

Cancer is one of the few diseases where a patient goes in feeling reasonably well and emerges from “successful” treatment feeling awful.

Successful Treatment

There needs to be a paradigm shift in thinking about successful cancer treatment

Is cancer success simply being cancer free?

OR

Is cancer success being cancer free and ALSO returning to a pain-free



From Cancer Patient to Cancer Survivor: Lost in Transition

- In the Institute of Medicine's report, "From Cancer Patient to Cancer Survivor: Lost in Transition", one of the main recommendations was to make "survivorship" a distinct phase of treatment.
- The focus on physical and emotional healing is key during this phase.

*From Cancer Patient to Cancer
Survivor: Lost in Transition*

- The report states that “most cancer survivors will return to work following their treatment but approximately 1 in 5 will have cancer-related work limitations up to 5 years later”.

Common Physical
Problems During and
After
Cancer Treatment

Common Physical Problems During and After Cancer Treatment

- Pain
- Swelling
- Decreased range of motion
- Decreased strength/muscle atrophy
- Soft tissue tightness
- Risk for infection and lymphedema
- Decreased cardiac function

Common Physical Problems During and After Cancer Treatment

- Fatigue
- Bone loss
- Neuropathy
- Weight gain
- Dizziness
- Postural changes
- Loss of normal routine function

Common Physical Problems During and After Cancer Treatment

- 90% of patients have one or more of these problems during and after cancer treatment.
- Physical therapy with a skilled oncology specialist can eliminate, improve or prevent almost every one of them.
- We then need people to be able to transition into a healthy lifestyle with safe

Moving in the Right Direction

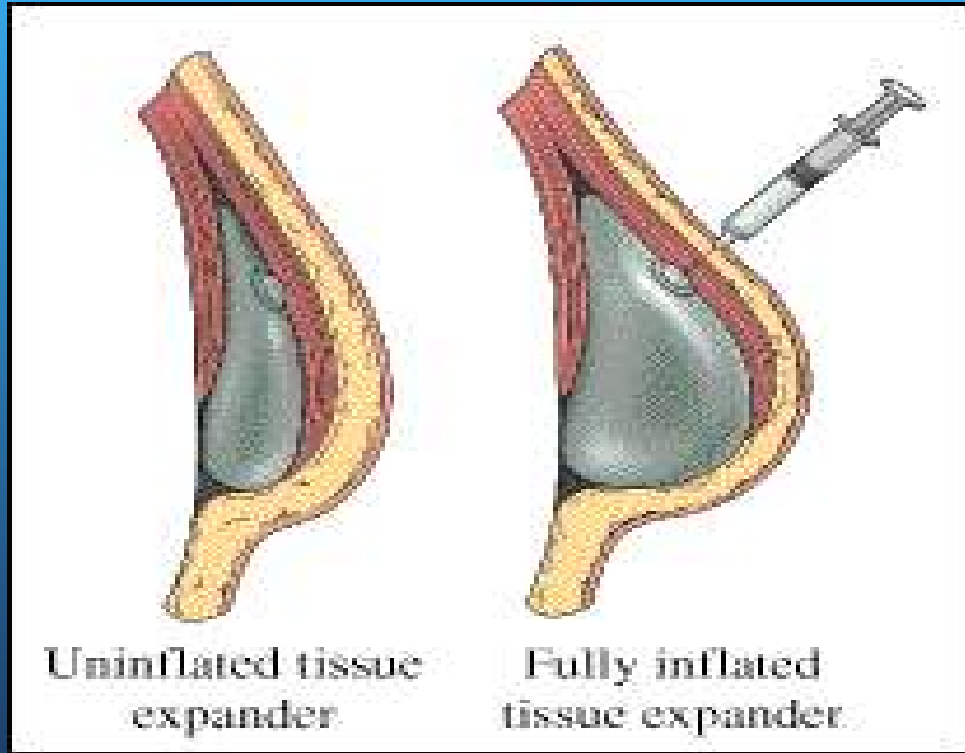
- Physicians are starting to tell their patients to exercise and return to normal activities.
 - However, when patients have pain, range of motion restrictions or strength deficits, they are at risk for creating increased dysfunction and disability, as well as increased risk for lymphedema.

Breast Reconstruction and
Recovery

Breast Reconstruction

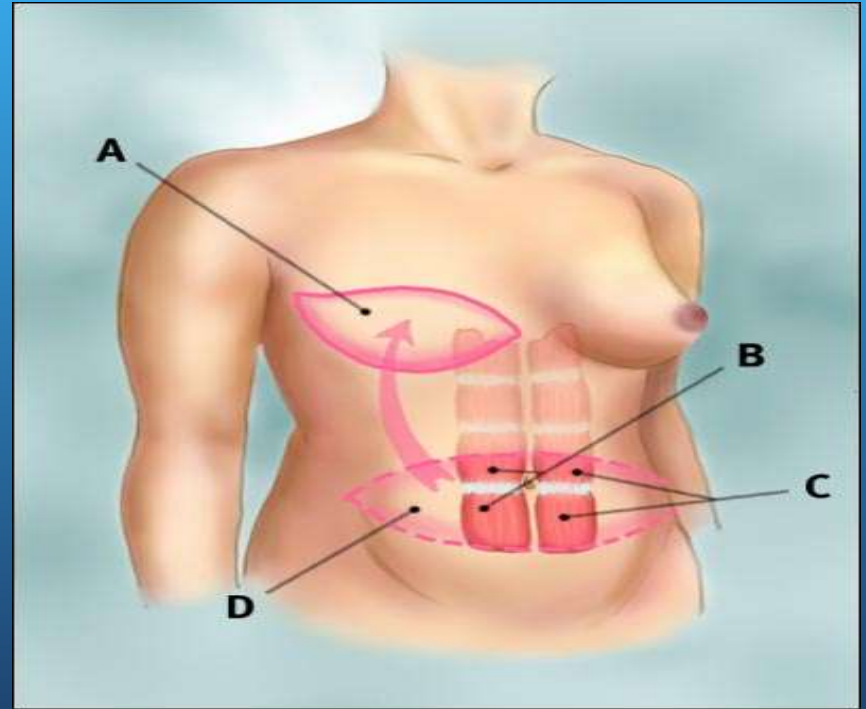
- Evidence suggests that persistent postsurgical pain may be a significant risk for women undergoing breast reconstruction.
- Women who undergo implant reconstructive surgery appear to be at increased risk for breast pain and shoulder pain.

Expanders - How They Impact Your Movement



TRAM/DIEP Flap Surgery

Studies indicate that women who receive TRAM flaps are at increased risk for persistent problems with abdominal pain and tightness at least 2 years after surgery.



Breast Reconstruction

- TRAM or DIEP Flap surgeries constitute major abdominal surgery and are correlated with post-op pain and strength deficits.
- Exercise Implications:
 - Will have weakened abdominal muscles, slower to recruit at first
 - Longer recovery - will be generally weaker with decreased endurance.

Recovering from Oophorectomy

- Women who undergo an oophorectomy will most often have precautions for lifting and exercising for the first few weeks following surgery.
- Exercise Implications:
 - Light walking is allowed and encouraged
 - Abdominal muscles will often be weaker - will want to avoid direct abdominal strengthening until cleared by MD
 - Should be aware of lymphedema precautions if lymph

Rehab and Recovery

After the Acute Phase is Over

Who Needs Cancer Rehabilitation?

- People who have had or will have surgery
- People who have had or will have chemotherapy
- People who have had or will have radiation



Physical Therapy

- There is robust evidence that physical therapy and exercise can:
 - Speed functional recovery after surgery
 - Reduce chemotherapy-related fatigue and nausea
 - Maximize range of motion
 - Reduce and eliminate pain during all segments of treatment
 - Improve perceived quality of life
 - Help moderate weight gain

Priorities

- Reduce swelling
- Regain range of motion
- Regain strength
- Return to prior level of function

Physical Therapy

- Everyone has different rehab needs -some people need 4-5 visits and they are done and others need to be followed throughout chemotherapy and radiation.
- It depends on your prior level of function, your level of involvement and the type of surgery that you have.
- Our goal is to get you back to all the things you love to do in the safest and most efficient way possible.

Physical Therapy

- Nothing we do in physical therapy should cause you increased pain
- Physical therapy for breast surgery is very different than what you would experience for an ACL, or rotator cuff surgery rehab
- Most people leave PT feeling better, with less pain, more energy and more movement

Expectations of Recovery Time

- Defining Recovery is Important
- Acute Recovery from surgery is when you are out of the critical post-op risk window
- Healing and Full Recovery is VERY DIFFERENT
- Be patient and set realistic goals

What if I Am Long Past Surgery?

Physical Therapy Can Help Address:

- Pain
- Fatigue
- Scarring and fibrosis
- Deconditioning/loss of function
- Swelling
- Impaired Balance
- Lymphedema
- Postural imbalance due to surgery
- Difficulty with walking and functional activities

Exercise and Cancer Recovery

- A review of 36 studies of cancer and quality of life found that aerobic and resistance exercise during or following cancer treatment resulted in improvements in :
 - quality of life
 - exercise capacity
 - flexibility
 - body composition
 - fatigue
 - muscular endurance
 - Pain, nausea, diarrhea, sense of control, depression, self-esteem, and life satisfaction were also improved

Physical Activity and Survival

- A study of almost 3000 women with stage 1-3 breast cancer who exercised 3-5 hours per week at average pace of 2-2.9mph.
- Improved their survival rate from breast cancer and overall mortality from other causes by 28-40% compared to less active breast cancer patients studied.
- Interestingly, the benefits were independent of the participant's prior activity level.

Then What?

- My goal as a therapist is to “graduate” patients to an independent and consistent exercise plan for life -
- There are several programs out there that can help bridge that gap so people can gain confidence and skills to continue on their own.
- Examples:
 - Living Strong, Living Well
 - Pilates at BCC
 - Exercise for Healing at PAMF Mountain View

Fatigue

Fatigue

- Fatigue is the most common and problematic symptom of individuals with cancer.
- Self-reported fatigue in patients who have cancer correlates with a decline in function.



Fatigue

- Several studies have conclusively found that exercise is effective in treating fatigue in people who have a history of cancer.

Fatigue

- For a person going through cancer treatment, it may seem counter-intuitive to think that exercise is going to make them less tired.
- The idea is to start small and yourself up for success.



Fatigue

This means finding their baseline for cardio exercise - it might be quite low at the beginning and gradually working up. The key is gradual increases in both time and difficulty of the exercise.

Lymphedema

Lymphedema

- Lymphedema is an abnormal collection of protein and fluid in the tissues that can occur in the arm and/or breast.
- Risk factors for lymphedema include having lymph nodes removed during surgery and undergoing radiation.

Lymphedema

- The risk is greater with axillary lymph node dissection as compared to sentinel lymph node biopsy.
- However, this does NOT mean that if you have had a significant number of nodes removed that you will automatically get lymphedema.

Lymphedema

- Physicians and therapists used to warn patients about doing ANY exercise, thinking it would cause lymphedema in these patients.
- Current research shows that supervised exercise DOES NOT increase a patient's chances of getting lymphedema, if performed

What Does that Mean for Exercise?

- Start with VERY low weights and GRADUALLY ramp up. It will seem very easy at first, but it is important to have a very gradual increase.
- Patients with existing lymphedema can wear a compression sleeve while exercising, or use Manual Lymphatic Drainage before and after exercise to help control swelling.
- For ovarian cancer patients, risk remain the same, however the focus in more on the lower extremities, pelvis and abdomen

Lymphedema

- ✘ A patient is NOT protected from lymphedema by sitting on the couch.
- ✘ A strong, rehabilitated body is your best defense against lymphedema.



*Implications for
Exercise After Cancer*

Endurance

- A lot of people will be deconditioned by the end of treatment- some will be discouraged by this.
- They need encouragement that this is their baseline and if they exercise in a safe and effective way, they will make progress – patience!

Cardiovascular Health

- A lot of chemotherapy drugs are cardiotoxic
 - they impact how the heart functions in the short term AND long term.
- Patients can regain their prior level of function, but it will take longer to get there.
- Exercise actually increases cardiovascular and pulmonary function during and after

Weight Training

- Women who have had expanders and implants used for reconstruction now have a permanently different location for their pectoralis major muscle.
- Because the pectoralis major is now OVER the implant, when build up their pecs, they will feel some pressure and tightness over the area.
- Therefore, use moderation when strengthening the pecs directly - too much at one time will cause them

Weight Training

- Emphasize positioning.
- People will likely already be in a posture that brings their shoulder forward
- Make sure any weight machines do not exacerbate this.
- Example: Bicep curls - may be better to do this in free weights

Other Considerations

- Protect the neck!
- Patient who have had chemo are at a much higher risk for osteoporosis and osteopenia.
- Therefore, when considering exercises, emphasize things you can do that protect the neck
- Example: Instead of crunches, work on abdominals with neck resting on mat - can use ball, lower abdominal exercises, pilates

Strength

- Muscles that tend to be particularly weak
 - Abdominals
 - Lower and middle trapezius
 - Serratus Anterior
 - Gluts and Quads
- Muscles that tend to be tight or short
 - Pectoralis Major

Neuropathy

- Some chemotherapy drugs cause neuropathies in hands and feet
- This means people may have persistent numbness and tingling
- This can impact balance significantly
- Also can cause pain

Neuropathy

- Things you can do:
 - Work on balance training
 - Single leg stance
 - Balance board
 - Make sure you are wearing supportive shoes!
 - Be aware that if you have neuropathies in your hands, your ability to hold weights etc.

Why Exercise?

- Patients often say they feel like their bodies failed them when they got cancer - why should you exercise?
- The answer is simple - exercise is the ticket to getting back to the things you love. It is also the ticket to getting back in touch with your body. A strong, pain free body will allow you to fully recover, both physically and emotionally.

Why Exercise?

- The concept of “recovery” needs to change - there is no reason a person who has had cancer cannot return to whatever it is she or he loved to do before cancer - and much more.
- Our bodies have an amazing healing capacity - and with help, they can be even better!

Now What?

- Set up a plan to bring exercise safely back into your life.
- Be Proactive - if you have pain, fatigue or are unable to do things you want to do in your life, get a referral to physical therapy from your physician.
- Make sure if you are working with someone in the rehab or fitness world that they know

Now What?

- Use to gain back a sense of control.
- Don't think of exercise as a regimented activity - not all exercise happens on a bike or treadmill!
 - Love to dance? Love to walk your child or grandchild
 - to school? Love yoga? Love to garden?
- Find something you love and



Questions

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