Energy and Fatigue after Cancer Treatment

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Slides also available in color at:
http://www.fhcrc.org/patient/support/survivorship/MovingBeyondCancer/index.html
1. Context: Energy and Fatigue in survivors

2. Understanding fatigue and lack of energy
   - What do we know?
   - What to do?

3. Your questions and discussion
Stamina and Physical Ability in Survivors

Population-Based, Case-control studies
(NHANES cohort over 10,000 adults)

- Long term survivors compared to no-cancer adults
  - Physical limits (stamina, fatigue) in 53% vs 21%
  - Restricted participation in activities
    - 31% vs 13%
# Survivors Medical Issues

## Medical problems:
- High cholesterol, triglycerides
- Cardiac and stroke risks
- Diabetes, high glucose
- Neurologic: (balance, nerves, memory)
- Low thyroid levels
- Lack of growth
- Premature menopause
- Osteoporosis
- Lungs / breathing limits
- Lymphedema
- GI (bowels, gas and bloating, acid reflux)
- Muscle or joint pain, swelling, weakness, cramps

## Symptoms and Function:
- Fatigue / lack of stamina
- Muscle and joint stiffness, weakness, cramps or pain
- Restricted social and physical activities
- Sexual dysfunction
- Memory loss
- Distress and worry
5 Year Survivors and ‘Normal’ Controls: Energy

P < .001 Survivors vs Controls at 5 yrs

Syrjala et al. J Pain, 2006
Fatigue is the most common symptom across diseases after chemotherapy or radiotherapy.

- For some it continues for years.
- Fatigue includes decreased stamina, and muscle weakness.
- Fatigue and depression are not the same, but they can be hard to tell apart and one can lead to the other.
### Physical Activity Level

#### 5 Year Survivors vs Controls (N=98):

<table>
<thead>
<tr>
<th>Physical Activity Level</th>
<th>Survivors</th>
<th>Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise or sports at least 3x/wk for at least 30 minutes</td>
<td>29%</td>
<td>30%</td>
</tr>
<tr>
<td>Avg. # hours active per day</td>
<td>3.9*</td>
<td>5.0</td>
</tr>
<tr>
<td>Percent inactive (&lt;2 hr/day moving around)</td>
<td>23%*</td>
<td>7%</td>
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* * P < .05

“Is everything all right?
I heard the motion detector go off.”
Fatigue: what is it?

Bothered more than half the days by:

- Feeling fatigued.
- Feeling weak or lack of stamina / muscle endurance.

Fatigue interferes with:

- Work or other activities.
- Sleep.
- Mood, pleasure, interest, enjoyment of life.
- Memory or concentration.
- Ability to start or finish things.
- Relationships with other people.
Depression: what is it?

2 weeks or more, bothered more than half the days by:

- Little interest or pleasure in doing things.*
- Feeling down, depressed, or hopeless.

If one of the above, then also may have:

- Trouble falling or staying asleep, or sleeping too much. *
- Feeling tired or having little energy. *
- Memory or concentration difficulty. *
- Feeling bad about yourself - or that you are a failure, or have let yourself or your family down.
- Poor appetite or overeating.
- Moving or speaking slowly. Or the opposite – restless, moving around a lot more than usual.
- Thoughts that you would be better off dead or of hurting yourself.
Mental health is the strongest predictor
- Mental health may be ‘chicken and egg’ not usually a cause after cancer
- Joint and muscle pain reports are more common in those reporting fatigue
- Survivors are not consistently more depressed

Inactivity is related (‘chicken and egg’)
- During treatment activity decreases, muscle is lost
- Muscle loss is normal with aging
- Takes effort to rebuild and maintain muscle
What Causes Fatigue or Lack of Energy for Survivors?

- Biological causes of fatigue are inconsistent:
  - Menopause not consistently
  - Anemia (low hemoglobin) not consistently
  - Low thyroid for some
  - Most medical problems increase fatigue
  - Medications can increase fatigue
  - Inflammatory biomarkers predict persistent fatigue after breast cancer (Parade Magazine)
  - Muscle DNA or mitochondria may be damaged by treatment in some people
    - Mitochondria process oxygen as energy
The Mind-Body FATIGUE Pyramid

PHYSICAL

EMOTIONAL COGNITIVE
What to Do?
The Mind-Body Health Pyramid

SLEEP

EXERCISE  NUTRITION
**Bottom Line:**
Best Solution for Energy and Fatigue

Both:
* Use your muscles!
* Get your heart rate up!
Complementary treatments may be effective for fatigue (small studies):

- Ginseng in breast cancer survivors
  - Improved overall quality of life, fatigue
- Tai Chi Chuan improves functional capacity, strength, flexibility
- Yoga results in modest improvement in well-being and symptoms
Exercise – NO better option with less side effect!

- Make a plan that depends on other people.
- Make your own goals and rewards that you really want.
- Plan muscle strengthening (weight resistance) training.
- Nearly all studies indicate benefit for fatigue as well as:
  - Sleep
  - Memory and concentration
  - Quality of life
- The problem is staying with the program.
YMCA and Hutchinson Center collaboration

12-week, 2 times a week, 90 min.

Training by personal trainers trained by oncology physical therapist

Content: exercise, learning, support

– Offered at multiple locations
– Lower charge than regular Y
– Includes membership for survivor and family for duration of program
– Call: 206-667-2814
When nothing seems to help:
you’ve seen the doctors,
had the tests,
your heart and blood are fine,
your hormones and thyroid are fine,
medications don’t explain it:
The 3 Ps:

- **Prioritize:**
  - What is most important, make sure that is first
  - Conserve energy for what matters most

- **Plan:**
  - Pick your best time of day to exercise or do what takes the most energy
  - Schedule your day, delegate, you are in control!

- **Pace:**
  - Make time for rest and sleep
  - Don’t insist things have to be like they were, accept that things are different now
Questions?
Discussion