

Making Exercise and Wellness Part of The Cancer Experience

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Presentation Outline

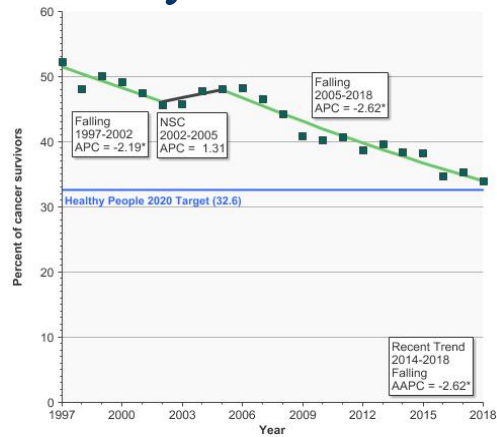
- Part 1: Background
 - Benefits of exercise
 - ACSM Guidelines
 - Exercise Safety
- Part 2: Resources at UNC
- Part 3: Engaging patients in exercise and wellness programs at your site



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Physical Activity Rates

- 34% of cancer survivors aged 18 years and older reported no physical activity in their leisure-time.
- 33% to 45% of patients accumulated at least 150 mins of moderate exercise per week.



Centers for Disease Control and Prevention, National Center for Health Statistics. National Health Interview Survey, 1997–2018.
 Exercise Guidelines for Cancer Survivors: Consensus Statement from International Multidisciplinary Roundtable. *Campbell et al. Med Sci Sports Exerc.* 2019 Nov; 51(11):2375-2390.



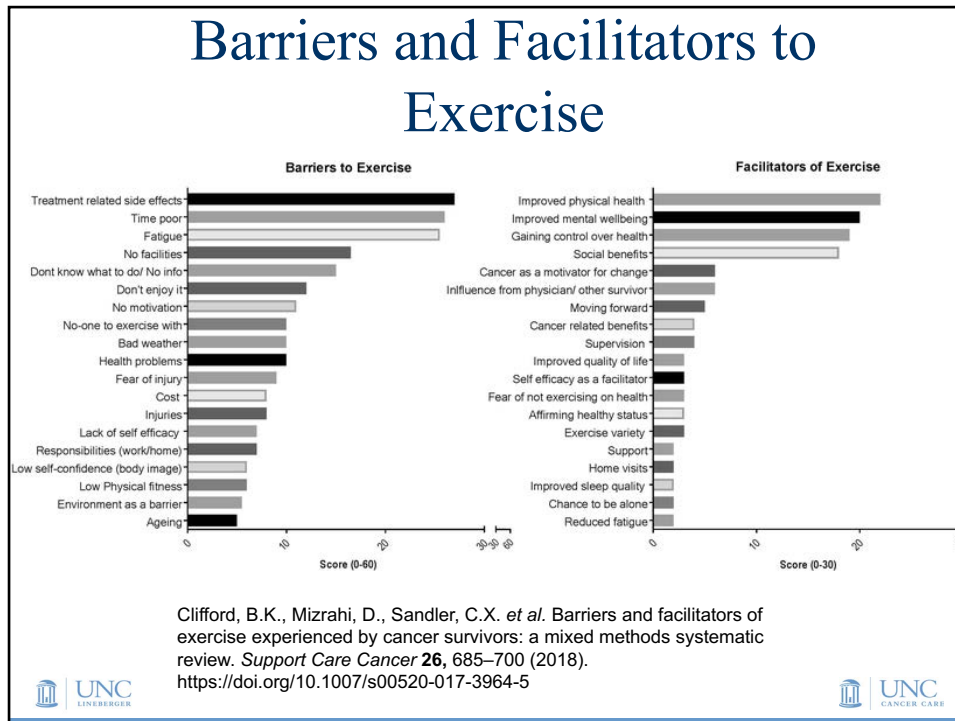
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Exercise is Medicine

- American College of Sports Medicine global initiative to make physical activity assessment and promotion a standard in clinical care.
- Encourages health care providers to include physical activity when designing treatment plans to refer patients to evidence-based exercise programs and/or qualified exercise professionals.



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ACSM Guidelines for Cancer Patients and Survivors

- **Avoid inactivity**
- 150 min/week of moderate intensity aerobic exercise OR 75 min/week of high intensity aerobic exercise
- Resistance training 2x/week

Campbell KL, Winters-Stone KM, et al. Exercise Guidelines for Cancer Survivors: Consensus Statement from International Multidisciplinary Roundtable. *Med Sci Sports Exerc.* 2019 Nov;51(11):2375-2390. doi: 10.1249/MSS.0000000000002116. PMID: 31626055.

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Exercise Safety

- High Falls Risk, Uncontrolled co-morbidities (HBP, Afib, Diabetes), Cardiotoxicity, Cognitively Impaired (moderate-severe dementia). - **Medical clearance needed**
- Physical Therapy: A bridge to group and/or unsupervised exercise programs. Can help to correct impairments and limitations that may prevent a cancer patient or survivors from working towards the ACSM exercise recommendations
- Health-related fitness assessments may be valuable
Examples: 6MWT, Gait Speed, SPPB, TUG, Berg Balance

National Comprehensive Cancer Network. NCCN Clinical Practice Guidelines in Oncology - Survivorship. 2018;Version 2.2018.



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Effects of Exercise on Health-Related Outcomes in Those with Cancer

What can exercise do?

- **Prevention of 7 common cancers***
Dose: 2018 Physical Activity Guidelines for Americans: 150-300 min/week moderate or 75-150 min/week vigorous aerobic exercise
- **Survival of 3 common cancers****
Dose: Exact dose of physical activity needed to reduce cancer-specific or all-cause mortality is not yet known; Overall more activity appears to lead to better risk reduction

*bladder, breast, colon, endometrial, esophageal, kidney and stomach cancers
**breast, colon and prostate cancers

Overall, avoid inactivity, and to improve general health, aim to achieve the current physical activity guidelines for health (150 min/week aerobic exercise and 2x/week strength training).

Outcome	Aerobic Only	Resistance Only	Combination (Aerobic + Resistance)
Strong Evidence			
Cancer-related fatigue	3x/week for 30 min per session of moderate intensity	2x/week of 2 sets of 12-15 reps for major muscle groups of moderate intensity	3x/week for 30 min per session of moderate aerobic exercise, plus 2x/week of resistance training 2 sets of 12-15 reps for major muscle groups of moderate intensity
Health-related quality of life	2-3x/week for 30-60 min per session of moderate to vigorous	2x/week of 2 sets of 8-15 reps for major muscle groups at a moderate to vigorous intensity	2-3x/week for 20-30 min per session of moderate aerobic exercise plus 2x/week of resistance training 2 sets of 8-15 reps for major muscle groups at moderate to vigorous intensity
Physical Function	3x/week for 30-40 min per session of moderate to vigorous	2-3x/week of 2 sets of 8-12 reps for major muscle groups at moderate to vigorous intensity	3x/week for 20-40 min per session of moderate to vigorous aerobic exercise, plus 2-3x/week of resistance training 2 sets of 8-12 reps for major muscle group at moderate to vigorous intensity
Anxiety	3x/week for 30-60 min per session of moderate to vigorous	Insufficient evidence	2-3x/week for 20-40 min of moderate to vigorous aerobic exercise plus 2x/week of resistance training of 2 sets, 8-12 reps for major muscle groups at moderate to vigorous intensity
Depression	3x/week for 30-40 min per session of moderate to vigorous	Insufficient evidence	2-3x/week for 20-40 min of moderate to vigorous aerobic exercise plus 2x/week of resistance training of 2 sets, 8-12 reps for major muscle groups at moderate to vigorous intensity
Lymphedema	Insufficient evidence	2-3x/week of progressive, supervised, program for major muscle groups does not exacerbate lymphedema	Insufficient evidence
Moderate Evidence			
Bone health	Insufficient evidence	2-3x/week of moderate to vigorous resistance training plus high impact training (sufficient to generate ground reaction force of 3-4 time body weight) for at least 12 months	Insufficient evidence
Sleep	3-4x/week for 30-40 min per session of moderate intensity	Insufficient evidence	Insufficient evidence

Citation: bit.ly/cancer_exercise_guidelines Moderate intensity (60%-89% heart rate reserve or VO₂R) to vigorous intensity (80%-89% heart rate reserve or VO₂R) is recommended.

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MOVING THROUGH CANCER: Exercise for people living with and beyond cancer

TO GET STARTED
Avoid inactivity; moving more and sitting less benefits nearly everyone

FOR OVERALL HEALTH
Aim to meet the current exercise guidelines for adults¹


Moderate Aerobic Exercise
 At least 150–300 mins per week

OR


Vigorous Aerobic Exercise
 At least 75–150 mins per week
(or a combination of moderate/vigorous aerobic exercise)


Resistance Exercise
 2x per week

FOR PEOPLE DURING & FOLLOWING CANCER TREATMENT
Research shows lower amounts of exercise can still help with the following cancer treatment-related symptoms:


Cancer-related fatigue


Health-related quality of life


Physical function


Anxiety


Depression


Sleep


Lymphedema²


Bone health³


To improve these symptoms, choose an exercise plan below:


Aerobic Exercise
 3x per week
 30–60 mins
Helps to manage the following symptoms:


OR


Resistance Exercise
 2x per week
 2 sets/8–15 reps
Helps to manage the following symptoms:


OR

 + 
Aerobic Exercise + **Resistance Exercise**
 2–3x per week 20–40 mins + 2x per week 2 sets/8–15 reps
Helps to manage the following symptoms:


¹ Physical Activity Guidelines for Americans, 2018
² Progressive supervised resistance training does not exacerbate lymphedema
³ At least 12 months of resistance training plus high impact training needed

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Special Considerations

Bone Mets/bone loss	Avoid high-impact movements, hyperextension or flexion of the spine and dynamic twisting movements Weight bearing vs non-weight bearing
Lymphedema	Insufficient evidence to support or refute the clinical advice of a compression sleeve- refer to patient's provider for guidance
Older adults	Cancer can accelerate co-morbidities such as: sarcopenia, osteoporosis, cognitive decline, fatigue, neuropathy
Ostomy	Empty before exercise Avoid contact sports Supervision from exercise professional (avoiding Valsalva, modifying core, ensuring proper hydration for ileostomy)
Peripheral neuropathy	Balance, stability and gait should be assessed before starting exercise Consider non-weight bearing exercise Resistance training considerations (gloves, machines vs free weights)
Stem Cell Transplant	Home-based programs encouraged Light intensity, high frequency Progress slowly and on day-to-day basis
Neutropenia	Fevers Platelets <10-15K

Campbell et al. Exercise Guidelines for Cancer Survivors: Consensus Statement from International Multidisciplinary Roundtable. *Med Sci Sports Exerc.* 2019 Nov;51(11):2375-2390. doi: 10.1249/MSS.0000000000002116. PMID: 31626055.

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Exercise During and After Cancer Treatment

During Treatment

- Program should include:
 - Cardio
 - Strength
 - Flexibility
 - Balance
- Slow or no progression
- Many of the same physiological/psychological benefits
- Mindful of:
 - Ports/lines/other surgeries
 - Bone mets
 - Treatment side effects

After Treatment

- Program should include:
 - Cardio
 - Strength
 - Flexibility
 - Balance
- Slow progression
- Many of the same physiological/psychological benefits
- Mindful of:
 - Lymphedema
 - Bone mets
 - Treatment side effects



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Part 2: Resources at UNC



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Get Real and Heel

Clinical Program

- 16-week moderate intensity, individualized, comprehensive exercise program
- Small groups, three times per week
- Includes: aerobic, strength, flexibility, and balance training
- Open to all cancer patients and survivors regardless of cancer diagnosis, stage, or treatment type
- Free
- Program requirements:
 - Oncologist medical clearance
 - Completion of a baseline physical assessment (provided by the GR&H team)

Remote Programming

- All remote programming
- Classes are offered live via zoom 5 days a week
- Recorded: posted to closed Facebook group and off-Facebook
- Still accepting new participants
- Free



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UNC- HealthScore Health Coaching Program

- 6-month research study (Bill Wood, PI) aimed to **improve or maintain physical function during or after cancer treatment**
- Inclusion:
 - English Speaking
 - 6 Month Life expectancy
 - Has a cancer diagnosis
 - Being at UNC Medical Center
- Participants are:
 - Given a FitBit
 - Paired with a health coach
 - Receiving weekly coaching around physical activity
 - Given access to study specific website
 - Taking weekly surveys about their symptoms and physical function
- Data are reported to clinical team weekly in the form of alerts and reports



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Example Report

1/22/2021
PRO-Care

Weekly Progress Report

Participant Name: [REDACTED] Date Of Report: 1/1/21

The following symptoms have been flagged with an alert: Appetite Interference

The HealthScore graph represents the PROMIS physical function score on a weekly basis. For the general population, the average score is 50, and higher scores represent better physical function.

HealthScore

Date	Score
9/15/2020	46.7
9/22/2020	49.7
9/29/2020	26.7
10/6/2020	29.8
10/13/2020	26
10/20/2020	29.8
10/27/2020	29.8
11/3/2020	32.5
11/10/2020	31.7
11/17/2020	35.4
11/24/2020	31.7
12/1/2020	27.5
12/8/2020	
12/15/2020	
12/22/2020	
12/29/2020	
1/5/2021	26

Exercise

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
steps	7151	8178	7752	8680	8340	5206	10613
active minutes	29	40	49	40	49	0	65

Coaches Notes:
 Exercise: increasing speed and incline on treadmill walks (3.2 MPH). Using wicking clothing on his walks to help with thermoregulation. Talked about stamina and combining workouts from 3 to 2 to help build stamina since he is meeting ACSM guidelines. Excited to try jogging- used to be a runner (about 2 miles on average). Resistance exercises (push up and sit ups and weight machines).
 Physical Function: Getting stronger- showing signs of "conditioning". Gratifying to see conditioning improving.
 Symptom Management: less fluid weight makes his performance better. He is finally at ideal body weight.

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UNC- Yoga

- Benefits of Yoga:
 - In Treatment: Yoga may benefit to reduce fatigue, depression and anxiety, improve sleep disturbance, and improve QoL
 - Robust results in breast cancer patients
 - Benefits in multiple cancer types
- Yoga offered three days a week at Wholistic Health Studio
- During or after treatment
- Optional fees: \$5/Passes: \$50 for 12 classes

Changes During CoVid

Now Via Zoom

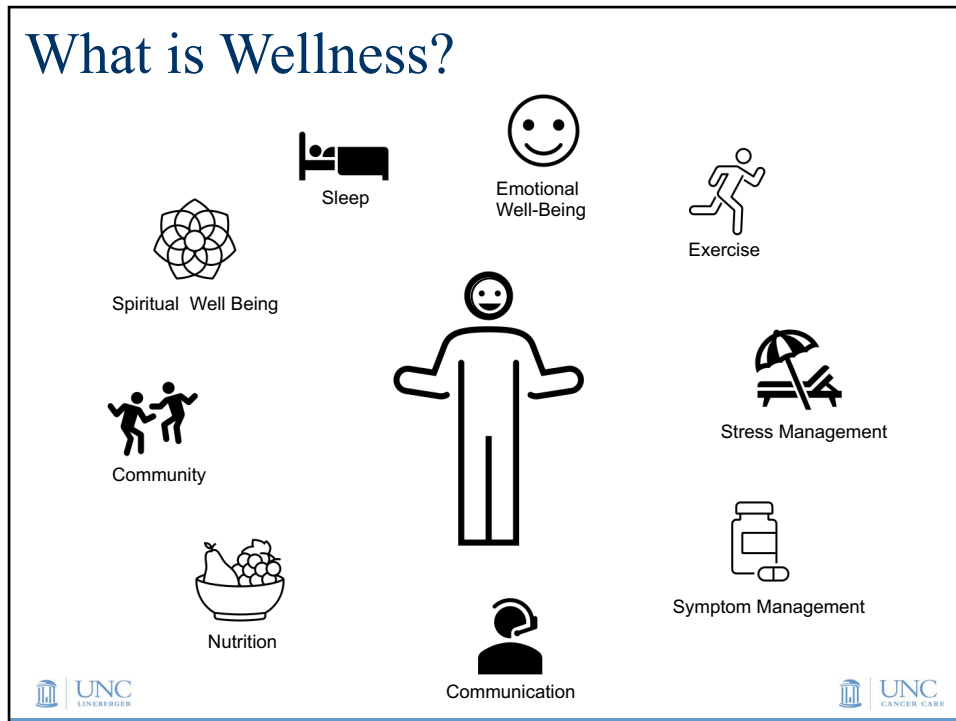
Mondays, Tuesday, Thursdays, Fridays: 10:00- 11:30am

Wednesdays: 2:00-3:30pm

Yi LJ, et al. Effects of yoga on health-related quality, physical health and psychological health in women with breast cancer receiving chemotherapy: a systematic review and meta-analysis. *Ann Palliat Med*. 2021 Feb;10(2):1961-1975. doi: 10.21037/apm-20-1484. Epub 2020 Dec 24.

Zetzi T, et al. Yoga effectively reduces fatigue and symptoms of depression in patients with different types of cancer. *Support Care Cancer*. 2020 Oct 7. doi: 10.1007/s00520-020-05794-2. Epub ahead of print.

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Part 3: Engaging Patients in Exercise and Wellness Programs

Logos for UNC Lineberger and UNC Cancer Care are present at the bottom corners.

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At UNC- Oncology Exercise Program Order

Search "Onc Ex"

Oncology Exercise Program Accept Cancel

Class:

Priority: Routine STAT

Select exercise program Get Real and Heel (UNCh) Healthscore **Can choose either program, or both**

Do you have any clinical concerns that would limit the patient's ability to participate?
 If "Yes" is selected, a required text box opens to enter concerns

In my professional medical opinion, it is safe for the patient to participate in this moderate intensity aerobic/strength program. The patient is/was under my care for the treatment of cancer and is medically stable to begin participating immediately.

Comments:

Next Required Accept Cancel



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At UNC- Oncology Exercise Program Order

Oncology Exercise Program Accept Cancel

Class:

Priority: Routine STAT

Select exercise program Get Real and Heel (UNCh) Healthscore

Do you have any clinical concerns that would limit the patient's ability to participate?

Enter clinical concerns

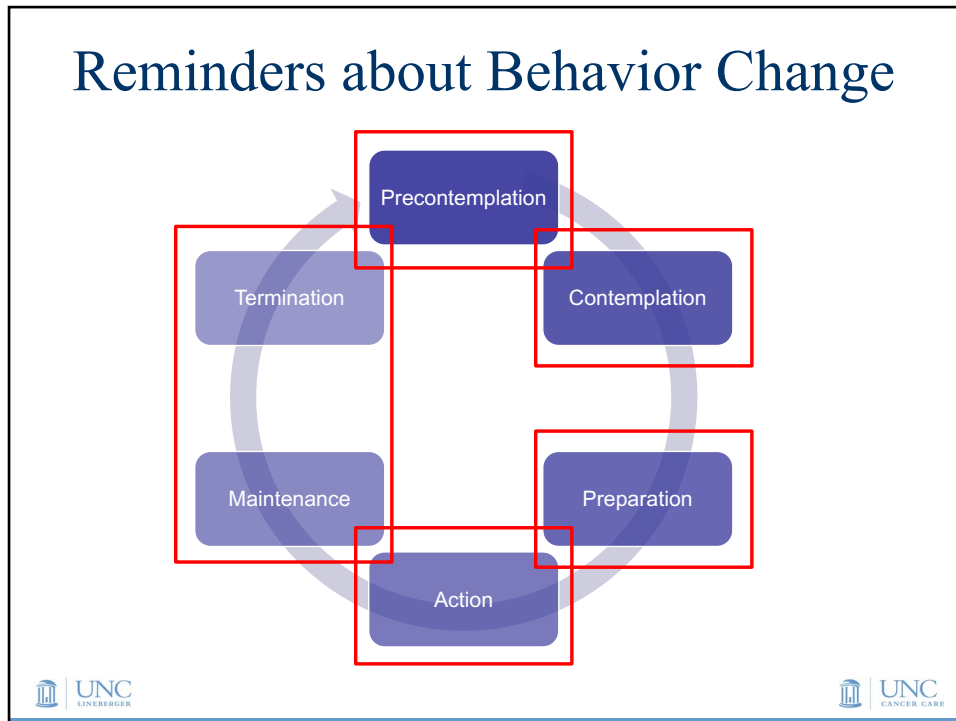
In my professional medical opinion, it is safe for the patient to participate in this moderate intensity aerobic/strength program. The patient is/was under my care for the treatment of cancer and is medically stable to begin participating immediately.

Comments:

Next Required Accept Cancel



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Ask Questions

- What kind of exercise does your patient do?
- How important is physical activity/ wellness to them?
- What could they do if they were fitter, stronger, had better ROM... etc
- What does your patient need to be successful?
- Inspire hope and motivation

} Contemplation

} Action

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Set SMART Goals

- **S**pecific
- **M**easurable
- **A**ttainable
- **R**elevant
- **T**imely

“Until my next appointment, I am going to walk 3 days a week for 20 minutes.”






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Who can do this?

Exercise Is Medicine!
Include physical activity when designing treatment plans

- Physicians
- APP’s
- Social Workers
- Dieticians
- Pharmacists
- Supportive Care Staff
- Nurses




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Provide Education and Resources

- Simple ideas about what constitutes physical activity
- Community Resources
 - LiveStrong
 - Cancer support programs
- Caregivers
- Tracking resources



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Case Study

- **Patient Background:**
 - 35 years old
 - Breast cancer, diagnosed 3 months ago
 - Currently on chemo
 - Planned surgery after chemo followed by radiation
- **Setting the Scene:** patient comes to your clinic feeling frustrated about worsening fatigue and concerned about her stamina being so poor that she won't be able to play with her children by the end of her treatment. She indicates that she is willing to try some exercise but is worried about it making her fatigue worse. She has exercised in the past but hasn't since her diagnosis.



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Case Study Continued

- **What Now?**

- Collect Information

- What does she like to do for exercise? What experience does she have? Does she have a partner that can help her be accountable?

- Provide education

- Data shows that exercise really helps fatigue!

- Make A Plan

- Goal Aerobic: 2x/week for 10-15 min. Increase in 2-5 min increments as symptoms allow.
- Goal Strength Training: 10 reps each: sit to stands, calf raises, reverse sit ups



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Thank you!



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