Reducing Health Risk in Cancer Survivors

Kathleen Wesa, MD
Integrative Medicine Service
Alternative vs Complementary

Alternative Therapies
• Promoted for use instead of mainstream treatment for cancer & other serious illnesses
• Usually biologically invasive
• Costly; potentially harmful

Complementary Therapies
• Used WITH mainstream care for serious illnesses
• Non-invasive
• Inexpensive; safe; evidence-based
Integrative Oncology

Combines the best of complementary and mainstream care
Fitness/Physical Activity

Essential per new data on activity and cancer outcome

“The handle on your recliner does not qualify as an exercise machine.”

“What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?”
When will we treat physical activity as a legitimate medical therapy... even though it does not come in a pill?

Summary of Exercise-Induced Changes

**INCREASED**
- Muscle mass, strength & power
- CV fitness
- Max walk distance
- Immune system capacity
- Physical functional ability
- Flexibility
- QOL
- Hemoglobin

**DECREASED**
- Nausea
- Body fat
- Fatigue
- Symptom Experience
- Duration of hospitalization
- HR
- SBP
- Psychological & emotional stress
- Depression & anxiety
Exercise Increases Survival

- 50-60% increase in survivorship seen with regular physical fitness
- Nurse’s Health Study- 2987 Nurses with breast cancer
- Adjusted RR of death from breast ca 0.5-0.6 for <3 MET hrs/week vs >9 MET hrs
- No apparent benefit for >9 MET hrs

Exercise Increases Survival-2

- 832 stage III colon cancer patients receiving adjuvant CTX
- Reported physical activities 6 months post completion of CTX
- Adjusted HR for <3 vs 18-26.9 MET hr/wk 0.51
- HR 0.55 for 27+ MET hrs/wk (p=0.01)
- Benefit not significantly modified by sex, BMI, +LN, age, baseline performance status, CTX received

ADT Changes in Men

48 weeks after ADT:
• 9.4% increase in whole body fat
• 2.7% loss in whole body lean mass


36 weeks after ADT:
• 5.6% UE, 3.7% LE, 1.4% trunk,
  2.4% whole body lean mass decrease
• 20.7% UE, 18.7% LE, 12.0% trunk, 13.8% whole body fat mass increase

Musculoskeletal fitness in aging & ADT

Reversal of muscle loss with Exercise

- 20 wks of progressive resistance training in men receiving ADT
- using 2-4 sets for 10-12 exercises twice per week
- Muscle strength improvement: chest press 40.5%; seated row 41.9%; leg press 96.3%
- Muscle endurance improvement: chest press 114.9%; leg press 167.1%

American Society for Nutrition Guideline Summary on Physical Activity

- Regular physical activity reduces risk of many adverse health outcomes
- Some physical activity is better than none
- Additional health benefits occur with at least 150 min/wk mod-intensity activity- i.e. brisk walking
- Both aerobic (endurance) and muscle strengthening (resistance) activity are beneficial
- Health benefits of physical activity far outweigh risks of adverse events for almost everyone

http://www.health.gov/PAGuidelines
ASN Guidelines regarding Cancer Prevention

- Physically active people have significantly reduced risk of colon cancer and breast cancer
- 210-420 min/wk mod-intensity is needed to significantly reduce the risk of colon and breast cancer; 150 min/wk does not appear to provide a major benefit
- Greater amounts of activity lower the risks of these cancers further although exactly how much is not clear
Guidelines for Physical Fitness for most cancer pts and survivors

• Do continuous or intermittent aerobic exercise 20-60 minutes 3-5x/wk at 55-90% Max HR (220-age)
  PLUS
• Do anabolic exercise 6-12 reps (50-85% of 1RM) and 1-4 sets of ea exercise for major muscle groups 1-3 x/wk
  PLUS
• Do flexibility exercises for major muscle groups 2-4 sets ea exercise  2-3 x/wk

World Cancer Research Fund/AICR Summary
Food, Nutrition, Physical Activity, and the Prevention of Cancer: a Global Perspective

8 Major Recommendations
2 Special Recommendations

www.dietandcancerreport.org
My doctor said I have to make BIG changes in my diet...

He said I have to switch from beer to water...

And switch from fatty foods to fresh vegetables!

Wow! What are you going to do?

I'm going to switch doctors.
WCR/AICR Recommendations

1- Body Fatness

• Be as lean as possible w/o being underweight
• BMI goal 21-23
• Avoid weight gain and increase in waist circumference as adult

2- Physical Activity

• Be physically active as part of everyday life
• Moderate activity-brisk walking >30 min every day
• As fitness improves aim for >60 min/d moderate or 30 min vigorous activity daily
3- Foods & Drinks that Promote Weight Gain

- Limit consumption of energy-dense foods
- Avoid sugary drinks
- Consume ‘fast foods’ sparingly, if at all

4- Plant Foods

- Eat mostly foods of plant origin
- 5+ servings of non-starchy veg and fruits every day
- Eat relatively unprocessed grains or legumes with every meal
- Limit refined starchy foods
- If consume starchy tubers/roots as staples need to ensure sufficient intake of non-starchy veg/fruits and legumes
WCR/AICR-3

5-Animal Foods

• Limit intake of red meat and avoid processed meat
• PH Goal- <300g (11 oz/wk) very little if any as processed
• Personal Rec- <500g (18oz/wk) very little if any as processed

6-Alcoholic Drinks

• Limit alcoholic drinks
• No more than 2 drinks/day for men and 1/day for women
7-Preservation, Processing, Preparation

- Limit salt consumption <6g/d (2.4g sodium)- stomach CA
- Avoid moldy cereals (grains) or pulses (legumes)- aflatoxins liver CA

8-Dietary Supplements

- Aim to meet nutritional needs through diet alone
- PH Goal- Maximize proportion of pop achieving nutritional adequacy w/o dietary supplements
- Personal Rec- Dietary Supplements are not recommended for cancer prevention
Two Special Recommendations

• 1) Mothers to breastfeed, children to be breastfed

• 2) Cancer Survivors- follow the recommendations for cancer prevention
  – All cancer survivors to receive nutritional care from an appropriately trained professional
  – If able to do so, aim to follow the recommendations for diet, healthy weight and physical activity
Mediterranean Diet Benefits

- Meta-analysis 1.5+ million patients
- Greater adherence to the Mediterranean Diet has 9% reduction in overall mortality
- 9% reduction in CV mortality
- 6% reduction in cancer mortality
- 13% decreased incidence of Parkinson’s Disease and Alzheimer’s Disease

Dietary Supplements and Botanicals

• Vitamin D may provide benefits aside from osteoporosis prevention and bone health, studies are in progress

• Antioxidants are controversial in cancer patients- vitamin C, SELECT trial, Physicians Health Study vit C/E

• Botanicals and Herbs are prone to interact with medications, especially those used in cancer treatment
Vitamin D

• Most people are vitamin D deficient
• Minimal vit D from food sources
• Normal levels >30-32 ng/ml
• >32ng/ml 0.5 risk of colorectal cancer
• Improved outcomes from lung, breast, colorectal cancer with normal vitamin D

Antioxidants

- Distinguish between high-dose antioxidant supplementation and supportive dietary supplementation (RDA)

- Antioxidant doses can differ markedly from matrix and mix in foods and supplements

- Dietary antioxidant effect on tumors is dose dependent

- Doses intermediate to dietary and high dose may decrease XRT effectiveness
Cancer Patients Use Herbs For

- Symptom control
  - Pain, N/V, fatigue, sexual dysfunction
- Treatment of active diseases
  - As cytotoxic agents
- Prevention of cancer or metastasis
  - Enhance immune system
- General health and tradition
  - Tonic
Web site about herbs, botanicals, vitamins, etc.

www.mskcc.org/about/herbs
Website

250+ monographs; each contains

• Clinical Summary
• Scientific Name
• Also Known As
• Patient Use
• Constituents
• Mechanism of Action
• Warnings/Adverse Reactions
• Drug Interactions
• Dosage
• Literature Summary and Critique
• References
Types of Mind-Body practices

- Meditation - includes mantra, mindfulness and relaxation techniques
- Yoga
- Tai Chi and Qi-Gong
- Hypnosis
- Guided Imagery
- Breath Awareness
Summary

Eat food
Not too much
Mostly plants
Be physically active every day
Stress reduction/Mind-body