Integrative Medicine: Potential Benefits in Cultivating Optimal Health

Carolyn M. Matthews, MD
DABOG, DABMA, DABIHM, DABHPM

Director of Integrative Medicine, Baylor University Medical Center, April 2013

Living with Aplastic Anemia, MDS, or PNH

Integrative Medicine

- Terminology
- Patterns of Use
- Modalities

ABIHM and AHMA

- Integrative Holistic Medicine is the art and science of healing that addresses care of the whole person-body, mind, and spirit. The practice of Integrative Holistic Medicine integrates conventional and complementary therapies to promote optimal health and to prevent and treat disease by addressing contributing factors.
**Integrative Medicine: CAM Domains**

- Use of complex interventions
- Individualized diagnosis and treatment
- Holism: treatment of the whole person by addressing their physical, spiritual, mental attributes

**Philosophies behind Integrative Medicine**

**Looking upstream**

- Addressing root causes of dysfunction
- Health promotion
- Prevention of illness

**NCCAM and CDC results, 2007 NHIS survey**

- 4 in 10 adults use CAM
- CAM use greater among women, those with higher levels of education and higher incomes
- Most common CAM therapies:
  - Natural products 17.7%
  - Deep breathing 12.7%
  - Meditation 9.4%
  - Massage 8.3%
**Costs of CAM: 2007 NHIS survey**

- In 2007, adults in US spent $33.9 billion out of pocket on visits to CAM practitioners and purchases of CAM products
- 2/3 on self-care products, classes, materials
- 1/3 on practitioner visits
  - Nahin, RL et al, National Health Statistics Reports, Number 18, July 30, 2009

---

**CAM in Oncology patients**

- 83% of patients across broad spectrum of malignancies
- 493 patients: 83% had used at least one approach
  - 80.5% spiritual practices
  - 62.6% vitamins and herbs
  - 59.2% movement and physical therapies
- Predictors of use: female, younger age, higher education
  - Richardson M et al, J Clin Oncol 2000; 18: 2502-14

---

**CAM in Oncology patients**

- Most common reasons for use
  - Desire to feel hopeful 73%
  - Believed therapies to be nontoxic 48.9%
  - Wanted more control in decisions about medical care 43.8%
- Expectations
  - Improve QOL 76.7%
  - Boost immune system 71.1%
  - Prolong life 62.5%
  - Relieve symptoms 44%
  - Richardson M et al, J Clin Oncol 2000; 18: 2502-14

---

**To tell... or not to tell?**

- 61% Not important for doctor to know
- 60% Doctor never asked
- 31% None of the doctor’s business
- 20% Doctor would not understand
- 14% Thought doctor would disapprove

Do tell...

- St. John’s wort: upregulates CYP450 enzymes, reduces exposure to active metabolite
- Grapefruit juice: inhibits CYP3A4 enzymes
- Cimetidine and most chemo
- Green tea and bortozemib

Integrative Medicine in America

- 26 of 29 centers: consultative care
- 63% of patients self-referred
- 93% create personalized health plan
- Most frequent interventions:
  - Food/nutrition
  - Supplements
  - Yoga
  - Meditation
  - Acupuncture/Massage
  - Pharmaceuticals

How do you choose?

- Certification
- Institutional/organizational affiliation

The bottomline: If it sounds too good to be true…it probably is

Advising patients: Evidence & Efficacy

<table>
<thead>
<tr>
<th>Recommend</th>
<th>Accept</th>
<th>Discourage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence supports efficacy</td>
<td>Evidence is inconclusive</td>
<td>Evidence shows not efficacious</td>
</tr>
<tr>
<td>AND</td>
<td>BUT</td>
<td>OR</td>
</tr>
<tr>
<td>SAFE</td>
<td>SAFE</td>
<td>Potential for serious RISK</td>
</tr>
</tbody>
</table>

Optimal Health Pyramid

Surgery, Medication

Exercise, Meditation

Air, Sleep, Food, Love, Touch, Spirituality, Sunlight

Genes, Environment, and Cancer


S.A.D.
Paleolithic Diet

- Hunter-Gatherer
- Total fat 28-58%
- No POP’s
- Unaltered foods
- No GMO

Reducing Inflammation

NFKB inhibitors

Eating for your Genes

- Low glycemic load
- High nutrient density
  - Phytonutrients
  - Micronutrients
- Optimal fat quality
- Low allergenic burden
- Reduce caloric intake

- Optimal fiber
- Optimal salt/potassium
Mediterranean Diet, Lifestyle Factors, and 10-Year Mortality in Elderly European Men and Women

The HALE Project

Kim Z. B. Hreidarsson, MD, Hauke P. C. R. De Groot, PhD
Francis V. Knol, PhD
Anne-Elizabeth Potts, MD, MSc

"Among individuals aged 70 to 90 years, adherence to a Mediterranean diet and healthful lifestyle is associated with a more than 50% lower rate of all-causes and cause-specific mortality."


Massage

- Pain
- Anxiety
- Depression
- Fatigue
- Nausea
- Favorable risk-benefit ratio

Massage therapy

- Memorial Sloan-Kettering Cancer Center
- 1290 patients treated over 3 years
- Pre/Post questionnaire re:
  - Anxiety 52% improvement
  - Fatigue- 41% improvement
  - Pain- 40% improvement
  - Depression- 31% improvement
  - Nausea- 21% improvement

Acupuncture: NIH Consensus Panel, Well-demonstrated efficacy

- Chemotherapy-induced nausea
- Dental pain
- Nausea of pregnancy
- Postoperative nausea

Acupuncture, Potentially useful per NIH consensus panel

- Addiction
- Asthma
- Carpal tunnel
- Epicondylitis
- Fibromyalgia
- Headache
- Low back pain
- Menstrual cramps
- Stroke rehab

Acupuncture: other possibilities

- Hot flashes
- Chemotherapy-induced leukopenia
- Post chemotherapy fatigue
- Radiation induced xerostomia
Acupuncture Safety

- Prospective survey of 34,407 treatments by 574 practitioners:
  - No serious adverse events
  - 43 minor adverse events: nausea, fainting, aggravation of symptoms, bruising

Exercise!!

- Decreases stress
- Improves glucose tolerance, increases GLUT4
- Improves HDL, TG, LDL
- CD4/CD8 cell ratios
- Reduces depression/anxiety
- Maintains muscle mass

Original Investigation

Physical Activity and Male Colorectal Cancer Survival


Men who engaged in more than 27 MET hours per week of physical activity had an adjusted hazard ratio for colorectal cancer-specific mortality of 0.67 (95% CI 0.24-0.92) compared with men who engaged in 3 or less MET hours per week, regardless of age, stage, BMI.

Methods: Retrospective cohort study of men between 1966 and 2001 and colorectal cancer incidence among men. Men were divided into categories of physical activity based on MET hours per week. The adjusted hazard ratio for colorectal cancer-specific mortality was compared across categories of physical activity.

Results: Compared with men who engaged in 3 or less MET hours per week, the adjusted hazard ratio for colorectal cancer-specific mortality was 0.67 (95% CI 0.24-0.92). The hazard ratio was 0.48 (95% CI 0.21-1.05) for men who engaged in 9 to 14.9 MET hours per week.

Conclusions: Physical activity is associated with reduced risk of colorectal cancer-specific mortality.

Arch Intern Med 2003;163(2):191-198

Original Investigation

Physical Activity and Survival After Breast Cancer Diagnosis

Wendy T. Chen, MD, PhD

Women who were physically active after breast cancer diagnosis had a lower risk of death than those who were inactive. The adjusted relative risk of death from breast cancer was 0.8 (95% CI 0.6-1.06) for 3 to 8.9 MET hours per week; 0.50 (95% CI 0.31-0.82) for 9 to 14.9 MET hours per week.

Methods: Retrospective cohort study of women between 1973 and 2000 and breast cancer incidence among women. Women were divided into categories of physical activity based on MET hours per week. The adjusted hazard ratio for breast cancer-specific mortality was compared across categories of physical activity.

Results: Compared with women who engaged in less than 3 MET hours per week, the adjusted relative risk of death from breast cancer was 0.8 (95% CI 0.6-1.06) for 3 to 8.9 MET hours per week; 0.50 (95% CI 0.31-0.82) for 9 to 14.9 MET hours per week.
**Mind-body Therapies**
- 8 week program MBSR shows significant reduction in sleep disturbance (p<.001)
- Significant reductions in stress, mood disturbance, and fatigue
  - Carlson, Int J Behav Med, 2005
- Hypnosis: significant reductions in pain, nausea, fatigue, emotional distress

**Fatigue: L-carnitine**
- After 1 week of supplementation, 13 of 15 patients with cancer, fatigue, and carnitine deficiency experienced decreased fatigue per Brief Fatigue Inventory scale
- 45/50 patients with fatigue improved significantly after 1 week of carnitine 4 g per day

**Fatigue: Role for omega 3’s??**
- 633 breast cancer survivors
- Blood sample 30 months after diagnosis
- Piper Fatigue scale and SF-36
- Fatigue scores higher by increasing CRP tertile
- High CRP 1.8 times more likely to have fatigue
- Highest intake of O6 vs O3 2.6 times greater odds of fatigue

**Omega-3 FA Metabolite selectively ablates leukemia stem cells**
- A cyclopentenone prostanoid produced from EPA alleviated development of leukemia in 2 murine models of leukemia
- IP administration of O3 derived metabolite into mice infected with Friend erythroleukemia virus, or those with CML oncogene BCR-ABL targeted leukemia stem cells for apoptosis, enhanced survival

Alfano CM et al. J Clin Oncol 2012 30 (12) 1280-7

Graziano et al. Br J Cancer 2002; 1854-7

Hegde S et al Blood 2011 118(2;6) 6909-19