Active Survivorship

Lexi Harlow, PT, DPT, CLT
Physical Therapy Department
Seattle Cancer Care Alliance
Presentation Topics

1) Possible Transplant Physical Side Effects
2) Physical Activity vs. Exercise
3) Benefits of Exercise
4) Summary of Exercise Research
5) Summary of Exercise Recommendations
6) Exercise Precautions
7) Rehabilitation Resources
8) Community Resources
Possible Side Effects from Transplant

- Fatigue
- Decreased muscle strength or muscle mass
- Limited flexibility
- Decreased endurance
- Balance impairments
- Sensory changes
- Osteoporosis
- GVHD (skin)
What Do Survivors Notice?

- “I have no energy.”
  (Decreased fatigue)

- “I can’t lift what I used to be able to.”
  (Decreased strength or muscle mass)

- “I catch myself reaching for the wall.”
  (Decreased balance and safety)

- “I need someone to help me do chores.”
  (Decreased independence)

- “I have to rest when going upstairs or hills.”
  (Decreased endurance)
Physical Activity vs. Exercise

- **Physical Activity Defined:**
  - “any bodily movement produced by the skeletal muscles that results in a substantial increase in energy expenditure”

- **Exercise Defined:**
  - “a form of leisure physical activity that is performed on a repeated basis over an extended period of time with the intention of improving fitness, performance, or health”

Courneya et al.
General Benefits of Exercise

**PHYSICAL**
- Cardiovascular fitness
- Building muscle strength
- Cancer and chronic disease prevention
- Weight loss/control
- Improve balance
- Osteoporosis prevention

**EMOTIONAL**
- Decrease depression
- Energy boost
- Improve sleep quality
- Manage stress
“Survivors tend to decrease their physical activity levels after their diagnosis of cancer, and most continue lower levels of activity through treatment and beyond, rarely returning to their pre-diagnosis levels of activity.”

Irwin, Crumley, McTiernan, et al. 2003
Summary of Exercise Research

- What types of cancer have been studied?
  - Prostate
  - Breast
  - Lung
  - Colorectal
  - Gynecologic
  - Head/Neck
  - Lymphoma
  - Leukemia

- What has exercise improved in cancer survivors?
  - Aerobic fitness
  - Muscle strength
  - Body composition
  - Quality of life
  - Depression
  - Fatigue
  - Pain
  - Chance of Recurrence?
  - Mortality?
How Much and What Should I Do For Exercise?
Be physically active as part of everyday life

Be moderately physically active, equivalent to brisk walking, for at least 30 minutes every day

As fitness improves, aim for 60 minutes or more of moderate, or for 30 minutes or more of vigorous, physical activity every day

Limit sedentary habits such as watching television
Adults:

✓ 2.5 hours/week of moderate intensity or 1.25 hours/week of vigorous intensity

✓ Should increase to 5 hours/week of moderate intensity or 2.5 hours/week of vigorous intensity

✓ 2x/week of strengthening of major muscle groups

- **Option #1**
  - Frequency = 3-7 days/week
  - Moderate intensity
  - At least 150 min/week, minimum of 10 min. bouts
  - Any type (ex: walking, cycling, tennis)

- **Option #2**
  - Frequency = 3-7 days/week
  - Vigorous intensity
  - At least 75 min/week, minimum of 10 min. bouts
  - Any type (ex: jogging, soccer, snowshoeing)

- Frequency: at least 2 days/week
- Moderate to vigorous intensity (60-80% of 1RM)
- 1-2 minutes of rest between sets
- 1-3 sets of 8-12 reps
- All major muscle groups (chest, back, shoulders, arms, abdomen, hips, legs)
ACSM Flexibility Exercise Recommendations (2010)

- Stretch all major muscle groups on days other exercises are performed
All survivors are encouraged to be as physically active as their conditions will permit.

Exercise should be tailored or altered to take into account an individual’s physical condition and treatment regimen.
General Exercise Recommendations

Cardiovascular

- Daily if possible, minimum of 30 minutes
- Warm-up/Cool-down
- Target HR Zone
General Exercise Recommendations

Strength training

- 2-3x/week
- For arms, abdominals, and legs
- Slow, steady progression
General Exercise Recommendations

Stretching

- 2-3x/week
- Avoiding injury
- Importance of technique
- Yoga
General Exercise Recommendations

Balance

- Daily
- Important to train with age
- Fall prevention

Got Balance?

theinspiredclassroom.com
Exercise Precautions

- Always consult with your MD or other practitioner to clear you for exercise
- Seek advice from a trained professional (PT, Certified Trainer)
- Blood lab values (platelets, Hct, Hgb)
- Chronic orthopedic injuries
- Metastases
- Heart conditions
- Lymphedema
Other Considerations

- Gradually increase time and intensity
- Proper hydration and rest
- Cross training
- Use of appropriate equipment
- Dressing properly
HELP!

- Join a team (accountability)
- Get your spouse, best friend, children, or animals to join in
- Exercise journal or log
- Local classes or support groups
- Join a gym
- Reward yourself!

www.foreverfitwomen.com
PHYSICAL THERAPY!

- Exercise prescription and consultation for managing fatigue and improving endurance
- Comprehensive individually tailored exercise program prescription which includes cardiovascular conditioning, strength training, and flexibility exercises
Other Rehabilitation Services

- Occupational Therapy
- Speech Therapy
- Rehabilitation Medicine (Physiatry)
- Respiratory Therapy
- Recreational Therapy
- Pain Clinic
- Social Work
- Psychologists
- Dietitians
Seattle Area Exercise Programs

- **Cancer Lifeline**
  (www.cancerlifeline.org)
  - Stretch and Strengthen, Yoga, Lebed

- **Team Survivor Northwest**
  (www.teamsurvivornw.org)
  - Women only; yoga, fitness training, swimming, hiking, dragon boating and canoeing, biking

- **Gilda’s Club**
  (www.gildasclubseattle.org)
  - Yoga, Pilates, Tai Chi

- **YMCA Exercise and Thrive**
  (www.seattleymca.org)
Exercise and Thrive Program

• 12-week, 2x/week, 90 min. strength and fitness program for survivors

• Training provided by Y and the SCCA / Hutchinson Center

• Focus: resistance exercise, teaching and support
  
  • 20+ locations (King, Pierce, Kitsap, Snohomish, Snohomish, Whatcom, and Olympic Peninsula)

• www.fhcrc.org/exerciseandthrive
EXERCISE!

“By exercising regularly, you are helping yourself to heal, potentially preventing new cancers from developing and preventing previous cancers from recurring, and at the same time lowering your risk of developing the most common life threatening medical condition – heart disease. The benefits of exercise are enormous.”

-Dr. Julie K. Silver
Acknowledgements and References

- US Department of Health and Human Services: 2008 Physical Activity Guidelines for Americans
- American College of Sports Medicine Roundtable on Exercise Guidelines for Cancer Survivors; Schmitz et. al; Medicine & Science in Sports & Exercise 2010.
- Exercise Prescription; Leiserowitz & Watchie; Topics in Geriatric Rehabilitation, Volume 27, Number 3, 193-205, 2011.
- Physical Exercise for Patients Undergoing Hematopoietic Stem Cell Transplantation: Systematic Review and Meta-Analysis of Randomized Controlled Trials; van Haren et. Al; Phys Ther 2013;93:514-528
Questions?

Thanks for coming and stay active!