Promoting Breast Health through Physical Activity

Joy Kiviat, FNP-BC, PhD, MSN
University of Arizona College of Nursing
ACSM certified Cancer Exercise Trainer
and Group Exercise Instructor

Educational Series
Program Purpose

• The educational series provides information about a variety of evidence-based intervention strategies that can be used with persons diagnosed with cancer and other chronic diseases
Learning Objectives

1. Describe the state of the practice for various integrative approaches to cancer treatment that improve wellbeing among people affected by this illness

2. Compare and contrast critically available treatments for cancer and its complications and side effects

3. Describe the evidence available for integrative approaches that will improve wellbeing and quality of life among persons affected by cancer and other chronic diseases

4. Discuss possible applications of this therapy in individual practice
CME Disclosure

All Faculty, CME Planning Committee Members, and the CME Office Reviewer have disclosed that they have no financial relationships with commercial interests that would constitute a conflict of interest concerning this CME activity.
Nursing Evaluations & Disclosures

- Criteria for successful completion:
  - Attendance requirements
  - **YOU MUST SIGN IN AND OUT**
  - You must be present by 12:10 PM
  - Complete online **NURSING** evaluation
  - Available online at [cne.nursing.arizona.edu/evaluations/](cne.nursing.arizona.edu/evaluations/)
- The planners and presenters have no relevant financial relationship to declare
Additional Disclosures

• The following organizations have provided support for this educational activity:
  • Susan G. Komen Foundation
• The following organizations are co-providers for this educational activity:
  • Arizona Telemedicine Program
  • The University of Arizona Cancer Center
  • The University of Arizona College of Nursing
Physical Activity and Health

We all know this...active lifestyles are associated with lower risk for:

- Diabetes
- Heart Disease, hypertension, stroke
- Vascular disorders, thrombi
- Osteoporosis and fractures
- Cognitive decline and dementia
- Falls and fall-related injuries

Physical Activity and Cancer Prevention

• Large body of evidence that physical activity protects against breast and colon cancers

  *30% reduction in incidence of breast cancer with ANY level of intensity compared to no exercise* 
  (McCullough et al., 2012)

• Even among overweight people, active folks had 25% reduction in risk compared to those who were inactive.

• Mechanism not fully understood, but we know:
  • Immune system stimulated => increased anti-tumor activity
  • Reduced inflammatory mediators => less tissue damage
  • Decreased reproductive hormone levels => less stimulation of breast tissue activity

Physical Activity & Recovery

Research indicates that cancer patients who exercise:

- report less fatigue
- require fewer blood transfusions
- are hospitalized less frequently
- are less likely to fall
- have better outcomes and improved sense of well-being
How does exercise help?

- Increased lean body mass, decreased fat
- Improved cardiovascular condition (lowers risk of embolism, heart attack and stroke)
- Increased bone density and improved balance (reduces risk of falls and injury)
- Immune system stimulation (reduces risk for infection and recurrence)
- Release of endorphins and other stimulatory neurotransmitters (elevates mood)
Consensus: Exercise is Beneficial, During and After Cancer Treatment

2008: Exercise during cancer treatment should become part of the standard of care (Wiskemann & Huber, 2008).

2012: American Cancer Society guidelines for nutrition and physical activity strongly support exercise as an important part of survivorship care planning (Rock et al., 2012).
Activity promotes Recovery, AND....

- *Reduces overall mortality* among survivors
- Evidence is mounting that moderate activity and a healthy weight can *help prevent cancer recurrence*
  
  - Strongest evidence in breast and colon cancer; recent studies suggest exercise reduces risk for prostate and brain cancer recurrence too.

(Loprinzi et al., 2012; Fong et al., 2012)
What’s the evidence?

2012 Review of evidence on lifestyle factors and mortality: After breast cancer treatment, physical activity and weight maintenance have biggest impacts on survival

- most active women have 50% lower mortality risk than least active
- each 10 lbs of weight gain increases risk of recurrence by 13%

Body Fat & Cancer-What’s the link?

Higher energy (calorie) intake leads to:

↑ Insulin & insulin-related growth factors
↑ Free Estrogen & Androgens
↑ Leptin, ↓ adiponectin => ↑ tumor growth

↑ Inflammatory chemical messengers

Result: more fuel available for cancer cell growth, excess hormones, and weaker immune response to abnormal cells

Source: Annual Report to the Nation on the status of cancer, 1975-2008,. (CDC, 2012)
Improving Balance
Provider Guidelines: Activity recommendations

Exercise is beneficial, during and after cancer treatment

Exercise is safe for cancer survivors.

Exercise should be standard care after cancer.


And yet....

- A national survey found only 1/3 of patients received advice on physical activity from their health care providers (Loprinzi et al., 2012)

- Among cancer patients, only 21% reported having counseling on exercise from their health care providers (Sabatino, Coates, Uhler, et al., 2007)
Moreover......

Survey of 2700 female cancer survivors found they were significantly:

- More likely to smoke
- More likely to report weight gain
- Less likely to exercise regularly
- Less likely to report health as “excellent”

compared to matched control group

(Rausch et al., 2012)
Overcoming Barriers

• Provider education: most oncologists aware of exercise benefits, but primary care providers may not be informed*.
  • Exercise prescription pads for oncologists
  • Include exercise in Survivor Care Plan

• Patient education: convince survivors of immediate and long-term benefits
  • Community presentations, brochures
  • Coaching at each healthcare encounter

*Provider counseling about health behaviors among cancer survivors in the United States.” Journal of Clinical Oncology (2007)
Increased Flexibility
Common Concerns of Survivors

• Fatigue: Just want to rest…
• Safety: Am I ready to exercise?
  • Could I get injured, will this interfere with recovery, risk for infection…many concerns
• Cost: fitness center membership, personal trainers, may be out of reach for some
• Access: location, transportation, time of day. What do YOU recommend?
Addressing Concerns

• Readiness test
• Motivating
• Preparing
• Persisting
• Evaluating
Exercise Readiness Test*

Answer yes or no to the following questions:

• Has your doctor ever said that you have a heart condition and that you should only do physical activity recommended by a doctor?
• Do you feel pain in your chest when you do physical activity?
• In the past month, have you had chest pain when you were not doing physical activity?
• Do you lose your balance because of dizziness or do you ever lose consciousness?
• Do you have a bone or joint problem that could be made worse by a change in your physical activity?
• Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?
• Do you know of any other reason why you should not do physical activity? *Adapted from Physical Activity Readiness Questionnaire (PAR-Q) developed by the British Columbia Ministry of Health & Multidisciplinary Board on Exercise.
Readiness Results

If you answered yes to any question:

• consult a physician before increasing physical activity.
• ask for a medical clearance and any exercise limitations.
• in most cases, you will still be able to do any type of activity you want as long as you adhere to some guidelines.

If you answered no to all: you can be confident that you can exercise safely. Important: start slow, increase gradually.
How soon after BC Surgery?

• First week: normal daily activities like combing hair, brushing teeth, plus elevation of affected arm and gentle fist pumping

• After first week (with MD approval): stretches and ROM exercises

What about Lymphedema?

- Recent study showed upper body resistance exercise does not increase swelling and was associated with 50% decrease in exacerbations (Schmitz et al., 2009).

  141 women with stable lymphedema and no previous hx of weightlifting, randomized to 2x/wk weight training or control group for 1 year.

- NLN 2011 guidelines: Start with low resistance, incremental increase with regular measurements; advise compression garment if lymphedema already present

- No controlled studies on value of compression garments during exercise for prevention of lymphedema
Strategies for Providers

- Promote self-efficacy: identify role models, positive self talk, recognize small steps
- Counter-conditioning: substitute a positive behavior for a problem behavior
- Motivational interviewing: help patient identify conflicts between her goals and behaviors

(Loprinzi et al, 2012)
Exercise options

Group classes (YMCA, community centers, fitness clubs, Pima Council on Aging)
Personal trainer (some make house calls)
Walking (suggest finding walking buddy or dog for companionship and motivation)
Swimming (good for persons with neuropathy, joint or bone pain)
Exercise videos and FitTV channel
Better than Ever program at UA Cancer Center
How Much is Enough?

ACS & ACSM roundtable concluded cancer survivors should strive for:

• 150 minutes/week aerobic exercise (aim for 30 minutes, 5 days a week; try brisk walk, run, swim, dance)

• 2-3 sessions/week resistance exercise (weights, bands, water bottles… 1-2 days off between sessions)

• Daily stretching/toning  

Source: Schmitz et al., 2010
S-t-r-r-e-e-e-e-t-c-h !


References, cont.


