

Reducing Health Risk in Cancer Survivors

Kathleen Wesa, MD

Integrative Medicine Service

Outline

- Alternative vs Complementary
- Physical Fitness
- Nutrition
- Botanicals & Supplements
- Mind-Body Interventions

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

© 2000 Randy Glasbergen. www.glasbergen.com



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

Copyright 2003 by Randy Glasbergen.
www.glasbergen.com



“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?

Church T, Blair SN. Br J Sports Med 2008 Oct 16.

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

Holmes *et al.*, Physical activity and survival after breast cancer diagnosis. JAMA 2005, 293 (20):2479-2486.

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

Meyerhardt, *et al.* JCO, 2006 Aug 1; 24(22): 3517-8.

ADT Changes in Men

48 weeks after ADT:

- 9.4% increase in whole body fat
- 2.7% loss in whole body lean mass

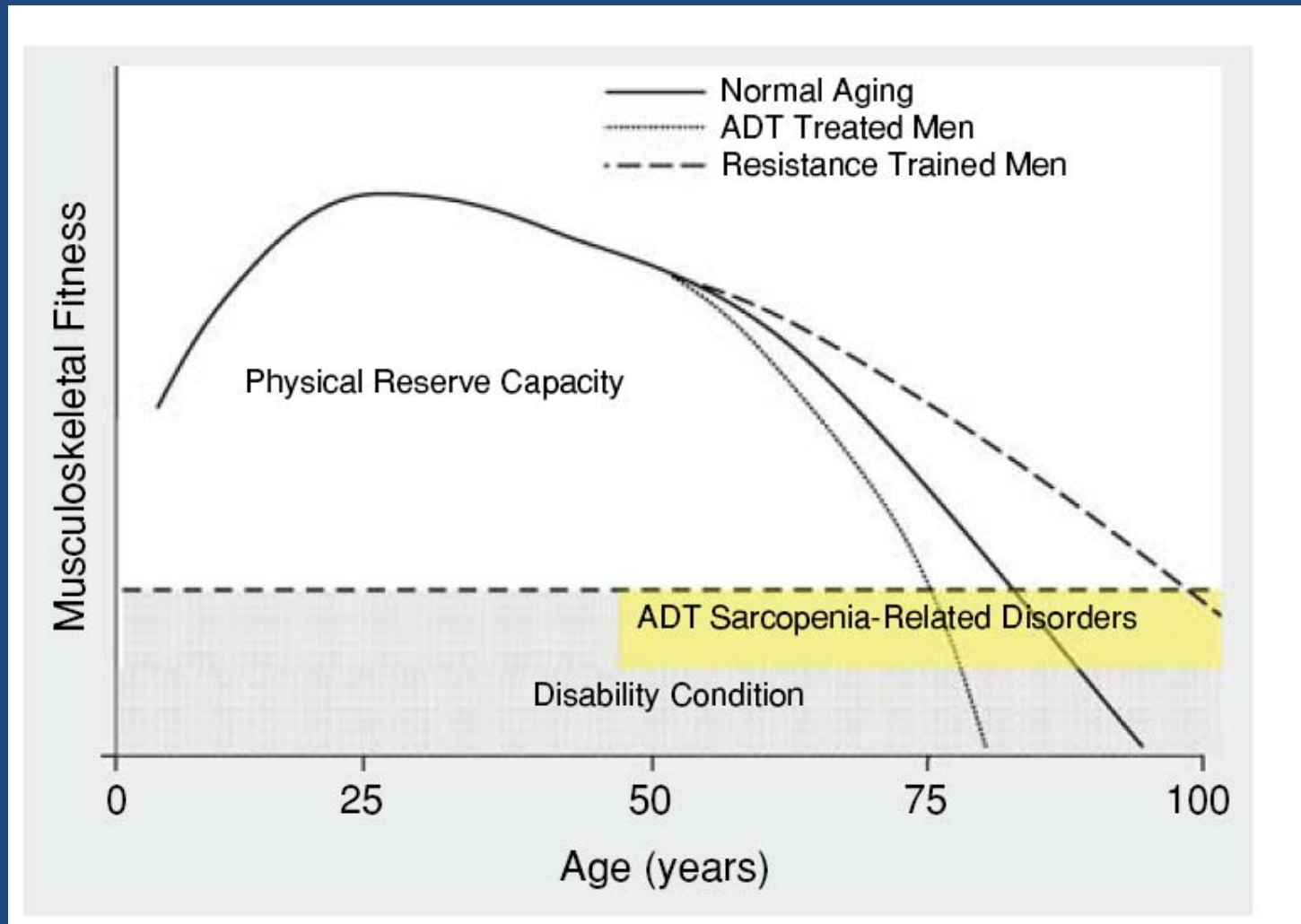
Smith MR, *et al.* J Clin Endocrinol Metab 2002, 87(2):599-603.

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

Galvão DA, *et al.* BJU Int 2008, 102(1): 44-47.

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%

Galvão DA, *et al.* Resistance training and reduction of treatment side-effects in prostate cancer patients. *Med Sci Sports Exerc* 2006, 38(12):2045-2052.

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

ASN Guidelines regarding Cancer Prevention

- Physically active people have sig reduced risk of colon cancer and breast cancer
- 210-420 min/wk mod-intensity is needed to sig reduce the risk of colon and breast cancer; 150 min/wk does not appear to provide a major benefit
- Greater amts 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

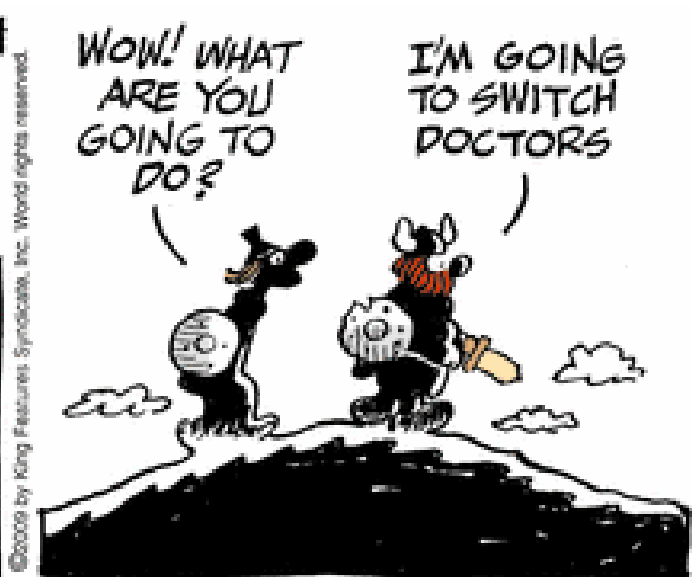
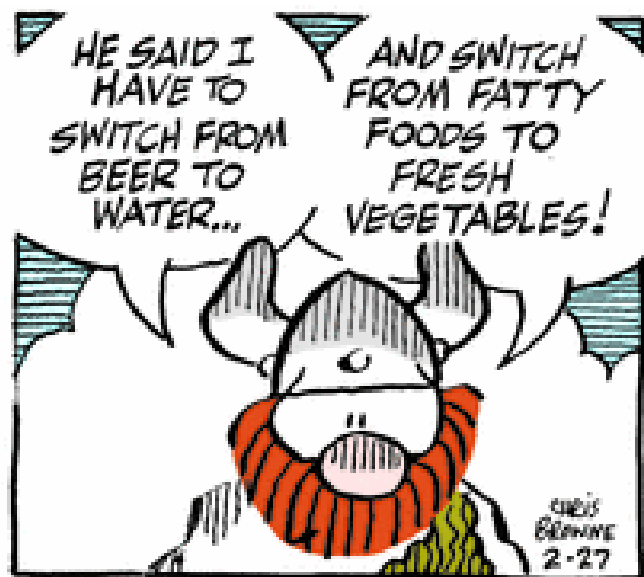
- Do continuous or intermittent aerobic exercise 20-60 minutes 3-5x/wk at 55-90% Max HR (220-age)
PLUS
- Do anabolic exercise 6-12 reps (50-85% of 1RM) and 1-4 sets of ea exercise for major muscle groups 1-3 x/wk
PLUS
- Do flexibility exercises for major muscle groups 2-4 sets ea exercise 2-3 x/wk

Newton R, Galvão D. Exercise in Prevention and Management of Cancer. Current Treatment Opinion in Oncology (2008) 9:135-146.

World Cancer Research Fund/AICR Summary

Food, Nutrition, Physical Activity,
and the Prevention of Cancer: a
Global Perspective

8 Major Recommendations
2 Special Recommendations



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

WCR/AICR-2

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

WCR/AICR-4

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

Sofi F, *et al.* Adherence to Mediterranean diet and health status: meta-analysis. *BMJ* 2008;337:a1344

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

Ng K, et.al. Circulating 25-hydroxyvitamin d levels and survival in patients with colorectal cancer. *J Clin Oncol*. 2008 Jun 20;26(18):2984-91

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/aboutherbs



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

