



## 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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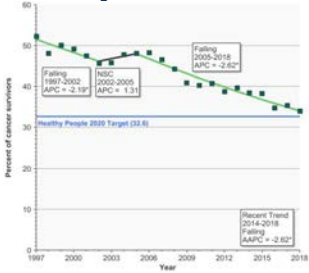
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## Physical Activity Rates

- 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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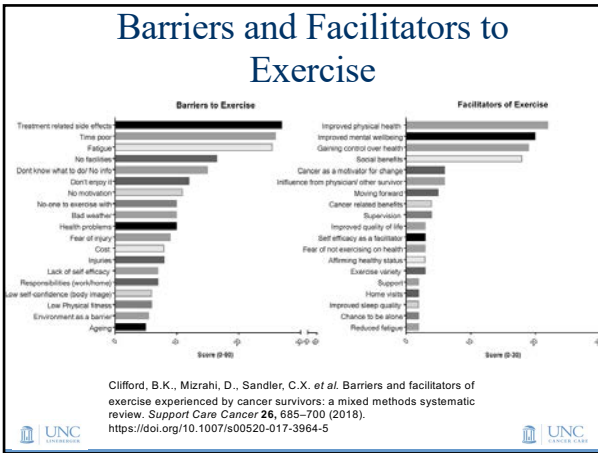
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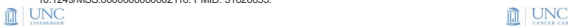
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### ACSM Guidelines for Cancer Patients and Survivors

- 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 2 common cancers\***  
\*See 2018 Physical Activity Guidelines for Americans: 150-300 min/week moderate or 75-150 min/week vigorous moderate exercise
- **Reduction of 3 common cancers\*\***  
\*\*Clear, direct lines of physical activity needed to reduce cancer-specific or all-cause mortality is not yet known
- **Overall these activity exposures are linked to better risk reduction**
- **Multiple health risks addressed, including falls and sexual stress**
- **These outcomes are associated**

**Obtain medical clearance and be supervised general health, with to achieve the current physical activity guidelines for health (150 min/week moderate exercise and 75/week strength training)**

Outcome	Aerobic Only	Resistance Only	Combination (Aerobic + Resistance)
<b>Strong Evidence</b>	<b>Dose</b>	<b>Dose</b>	<b>Dose</b>
<b>Cardiovascular Risks</b>	3a. <b>150</b> min per session of moderate intensity	3a. <b>150</b> min per session of moderate intensity	3a. <b>150</b> min per session of moderate intensity exercise, plus 2a. <b>2</b> sets of resistance training <b>2</b> sets of <b>10-15</b> reps for major muscle groups or moderate intensity
<b>Health-related quality of life</b>	3a. <b>150</b> min per session of moderate to vigorous	3a. <b>150</b> min per session of moderate to vigorous	3a. <b>150</b> min per session of moderate to vigorous moderate intensity exercise plus 2a. <b>2</b> sets of resistance training <b>2</b> sets of <b>10-15</b> reps for major muscle groups or moderate to vigorous intensity
<b>Physical Function</b>	3a. <b>150</b> min per session of moderate to vigorous	3a. <b>150</b> min per session of moderate to vigorous	3a. <b>150</b> min per session of moderate to vigorous moderate intensity exercise, plus 2a. <b>2</b> sets of resistance training <b>2</b> sets of <b>10-15</b> reps for major muscle groups or moderate to vigorous intensity
<b>Anxiety</b>	3a. <b>150</b> min per session of moderate to vigorous	Insufficient evidence	3a. <b>150</b> min per session of moderate to vigorous moderate intensity exercise plus 2a. <b>2</b> sets of resistance training <b>2</b> sets of <b>10-15</b> reps for major muscle groups or moderate to vigorous intensity
<b>Depression</b>	3a. <b>150</b> min per session of moderate to vigorous	Insufficient evidence	3a. <b>150</b> min per session of moderate to vigorous moderate intensity exercise plus 2a. <b>2</b> sets of resistance training <b>2</b> sets of <b>10-15</b> reps for major muscle groups or moderate to vigorous intensity
<b>Lymphedema</b>	Insufficient evidence	3a. <b>150</b> min per session of moderate to vigorous	Insufficient evidence
<b>Moderate Evidence</b>			
<b>Bone health</b>	Insufficient evidence	3a. <b>150</b> min per session of moderate to vigorous	Insufficient evidence
<b>Sleep</b>	3a. <b>150</b> min per session of moderate intensity	Insufficient evidence	Insufficient evidence

Citation: [bit.ly/cancer\\_exercise\\_guidelines](http://bit.ly/cancer_exercise_guidelines)

Reduce breast and/or colon cancer risk in women with a history of breast cancer

Exercise is Medicine

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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 adults!

Moderate Aerobic Exercise **OR** Vigorous Aerobic Exercise  
At least 150-300 min per week **OR** At least 75-150 min per week  
(or a combination of moderate/vigorous aerobic exercise)

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

Concurrent fatigue, Health-related quality of life, Physical function, Anxiety, Depression, Sleep, Lymphedema, Bone health

**To improve these symptoms, choose an exercise plan below:**

Aerobic Exercise **OR** Resistance Exercise **OR** Aerobic + Resistance Exercise

20-40 min, 2-3 times/week **OR** 2 sets/10-15 reps, 2 times/week **OR** 20-40 min, 2-3 times/week + 2 sets/10-15 reps, 2 times/week

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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: 31628055.

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### Exercise During and After Cancer Treatment

<p><b>During Treatment</b></p> <ul style="list-style-type: none"> <li>• Program should include:             <ul style="list-style-type: none"> <li>• Cardio</li> <li>• Strength</li> <li>• Flexibility</li> <li>• Balance</li> </ul> </li> <li>• Slow or no progression</li> <li>• Many of the same physiological/psychological benefits</li> <li>• Mindful of:             <ul style="list-style-type: none"> <li>• Ports/lines/other surgeries</li> <li>• Bone mets</li> <li>• Treatment side effects</li> </ul> </li> </ul>	<p><b>After Treatment</b></p> <ul style="list-style-type: none"> <li>• Program should include:             <ul style="list-style-type: none"> <li>• Cardio</li> <li>• Strength</li> <li>• Flexibility</li> <li>• Balance</li> </ul> </li> <li>• Slow progression</li> <li>• Many of the same physiological/psychological benefits</li> <li>• Mindful of:             <ul style="list-style-type: none"> <li>• Lymphedema</li> <li>• Bone mets</li> <li>• Treatment side effects</li> </ul> </li> </ul>
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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





**Weekly Progress Report**  
 Participant Name: [Name] Date of Report: 3/23/21

**Symptoms:**

Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	100	100	100	100	100	100	100
Week 2	100	100	100	100	100	100	100
Week 3	100	100	100	100	100	100	100
Week 4	100	100	100	100	100	100	100
Week 5	100	100	100	100	100	100	100
Week 6	100	100	100	100	100	100	100
Week 7	100	100	100	100	100	100	100
Week 8	100	100	100	100	100	100	100
Week 9	100	100	100	100	100	100	100
Week 10	100	100	100	100	100	100	100
Week 11	100	100	100	100	100	100	100
Week 12	100	100	100	100	100	100	100
Week 13	100	100	100	100	100	100	100
Week 14	100	100	100	100	100	100	100
Week 15	100	100	100	100	100	100	100
Week 16	100	100	100	100	100	100	100

**Physical Function:** Getting stronger - showing signs of "conditioning". Getting to see conditioning improving.

**Symptom Management:** less fluid weight status for performance better. No 4 fluids or more 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):193-1975. 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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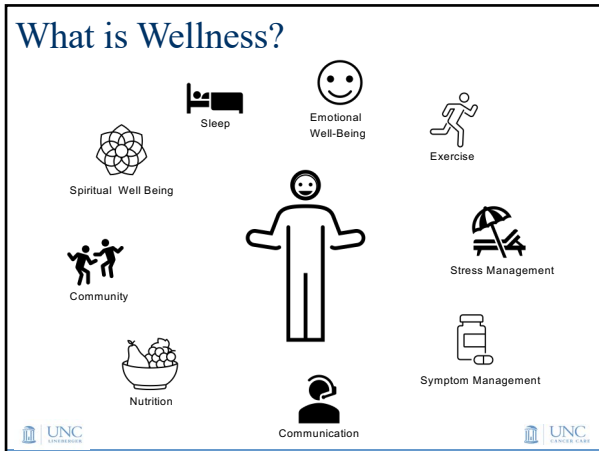
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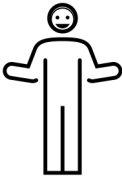
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## What is Wellness?





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## Part 3: Engaging Patients in Exercise and Wellness Programs

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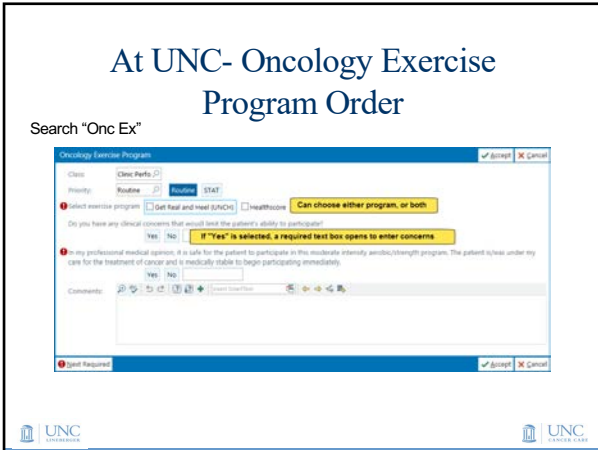
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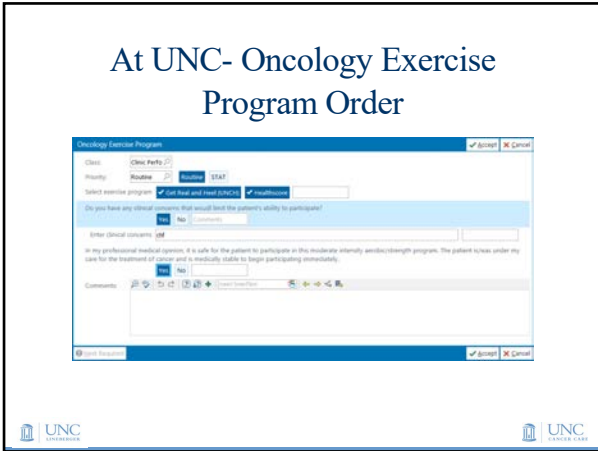
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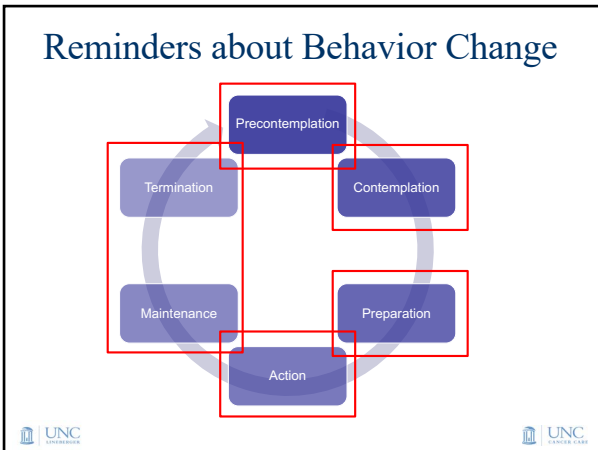
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### Ask Questions

- 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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