Exercise Guidelines and Applications: LIVESTRONG at the YMCA

Mary Biddle-Newberry, BS, MS
Y of USA, Boise ID

Anna L. Schwartz, PhD, FNP, FAAN
Idaho State University & University of Washington
“When treatment ends, the warrior and his/her family often are not prepared for the fact that recovery takes time. In general, their recovery will take much longer than treatment did. People often say that they didn’t realize how much time they needed to recover.”

….from Facing Forward: Live After Cancer Treatment, NCI
Current State

- Over 1.5 million new cases cancer in 2010
- Over 12 million survivors alive in U.S.

Burden of cancer
- Morbidity, mortality,
- Economic cost,
- Lost work days,
- Reduced quality of life,
- Family burden

With increasing survival (and aging population), there is a significant population that is trying to return to their “new normal” feeling anything but normal!

- Need for cancer rehabilitation
- Need for exercise guidelines
ACSM Roundtable

- Round table and Consensus meeting
- International multidisciplinary team
  - Nursing
  - Medicine
  - Epidemiology
  - Exercise physiology
- Representation from
  - Y-USA
  - National Cancer Institute
  - Lance Armstrong Foundation
  - American Cancer Society
Recommendations the same as for age appropriate guidelines from the US DHHS Physical Activity Guidelines for Americans

- 150 minutes/week moderate-intense aerobic exercise or 75 minutes/week of vigorous exercise
- Strength training 2-3 time/week, 8-10 exercises of 10-15 repetitions/set, with at least one set per session

Avoid Inactivity!!!

- Return to normal daily activities as quickly as possible
- Continue normal daily activities and exercise as much as possible during and after non-surgical treatments
Goals of Exercise

Prescription

- Regain and improve physical function, aerobic capacity, strength and flexibility
- Improve quality of life
- Improve body composition and body image
- Improve cardiorespiratory, endocrine, neurological, muscular, cognitive and psychological outcomes
- Potentially reduce or delay recurrence or secondary primary cancer
- Reduce, attenuate and prevent long term and late effects of cancer treatment.
- Being inactive is a risk factor for other diseases!
How to Apply Guidelines to Practice

- Provide clear instructions to exercise and avoid inactivity

- Educate public on how to exercise

- Reassure that exercise is safe

- Basic exercise instructions:
  - At least every other day
  - Build up to 30 minutes
  - Start slowly and Progress slowly
  - Moderate intensity
  - Choose an activity that is enjoyable
  - Aerobic and resistance exercises
LIVESTRONG at the YMCA

- to empower cancer survivors to improve functional capacity and increase strength.
- Individualized to each survivor
- Program is FREE!
- High demand and highly successful program
- Program is FREE!
## Exercise Modifications

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Exercise</th>
<th>Exercise Modification Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Lymphedema</strong></td>
<td>• Participant should not exercise affected limb if they report:</td>
<td>• Check in w/participant every session and monitor limb.</td>
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<tr>
<td></td>
<td>tightness, achiness, shooting pain, or heaviness in the trunk or limb-at-risk. Tell client</td>
<td>• Start at a VERY low weight.</td>
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<td></td>
<td></td>
<td>• Stay at starting weight for at least 2 weeks before progressing to next weight.</td>
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<td>• Progress in the smallest available increments.</td>
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<tr>
<td><strong>Peripheral Neuropathy</strong></td>
<td>• Use caution when handling weights to avoid dropping weights.</td>
<td>• Consider using weight machines or elastic tubing instead of free weights.</td>
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<td>• If toe/foot numbness is present, be aware of potential for balance problems and increased risk for tripping and</td>
<td>• Spot client when using free weights.</td>
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<td>• Be physically present to spot client if they become unstable when learning new exercises such as lunges.</td>
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<td>• May need to be cautious in</td>
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<td><strong>Decreased Range of Motion</strong></td>
<td>can do through full range of motion. Use caution and choose weight lifting exercises that client can do through full range of motion.</td>
<td>•Exercises chosen should not replicate pain (above mild). Water exercises found to be helpful.</td>
</tr>
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<td><strong>Decreased Immune Function</strong></td>
<td>moderate intensity respiratory infections or other illnesses. Keep exercise at low to moderate intensity.</td>
<td>•If trainer is ill, NO training cancer survivors. If skin irritation, or ongoing problems with immune function, avoid swimming.</td>
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<tr>
<td><strong>Fatigue</strong></td>
<td>•No exercise that should be avoided.</td>
<td>•Start exercise slowly and gradually increase intensity.</td>
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<td><strong>Any other Side Effect</strong></td>
<td></td>
<td>away; instruct them to stop and consult with medical team.</td>
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</table>
LIVESTRONG at the YMCA addresses unmet needs of survivors.

- 92% Agree that they have made progress related to their health and well-being goals as a result of their participation in Y programs for cancer survivors.

- 86% Agree that they are part of a supportive community at the Y (as defined by 4 measures).

- 92% Agree that their program leader has the understanding and skills needed to lead a physical activity program for cancer survivors.

- 93% Plan to continue their health and well-being journey at the Y after the program ends.

- 94% Are highly-likely to recommend LIVESTRONG at the YMCA to a friend or family member.
Improvement in LIVESTRONG at the YMCA participants

- 56% Improvement in leg strength (leg press)
- 45% Improvement in upper body strength (overhead press)
- 85% Increase in core strength (abdominal strength)
- 60% Improvement in aerobic capacity (treadmill or bicycle ergometer time to fatigue).

LIVESTRONG at the YMCA is safe.
- Over 2000 participants
- 3 injuries reported
The LIVESTRONG at the YMCA program gave me more than coaching – it gave me a path for life after treatment. The end of medical treatment is abrupt. Once my daily visits to the cancer center ended, I felt alone and disoriented. I needed a way to rebuild my life as a cancer survivor. That’s where the medical system ended and the LIVESTRONG at the YMCA program stepped in.”

YouTube: LIVESTRONG at the YMCA (posted by LIVESTRONG ARMY)
http://www.youtube.com/watch?v=aJhC2DPBeyw