

Exercise after Breast Cancer: What have we learned?

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Survival following breast cancer is excellent!

Overall Survival Rate

After 5 years

88%

Source: American Cancer Society

OVER 3 million breast cancer survivors in the US

Source: CDC & NCI

American College of Sports Medicine Roundtable on Exercise Guidelines for Cancer Survivors

EXPERT PANEL

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to physical functioning and quality of life are sufficient for the recommendation that cancer survivors follow the 2008 Physical Activity Guidelines for Americans, with specific exercise programming adaptations based on disease and treatment-related adverse effects. The advice to “avoid inactivity,” even in cancer patients with existing disease or undergoing difficult treatments, is likely helpful.

In 2009, the American Cancer Society (ACS) estimated that there were nearly 1.5 million new cases of cancer diagnosed in the United States and just more than 500,000 people who died from the disease (76). Currently, there are close to 12 million cancer survivors in the United States, and this number grows each year (66,70,122). Improved prognosis on the basis of earlier detection and newer

ACS Guidelines 2012

Nutrition and Physical Activity Guidelines for Cancer Survivors

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Cancer survivors are often highly motivated to seek information about food choices, physical activity, and dietary supplements to improve their treatment outcomes, quality of life, and overall survival. To address these concerns, the American Cancer Society (ACS) convened a group of experts in nutrition, physical activity, and cancer survivorship to evaluate the scientific evidence and best clinical practices related to optimal nutrition and physical activity after the diagnosis of cancer. This report summarizes their findings and is intended to present health care providers with the best possible information with which to help cancer survivors and their families make informed choices related to nutrition and physical activity. The report discusses nutrition and physical activity guidelines during the continuum of cancer care, briefly highlighting important issues during cancer treatment and for patients with advanced cancer, but focusing largely on the needs of the population of individuals who are disease free or who have stable disease following their recovery from treatment. It also discusses select nutrition and physical activity issues such as body weight, food choices, food safety, and dietary supplements; issues related to selected cancer sites; and common questions about diet, physical activity, and cancer survivorship. *CA Cancer J Clin* 2012;62:242-274. © 2012 American Cancer Society.

National Comprehensive Cancer Network

GENERAL PRINCIPLES OF PHYSICAL ACTIVITY

- All patients should be encouraged to be physically active and return to daily activities as soon as possible.
- Physical activity recommendations should be tailored to individual survivor's abilities and preferences
- General recommendations for cancer survivors:^a
 - > Overall volume of weekly activity of at least 150 minutes of moderate-intensity activity or 75 minutes of vigorous-intensity activity or equivalent combination
 - > Two to three weekly sessions of strength training that include major muscle groups
 - > Stretch major muscle groups and tendons on days other exercises are performed

^aRock CL, Doyle C, Demark-Wahnefried W, et al. Nutrition and physical activity guidelines for cancer survivors. CA Cancer J Clin 2012;62:242-274. Available at: <http://onlinelibrary.wiley.com/doi/10.3322/caac.21142/full> and Schmitz KH, Courneya KS, Matthews C, et al. American College of Sports Medicine roundtable on exercise guidelines for cancer survivors. Medicine & Science in Sports & Exercise 2010;42:1409-1426. Available at: http://journals.lww.com/acsm-msse/Fulltext/2010/07000/American_College_of_Sports_Medicine_Roundtable_on.23.aspx

Overview of common recommendations

- Avoid inactivity, return to activity asap
- 150 minutes aerobic activity per week
- 2-3 times weekly strength training
- Flexibility on days when other activities are performed (daily)



SO WHAT'S THE EVIDENCE?

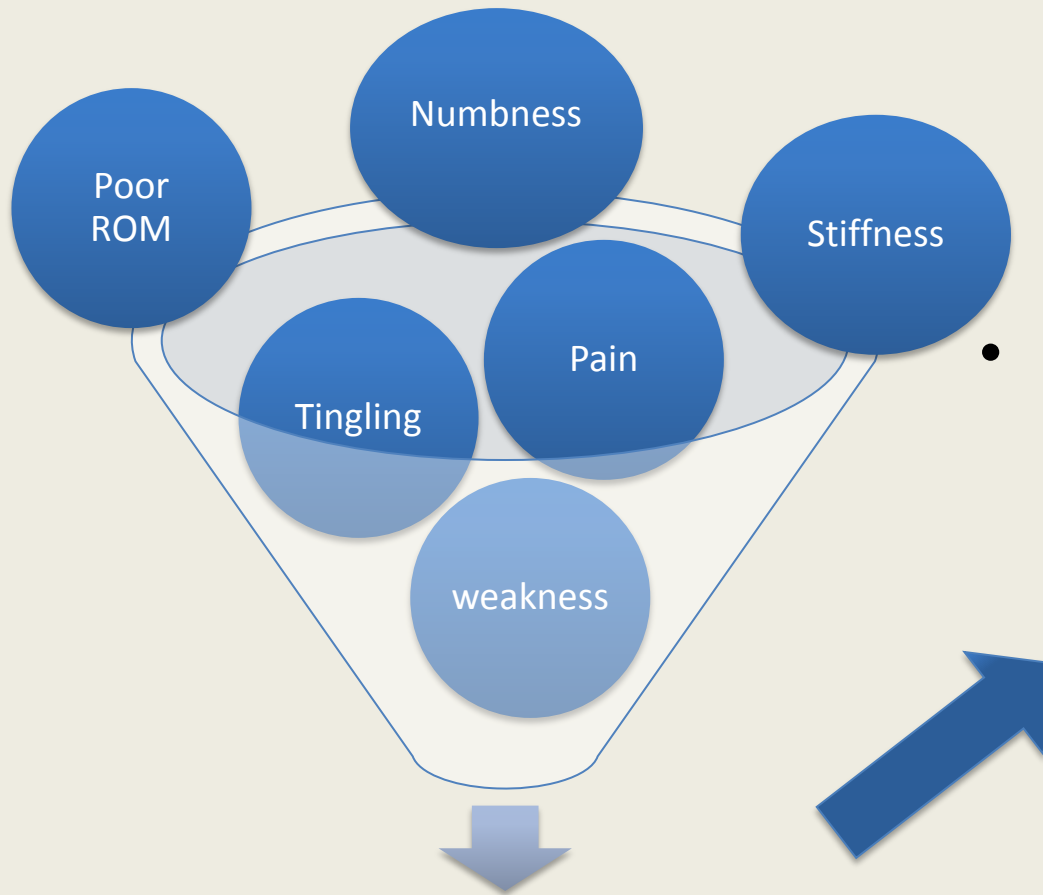
Exercise and Breast Cancer Recurrence/Death

Author Year	N	Recurrence	BC Death	Deaths
Holmes 2005	2487	0.57	0.50	0.59
Abramson 2006	1264			0.78
Holick 2008	4484		0.53	0.52
Irwin 2008	933			0.33
Sternfeld 2009	1970	0.91	0.87	0.76
Chen 2011	1826	0.59	0.59	0.65
Irwin 2011	4643		0.61	0.54

(Hazard Ratios)

COMMON ISSUES FACED BY BREAST CANCER SURVIVORS... CAN EXERCISE HELP?

Upper-body symptoms



- Adversely influences ability to participate in daily activities and function

Upper-body symptoms

How often do upper body symptoms occur?

	Months post surgery					
	3	6	12	18	24	36
Any one symptom	27%	30%	30%	20%	35%	40%

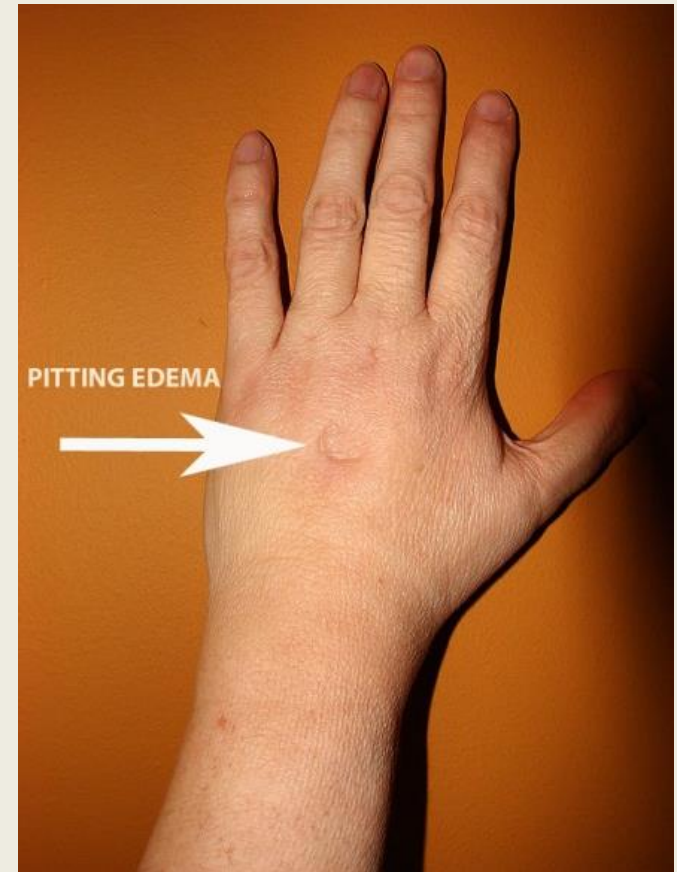
Risk factors for upper body symptoms:

- Surgery type
- Radiation
- Lymphedema

Does exercise help with upper body symptoms?

- YES!
- In the PAL trial:
 - women who did slowly progressive strength training were more likely to decrease number and severity of upper body symptoms than women in the control group

Arm Secondary Lymphedema



Does exercise reduce risk for onset or worsening of Lymphedema?

- YES! – for BREAST CANCER survivors
- In the PAL trial,
 - Control group women with lymphedema had 2X the number of ‘flare-ups’ compared with those who did weight-lifting
 - Weight-lifting women without lymphedema who had 5+ nodes removed were 70% less likely to develop increased arm swelling compared to the control group

Cancer Survivors Comment on Physical Limitations

- “I can still get everything done that I need to do, but I feel like I am ten years older than I was before breast cancer treatment”

Physical Limitations

	No cancer (%)	cancer survivor (%)
A: Any physical restriction	13	31
B: Any limitation in physical performance	21	53

Ness et al. ... based on NHIS data...

Does Exercise Improve Day to Day Physical Abilities?

- YES!
- In the PAL trial:
 - Prevention of decline with strength training (paper submitted)
- Weight-lifting increases strength
 - Including the Weight-lifting program prescribed in SABCs
- Increased strength is associated with improved functional capacity in older adults
- Aerobic exercise is definitely associated with improved physical abilities (aerobic fitness)

Fatigue in cancer survivors

	Pre tx	During tx	Post treatment	
			3-6m	12m
Fatigued	30%	93%	50%	25%



Does Exercise Improve Fatigue

- YES!
- There are many published studies showing that exercise programs improve fatigue in breast cancer survivors
- National Comprehensive Cancer Network
 - Aerobic exercise is the #1 recommended non-pharmacologic treatment for cancer related fatigue

Arthralgias: Aches and Pains

Typically associated with taking HORMONE THERAPIES, particularly AROMATASE INHIBITORS

% with Aches and Pains among >30,000 women taking Aromatase Inhibitors

Joint symptoms	36%
Arthralgia	25%
Myalgia	12%

What helps with Aches & Pains in Breast Cancer Survivors?

- Medications, switching or discontinuing Aromatase Inhibitors, Acupuncture
- Exercise helps!
 - VERY recent research completed in this area.
- However, we do know exercise helps with joint pain in those with arthritis.
- Please be sure to tell your physical therapist or fitness professional if you have aches and pains that get in the way of your exercise program.

Bone Health

- Cancer treatment-related causes of bone health problems:
 - Chemotherapy-induced premature ovarian failure
 - Medical or surgical ovarian ablation therapy
 - Partial estrogen agonists
 - Aromatase Inhibitors
 - Androgen deprivation therapy
- Other causes:
 - Inactivity
 - Use of corticosteroids
 - Inadequate intake of calcium and Vitamin D

Bone Health Issues – How often is it an issue?

- In a review of patients taking Aromatase Inhibitors
 - 48% had significant bone loss (osteopenia)
 - 7% had osteoporosis

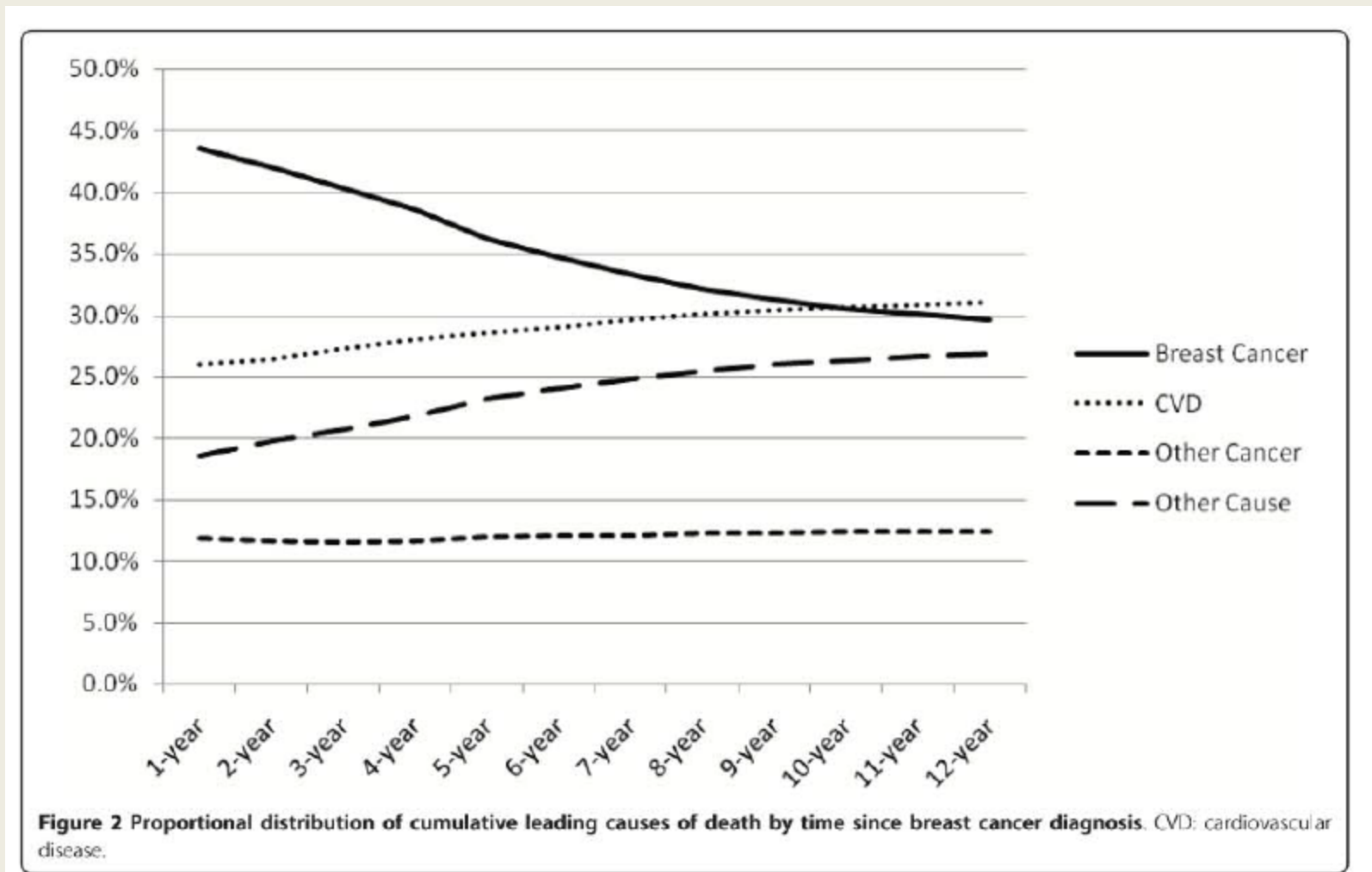
Is Exercise Good for Bone Health?

- YES!
- There has been strong randomized controlled trial evidence that weight-lifting and weight bearing exercise is excellent for the bones since the mid 1990's

Heart Health after Cancer

- Personal and behavioral risk factors for Heart Disease:
 - Age
 - Body mass index
 - Diet
 - Physical activity levels
 - Smoking
 - Cholesterol
 - Blood lipids
- Treatment-related factors:
 - Chemotherapies
 - Herceptin
 - Hormonal therapies
 - Radiation Therapy
 - Avastin

Cardiovascular Disease Competes with Breast Cancer as Cause of Death in Survivors



American Heart Association Guidelines for Women's Heart Health

- Quit smoking
- Good nutrition, weight control
- Omega-3 fatty acids
- Treatment for hypertension and dyslipidemia
- Screening for cancer related heart health problems is available. Ask for it!
- Exercise!
- Aerobic exercise has long been recognized to be protective against cardiovascular disease outcomes
- Aerobic exercise is specifically good for those with and at risk for congestive heart failure

Elements needed for a successful rehabilitative cancer exercise program

1. Oncology clinic buy-in and referrals into exercise programs
2. Safety evaluation - *Barriers and bridges*
3. Education for survivors - *Diabetes education analogy*
4. Education for intervention staff
5. Intervention delivery infrastructure

Strength After Breast Cancer Program

- Based on a large clinical trial conducted at Penn
 - 154 survivors WITHOUT lymphedema
 - 141 survivors WITH lymphedema
- Women who participated had these benefits:
 - 50% reduced likelihood of lymphedema worsening
 - 70% reduced likelihood of lymphedema onset among women with 5 or more nodes removed
 - Improved strength and energy
 - Improved body image
 - Reduced body fat
 - Improved upper body symptoms



Strength ABCs

- Evaluation, Education, and exercise classes to equip you to regain your strength!
- Now available:
 - Good Shepherd Penn Partners
 - Multiple locations
 - Virtua's Rohrer Center in Voorhees, NJ

WISER Survivor

- We are recruiting 350 breast cancer survivors for a new exercise and weight loss trial:
 - Overweight
 - Lymphedema
 - Any age
 - 1 year since diagnosis
- If you are interested, please contact RENATA ALFORD at 215-573-6621

What's next?

- STAND UP and MOVE as you are able
- Get your strength back!



THANK YOU FOR LISTENING!

- UMN Department of Recreation and Sports
- YMCA Associations and staff (local AND national)
 - Ann-Hilary Hanley, Kathy Custis, Lisa Newman, Rachel Dubin
- Collaborators
 - Rehana Ahmed, Andrea Troxel, Andrea Cheville, Karen Glanz, Fran Barg, Andrea Branas, Rinad Bineas
- Staff
 - Amy Rogerino, Cathy Bryan, Damali Mason, Lorita Grant, Laura DiGiovanni, Domenick Salvatore
- PA and NJ Cancer Registries
 - Robin Otto, Craig Edelman, Homer Wilcox
- Good Shepherd Penn Partners PTs
- Living Well After Cancer collaborators
- Funders
 - NCI, Komen, UMN GCRC, Penn CTSA
- PARTICIPANTS!

