Integrative Medicine: Potential Benefits in Cultivating Optimal Health

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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

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

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 bortezemib
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

- If it sounds too good to be true…it probably is

Advising patients: Evidence & Efficacy

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Optimal Health Pyramid

Surgery, Medication

Exercise, Meditation

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

Genes, Environment, and Cancer


"If you ever hope to improve your health, you've got to stop eating hospital food."
S.A.D.

Paleolithic Diet
- Hunter-Gatherer
- Total fat 28-58%
- No POP's
- Unaltered foods
- No GMO

Reducing Inflammation
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

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.

Intensive nutrition and lifestyle intervention
- 48 upregulated and 453 down-regulated transcripts
- Significant modulation of biological processes re tumorigenesis

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
Compared with women who engaged in less than 3 MET hours per week of physical activity, 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. Increased physical activity was significantly associated with a lower risk of breast cancer mortality, with odds ratios of 0.7 (95%CI 0.5-1.03) for 5 to 9.9 total MET hours per week and 0.58 (95%CI 0.35-0.99) for 10 or more MET hours per week of physical activity.

Mind-body Therapies

- 8 week program MBSR shows significant reduction in sleep disturbance (p<.001)
- Significant reductions in stress, mood disturbance, and fatigue
  - Carlson, 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

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

Omega-3 FA Metabolite selectively ablates leukemia stem cells

- A cyclopentenone prostaglandin 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 oncprotein BCR-ABL targeted leukemia stem cells for apoptosis, enhanced survival

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