established and the waiting is not fun, because biomarkers like estrogen and progesterone come back quicker than the HER2- biomarker
- There are patients that just have mastectomy and do not need radiation and/or chemo and there are clients that need both
  - Lumpectomy can also have a variation of either chemotherapy and/or radiation
- Most breast cancer clients will be taking medicines after their initial treatment is done like aromatase inhibitors, selective estrogen receptor modulators, and/or gonadotropin-releasing hormone agonists

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Breast Cancer

- Going through diagnosis, labs, surgeries, and treatments can often mimic PTSD due to profound physical, emotional and existential distress
- Fear that the cancer will return or prove fatal
- Identity and body image shifts due to mastectomies, reconstruction scars, lumpectomy scarring, chemotherapy induced hair loss can affect self-esteem and sexuality
- Trauma responses due to flashbacks to medical procedures and diagnosis moments are common and require trauma-informed care

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Embracing the new “YOU"

- This can be very difficult, because as a person you want to just go back to what things were prior to having CANCER
- Hard to embrace all the joint/bone pain, fatigue, sexual changes, hot flashes, insomnia, side effects of medications, and just living your life
- It will take time and going through grief stages of denial, anger, bargaining, depression and acceptance
- Example, your client was exercising 3-4 days a week, working, having a social life and/or family and those activities suddenly become limited
- It is very frustrating, but educate on giving themselves “some grace”

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Goals of Rehabilitation

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Goals of Rehabilitation

Restore Mobility:

- Look at shoulder restrictions
- Focus on tightness, and limited range of motion caused by surgery or radiation
- This is not just limited to mastectomies and lumpectomies; radiation causes a lot of skin changes and scarring

Manage Lymphedema:

- Provide early detection, education, and specialized therapies (decongestive therapy) for surgical swelling

Rebuild Strength:

- Develop custom exercise programs to deal with cancer related fatigue, muscle weakness, and joint stiffness
- Even after chemo and/or radiation; fatigue can be caused by medications to manage cancer

Relieve Pain:

- Manual therapy techniques and target stretches to ease chest, back and shoulder pain

Support Cognitive and Nerve Health:

- Chemotherapy can induce peripheral neuropathy and cognitive changes
- (ex. Chemobrain is not fun)

The Effects of Early Rehabilitation

- The results of this study revealed that the physical and psychosocial functions of individuals deteriorate after breast cancer surgery, but early physiotherapist follow-up is effective in maintaining these functions and preventing breast cancer-related lymphedema
- As clinicians, we play a crucial part in helping these clients with their quality of life due to our patient focused treatment and holistic evaluation
- Need to empower more people to take an active role in their treatment and advocate for them

Kaş Özdemïr A, Telli Atalay O, Yılmaz S, Şenol H. The effects of early rehabilitation on physical and psychosocial functions after breast cancer surgery. *Support Care Cancer*. 2025;33(10):872. Published 2025 Sep 23. doi:10.1007/s00520-025-09926-4

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Restore Mobility: Beginning

- Start with gentle, approved ROM exerises and progress slowly to rebuild strength and flexibility
- Start with hand and arm squeezes: Raise your affected arm to shoulder height (if comfortable) and open and close your hand 15-30 times
- Elbow bends: Bend and straighten your elbow several times or touch your hand to your opposite shoulder
- Deep diaphragmatic breathing: Lie on your back, place a hand over your belly and smell the roses and breathe out the candles (focus on expanding your chest and abdomen and complete up to 6 times a day to help with chest wall mobility and lymph flow)

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Restore Mobility: Progressing

- Pendulum Swings: Lean over slightly while supporting yourself with your unaffected arm and let your affected arm gently swing in small circles or back and forth (I have had to let patients try to do them sitting down as well because of pain or fatigue)
- Wander Exercises: Lie on your back holding a broom, stick, or my personal favorite, a golf club and use your good arm to gently push your recovering arm overhead until you feel a mild stretch
- Wall Climbing/Walks: Stand facing a wall and slowly walk your fingers up the wall as high as you are able to without any pain

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Restore Mobility: Long Term

- Pectoral Stretches: Stand in a doorway with your hands on the frame of the door and gently lean forward to stretch the chest
- Resistance Training: Use light bands or small weights once cleared, focusing on rows and external rotations to stabilize shoulder muscles
- Mind-Body Practices: Mindfulness techniques, yoga stances and diaphragmatic breathing to assist with daily body awareness
- Include walking or any other meaningful activity to improve overall mobility

Lymphedema Management

- Abnormal swelling caused by buildup of lymph fluid when lymph nodes or vessels are damaged during treatments like surgery or radiation
- Swelling can happen in the arm, hand, breast, chest or underarm of the treated side, this causes reduced flexibility and a feeling of heaviness in the limb
- Aching in nearby joints like the wrist, elbow, and shoulder can occur
- Risk factors include removal of multiple lymph nodes, radiation therapy to the chest or underarm area, infections, injuries or excessive strain of the affected arm

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Lymphedema Management

- There is no cure for lymphedema, but it can be managed effectively especially if caught early
- Compression Garments: Sleeves or wraps to help fluid flow, make sure you are talking with a lymphedema therapist because too much compression is not helpful either
- Manual Lymph Drainage: A specialized massage technique performed by a certified therapist
- Prescribed Exercises: To assist with natural lymph flow
- Pneumatic pump or mechanical compression devices to be used at home, but this will be done with a certified lymphedema clinician

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Rebuild Strength

- Medical clearance needed! Patient might have drains, lifting restrictions, or limitations due to chemotherapy, radiation, or surgery
- Prioritize mobility first! Restore shoulder and arm range-of-motion before adding any weight or resistance
- Start light and begin with little to no weight, body weight movements, or light resistance bands
- Watch for lymphedema: Progressive resistance is safe when introduced gradually, avoid tight band placement or long static holds

Min J, Kim JY, Ryu J, et al. Early Implementation of Exercise to Facilitate Recovery After Breast Cancer Surgery: A Randomized Clinical Trial. *JAMA Surg*. 2024;159(8):872-880. doi:10.1001/jamasurg.2024.1633

Rebuild Strength

- A 1-month tailored exercise program, initiated immediately after breast cancer surgery and supplemented with supervised sessions coinciding with surgeon visits, significantly improved shoulder function in patients with breast cancer
- This is why rehabilitation clinicians are so important for breast cancer, and truthfully all types of cancer

Cyr MP, Jones T, Brennen R, Colombage U, Frawley HC. Effectiveness of Pelvic Floor Muscle and Education-Based Therapies on Bladder, Bowel, Vaginal, Sexual, Psychological Function, Quality of Life, and Pelvic Floor Muscle Function in Females Treated for Gynecological Cancer: A Systematic Review. *Curr Oncol Rep*. 2024;26(11):1293-1320. doi:10.1007/s11912-024-01586-7

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Phase 1: Weeks 1-4



Gentle movement and flexibility that includes diaphragmatic breathing to support lung and chest functions



Gentle arm raises to shoulder height, and wall stretches to open the pectoral muscles

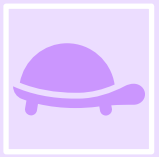
Phase 2: Weeks 4-6



Focus on major muscle groups 2-3 times a week



Try beginner-friendly resistance exercises like seated or standing rows with a light band, bodyweight or chair assisted squats, wall push-ups, and ceiling pumps



Aim for smooth and controlled movements per set
(5 good exercises are better than 10 bad form exercises)

Phase 3: Gradual Advancement

- Slowly increase resistance or repetitions only when your body can adapt without excessive soreness, pain, or swelling
- Incorporate low impact aerobic activities like swimming and/or walking to boost overall energy and reduce fatigue

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Relieve Pain

- Pain relief is an interdisciplinary approach!
- It can involve medications, physical therapy, and occupational therapy
- Medications for pain relief can include non-opiod options like acetaminophen or non-steroidal anti-inflammatory drugs (NSAIDS) such as ibuprofen
  - These can be used for mild or moderate pain or inflammation
  - Make sure your client follows their doctor's orders as some NSAIDS can affect blood clotting or interact with active treatments

Relieve Pain

- **Adjuvant Medications:** Drugs originally meant for other conditions like anti-depressants (duloxetine) or anti-seizure medications (gabapentin) are very effective for neuropathy caused by chemotherapy
- **Opioids:** Weak or strong opioids (such as tramadol, codeine, or morphine-based drugs) may be prescribed for more severe or advanced pain when other medications are not enough

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Relieve Pain

- **Physical Therapy/Occupational Therapy:** A specialized therapist can create custom movement and exercise programs to improve mobility, reduce pain from surgery, radiation, lymphedema, and manage scar tissue
- **Acupuncture:** Can help relieve joint pain caused by hormone therapies like aromatase inhibitors (Exemestane, anastrozole, and letrozole) these meds can cause joint/bone pain, bone loss, and menopausal symptoms
- **Muscle therapy:** Therapeutic or lymphatic massage can ease muscle tension and swelling but needs to be avoided over areas with very recent surgery or radiation
- **Mind-Body Techniques:** Practices like yoga, hypnosis, and cognitive behavioral therapy can help manage the stress and perception of pain

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Things to Remember!

- Some of your clients are being put in medical menopause with aromatase inhibitors and Lupron shots (go from having hormones to very little)
- Aromatase inhibitors cause hot flashes, insomnia, night sweats joint/bone pain, and fatigue
- Your clients will have good days and bad days, do not over stress them
- Meds like Tamoxifen (selective estrogen receptor modulator) used to treat and prevent estrogen positive breast cancer cause hot flashes, night sweats, vaginal dryness or discharge as well as fatigue, nausea, mood changes, and headaches

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Pelvic Floor Dysfunction

- You have clients that are going through breast cancer and that also have pelvic floor dysfunction due to their medications and treatment
- Your patient could have had issues prior to their cancer dx and it has gotten worse due to their treatment
- Your client could have pelvic floor tightness, pelvic floor weakness, vaginal dryness, vaginal wasting, sexual dysfunction issues, urinary and/or bowel incontinence and pelvic pain
- Make sure you are asking these questions when evaluating, because I promise you; your client is going to have some of these issues

Pelvic Floor Dysfunction

- Most of your clients are going through medical menopause
  - This is a life changing event despite what they are already going through with their cancer
- Medications, chemotherapy, and radiation take a HUGE toll on their bodies causing significant weakness and fatigue
- I had to deal with stress incontinence after chemotherapy, I never thought I would have to be my own pelvic health clinician

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Pelvic Floor Dysfunction

- Know what is available in your area to assist with specialized treatments like lymphedema, pelvic health and counseling options in your area
- These topics can be very taboo so make sure you are comfortable with discussing to address these issues (I practiced in the mirror a lot and with my very supportive husband)
- Pelvic health practitioners can assist with:
    - Lubrication recommendations
    - Positioning modifications
    - Pelvic floor uptraining
    - Pelvic floor downtraining
    - Behavior modifications to reduce incontinence
    - Pain management
    - Bowel management
    - Scar tissue management
    - Education on diet/water intake

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Pelvic Floor Dysfunction

- Breast malignancy is the most common cancer in females and symptoms of pelvic floor disorders and sexual dysfunction secondary to systemic cancer treatment are common
- Many women do not know this is an area that can be worked on and doctors do not ask these questions enough
- Needs to be a focus to improve quality of life
- Normalize these conversations with clients and empower them to ask for these services
- Non-surgical, non-pharmaceutical, conservative therapies—namely pelvic floor and education-based therapies—can be beneficial to reduce these symptoms with breast cancer clients

Cyr MP, Jones T, Brennen R, Colombage U, Frawley HC. Effectiveness of Pelvic Floor Muscle and Education-Based Therapies on Bladder, Bowel, Vaginal, Sexual, Psychological Function, Quality of Life, and Pelvic Floor Muscle Function in Females Treated for Gynecological Cancer: A Systematic Review. *Curr Oncol Rep*. 2024;26(11):1293-1320. doi:10.1007/s11912-024-01586-7

Support Cognitive and Nerve Health

- Cognitive changes and nerve issues are common side effects linked to chemotherapy, radiation, hormone therapy, and the body's inflammatory response
- Mental haziness, trouble concentrating, memory lapses, and slower processing speed are often called chemo fog or chemo brain
- Causes are due to direct neurotoxicity from treatments, hormonal shifts (lowered estrogen affecting neuron communication), inflammation, fatigue, and stress
- For most patients, these mental changes improve within 9 to 12 months after finishing active treatment but may occur long term

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Nerve Health and Neuropathy

- Peripheral Neuropathy is numbness, tingling, burning pain, or weakness in the hands and feet that can be triggered by special chemotherapy drugs used in breast cancer treatment
- Management includes physical therapy/occupational therapy, acupuncture or specialized medications if nerve symptoms become severe or painful

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Practical Coping Strategies



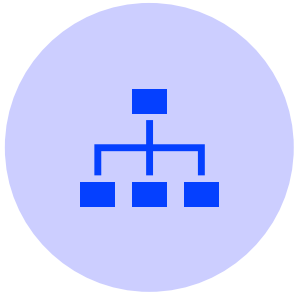
Medical Support:

Talk openly with your oncology team so they can check for contributing factors like deficiencies (low hemoglobin, low vitamin D, kidney/liver enzymes, low ferratin levels, sleep disorders or depression



Lifestyle Habits:

Prioritize regular physical exercise, improve sleep hygiene, manage stress through meditation, mindfulness, and gentle yoga



Organization Tools:

Use detailed planners, set structured routines, and write important tasks down to reduce mental stress/strain



Brain Stimulation:

Work on puzzles, learn a new skill, or try interactive memory games to help build focus

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Types of Intervention

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Types of Interventions

Physical and Occupational Therapy:

- Focus on posture training, scar tissue mobilization, joint movement, daily functional recovery, and improving quality of life
- Don’t forget, OT/PT can assist with stress management as well
- This is a stressful time and patience/understanding is super critical
- Patients are going through states of denial and trying to manage their daily lives
- Validate their concerns and address them openly and honestly

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Types of Interventions

Exercise Programs:

- Focus on safe aerobic and strength training tailored to the individuals' capabilities
- Remember, their bodies are going through so much stress, poisonous chemicals/radiation, medications that cause sleep disturbances, muscle/joint pain, steroids, and pain medications that can hinder someone's physical abilities
- Example, I am a year and half past when chemo/radiation stopped but am on a Lupron shot (lowers estrogen levels, causing medical menopause) and Exemestane (estrogen blockers) that cause extreme fatigue, muscle and joint pain, I am just now getting back to exercising consistently
- You want to motivate your clients but be empathetic to their needs and abilities

Types of Interventions

Supportive Counseling:

- Integrates psychological and stress management to address emotional well-being during recovery
- Therapy practitioners can absolutely assist with this area but make sure you are comfortable doing this, It is okay to make referrals to appropriate clinicians
- What is difficult about cancer is fear of not being able to control the outcome, there are so many different variables that affect cancer and even more difficult at times to prioritize yourself (promote being an advocate for themselves)
- As a clinician, I tell my clients to imagine three trash cans and separate them into:
  1. Things you can’t change
  2. Things you are in control of
  3. Things that do not matter

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Supportive Counseling

- Include partners or caregivers in the plan of care to address relational strain and communication breakdowns (if client is agreeable)
- Oncology collaboration: Coordinate with the client's medical team to ensure holistic care and monitor how distress impacts their treatment compliance
- Counseling can include sexual counseling, couples counseling, psychology, psychiatry or even a social services LCSW

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Things To Remember!

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Therapeutic Use of Self

This is so IMPORTANT!

- I use my experiences all the time to give my patient's a level of comfort, but I let them tell me their story! It is not about me
- VALIDATE your client: Your client is about to get poked, prodded, and have everyone looking at their boobs like they are not even there
- Waiting for lab results and their next mammogram-
- I want to be their cheerleader and empower that person to get through this ordeal
- Do not pity that person, but help them on their journey whether you are there for the beginning, middle or if they are in remission

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What to Avoid as a Therapist

- Avoid toxic positivity, unsolicited advice, and minimizing phrases
- Avoid saying “I know how you feel”
  - Everyone’s experience with cancer is unique
- Avoid saying “You’re going to beat this” or “Stray strong”
  - This can create pressure to put on a brave face or make the person feel guilty if their health declines
- Avoid saying “You don’t look sick”
  - This invalidates the physical and emotional exhaustion the person is experiencing beneath the surface

What to Avoid as a Therapist

- Avoid saying “The hard part is over”
  - People say this when chemotherapy, surgery, and/or radiation stop, but these clients may have years of medication to take, and it is not any easier to handle
- Avoid saying “Have you tried this diet or treatment?”
  - I can’t count how many times I got told to try some crazy cocktail of vitamins or internet recipes to cure cancer
- Avoid saying “Everything happens for a reason” or “At least it’s the treatable kind”
  - Minimizing the diagnosis does not cancel out their pain and fear

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