ROLE OF PHYSICAL THERAPY IN CANCER CARE

Presented by:

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Organized:

UNC's Get Real and Heel

Mindset Movement and Wellness

WHAT ARE WE GOING TO LEARN?

- NERVOUS SYSTMEM REGULATION
- PREHAB AND SYMPTOM PREVENTION
- MANAGING TREATMENT SIDE EFFECTS
- RESTORING FUNCTION & REDUCING RECURRENCE RISK

Sophia Pelton PT DPT

2020

- 25 years of practice
- Trained in Manual Lymphatic Drainage in 2002
- Helped to Open a Sports Medicine Clinic NJ
- Moved to NC in 2014 from New Jersey.
- Duke to UNC
- Orthopedic clinical specialist
- Opened Age Well NC June 2020

- Health conscious
- Runner
- Reluctant Weight Pusher and puller
- Mom of 3
- Healthy relationship spouse
- Community Involvement

EXPERIENCE IS THE BEST TEACHER

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NERVOUS SYSTEM REGULATION

Healing happens in safety.

YOU ARE NOT YOUR THOUGHTS

There is an observer between you and your thoughts. Once you notice that your brain is taking you on a walk, you can practice bringing it back.

BE HERE NOW

Sinking into mindfulness. Notice smells, colors, sounds and focus on what is in your environment both in and out

FIND YOUR BREATH AND CONCENTATE ON IT

Ujjayi breathing
Long Exhales.

UJJAYI BREATHING

1. BREATH IN AND OUT OF NOSE MOUTH STAYS CLOSED
2. CONSTRICT THE BACK OF THE THROAT GENLTY TO MAKE SOUND
3. LISTENING TO THE SOUND AND FEELING YOUR BODY BREATH SWITCHES YOU INTO REST AND DIGEST
4. LETS DO A FEW ROUNDS TOGETHER
5. PAIR YOUR BREATH WITH MOTION

PREHAB AND SYMPTOM PREVENTION

Research tells us that even 3 weeks of exercise before treatments: radiation, chemotherapy or surgery can help you function better.

- **BASELINE FITNESS PREDICTS OUTCOMES**
- **CARDIOVASCULAR CONDITIONING**
- **HOW TO START**

It is safe to exercise at all stages of Cancer. Listen to your body and do what you can. Movement is medicine.

PREHAB AND SYMPTOM PREVENTION

- Limb/lymphedema baseline
- Range-of-motion baseline
- Swallowing and speech baseline
- Pelvic floor baseline
- Nutritional screening
- Education

READY FOR A TEST???

SIT TO STAND IN 30 SECONDS

Orignial Test

1. Starting Position: Hands on thighs
2. Stand up Fully
3. Sit back down
4. Repeat for 30 seconds

Modified

1. Starting Position. Sitting with hands on Arm Rests
2. Stand up Fully use your hands as needed
3. Sit back down
4. Repeat for 30 seconds

COMMON SIDE EFFECTS

- CANCER RELATED FATIGUE
- PERIPHERAL NERUOPATHY
- LYMPHEDEMA
- RADIATION FIBROSIS
- RESULTANT PAIN/WEAKNESS
- BONE LOSS

LETS DANCE

You just did more for your body in **90 seconds** than most exercises do in **20 minutes**.

Side Effect	How Dancing Helps
Bone Loss	Stomping delivers the same rate of impact as jumping — direct bone-building signal to the hip
Weakness	Full-body, functional movement — legs, core, arms working together
Lymphedema	Rhythmic muscle contraction acts as a pump, supporting lymph flow
Fatigue	Short bursts + recovery beat "rest more" — movement is the actual antidote
Neuropathy	Weight shifts and grounded footwork rebuild balance and proprioception, safely
Radiation Fibrosis	Active arm movement through your own available range maintains and improves mobility

RECURRENCE RISK REDUCTION

Surprise!

Exercise

How does exercise really work to help prevent recurrence?

Pathway	What we think happens in your body
Less inflammation	Exercise lowers inflammatory markers like IL-6 and CRP that can otherwise support tumor growth.
Better insulin control	Lower circulating insulin and IGF-1 mean less fuel signaling that cancer cells can exploit.
Stronger immune defense	Movement mobilizes natural killer cells that help identify and clear abnormal cells.

Proposed mechanisms — still an active area of research

Five studies behind the exercise-recurrence connection

A mix of randomized trials and large cohort studies — different designs, same direction of benefit.

CHALLENGE Trial — NEJM, 2025

Randomized trial, 889 colon cancer patients: exercise cut recurrence risk by 28% vs. usual care.

CALGB 89803 — Meyerhardt et al., JCO 2006

832 patients with stage III colon cancer: physically active survivors had much lower recurrence and death risk.

Nurses' Health Study — Holmes et al., JAMA 2005

2,987 women with breast cancer: walking 3–5 hours/week linked to about half the risk of breast cancer death.

Pooled Australian & Canadian trials — Biganzoli et al., 2021

579 women, re-analysis of randomized trials: exercise lowered long-term survival risk by more than half.

Pooled U.S. cohort study — Rees-Punia et al., JNCI 2025

90,844 survivors across 11 cancer types: higher activity after diagnosis linked to better overall survival.

Recurrence Risk Reduction

Putting it all together.

01

Present Moment living

When you are struggling. Take a deep breath and feel your breath animate your body

02

Stress management

You are not your emotions or your thoughts.

03

Nutrition

Whole Foods and moderation

04

Cardio

150 minutes moderate
OR
90 min vigorous

05

Weight Training

2 times a week minimum

06

Joy

Seek and Spread Joy

07

Curiosity

Try new things. Honor yourself.

PT is a great starting place to figure it all out.

> *I don't know how to get my cardio back.*
>
> *I don't know which exercises actually help me.*
>
> *I'm fatigued often, and afraid to do too much.*
>
> *I don't want more pain.*
>
> *I want to get back to work, but I don't know how to move again.*

Survivorship is a process.

Mindset Movement
and Wellness

Thank you so much for being here.
I’m honored to be helping others get through this health challenge.

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