Best of Both Worlds: Clinical Excellence Meets Integrative Medicine

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Living Life to the Fullest-Body, Mind&Spirit
Disclosures

- Medical Director Wellness-FHCH
- Director Product Development Visalus Sciences
- Founder-Body Language Vitamin Co
- Author-Save Your Hearing Now and Complementary and Integrative Therapies for ENT Disorders
- Multiple patents
- Two NIH grants and Three clinical trials
This Course will:

- Describe scope of current health in USA
- Describe what is Complementary/Int Med
- Discuss Nutritional and Supplement strategy
- Discuss skepticism, fallacies and truth
- Discuss some of our studies
- Discussion some common herbs for sports
- What I plan to doing at FHCH (need to raise 25 million!)
- Answer questions
Health “care” in America

- USA spends the most of any country on health care (~9000/person)
- 2.8 trillion dollars/year; 17-18% of the GDP
- Life expectancy 78 yrs, 45th well behind Swiss, Germany, Norway, Greece, Bosnia and Jordan
- Infant mortality 6.37/1000 (higher than almost all other developed countries)
- “The health system isn’t healthy. There’s no denying it. A system that was designed to make you feel better often just makes things worse” (WSJ March 19, 2007)
- We should be the best in class, instead we are ranked an abysmal 37th!
  
  (E. Emanel, JAMA May 16, 2007)
Chronic disease affects 125 million Americans costing more than $500 billion/year.

50 – 75% of medical disorders are preventable, can be significantly ameliorated, or can be delayed.

The Centers for Disease Control
FHCH Wellness Mission

The Florida Hospital Celebration Health Complementary & Integrative Medicine and Creation Health Wellness will be state-of-the-art programs that provide optimal care to support health and wellness. The centers will provide integrative care with a strong research-based orientation to assure the safe and effective blending of conventional and complementary medicine.
Definition

• **CAM (CIM)** comprises those practices used for the prevention and treatment of disease that are not taught widely in medical school, not generally available in hospitals, and not usually covered by health insurance.

• **Integrative medicine** is healing-oriented medicine that draws upon all therapeutic systems to form a comprehensive approach to the art and science of medicine *(Dr. Andrew Weil, U. of Arizona).*
Examples of CIM therapies

- Acupuncture**
- Alexander technique
- Biofeedback
- Chiropractic**
- Energy healing
- Feldenkrais technique**
- Folk remedies
- Homeopathy
- Herbal supplements**
- Hypnotherapy**
- Imagery

- Magnets
- Massage therapy
- Megavitamins**
- Neuromuscular therapy **
  (anatomically-directed)
- Prayer (intercessory) **
- Relaxation
- Remote healing
- Rolfing
- Self-help groups
- Spiritual healing by others

**Being tested in clinical studies at HFHS
Nutrition

- Proper nutrition essential for good health
- Basic food groups
- Fruits and vegetables
- Sensible diet (reduce fats and simple sugars)
- Moderation
Lifestyle

- No tobacco products
- Minimal alcohol (unless SDA, then NONE!)
- Avoid excess sun exposure
- Maintain appropriate weight
- Healthy Diet 5-10 Fruits and veggies/d
- Exercise regularly (3-7 times/week)
- Simplify lifestyle (if possible)
- Reduce stress get enough sleep
Recommended Dietary Allowances (RDA)

- Food and Nutrition Board since 1941
- Best Scientific judgment on nutrition allowances
- Meet nutrient needs of practically all healthy people
- *RDAs are safe and adequate levels; neither minimal requirements nor optimal levels!*
Reality check

• “to obtain enough vitamin E from food to attain a reduction in the risk of cardiovascular disease and possibly cancer, you’d need to consume 9 tablespoons of olive oil, 75 slices of whole wheat bread, 40 almonds, or 200 peanuts each day.”

(Moret Traber, PhD, Oregon State University)
USDA Report 2005

- 93% of Americans inadequate intake of vitamin E
- 56% of Americans inadequate intake of magnesium
- 44% of Americans inadequate intake of vitamin A
- 31% of Americans inadequate intake of vitamin C
- 14% of Americans inadequate intake of vitamin B₆
- 12% of Americans inadequate intake of zinc
- 8% of Americans inadequate intake of folate

Heart Disease

- 71,300,000 Americans (HBP, CHD, stroke, Heart failure)
- Leading cause of death (37.3%) in USA (1/2.7 deaths)
- Risks: HBP, DM, Weight, lack of exercise, smoking, stress, chol, menopause, metabolic synd (TG)
- >500 Billion spent each year
- THIS is PREVENTABLE

Heart Disease and Stroke Statistics—2006 Update (American Heart Association Statistics Committee and Stroke Statistics Subcommittee)
Cancer statistics

• 1.4 million diagnosed CA’s in USA annually
• 560,000 deaths annually in the USA
• Worldwide ~ 7 million deaths annually
• Cancer is second most common cause of death in USA, behind heart disease
• Cancer is largely preventable: 2/3 CA deaths linked to lifestyle choices

American Cancer Society  http://www.cancer.org
Bal et al Nov/Dec 1999
Complementary/Integrative Medicine

- Astounding increase in public use
- >60% Americans
  (See Barnes at www.nccam.nih.gov/news/camsurvey.htm and Eisenberg et al)
- 7/10 using CIM, do not tell their Dr
- Alternative in USA is likely Mainstream elsewhere
Complementary/Integrative Medicine

• Conventional medicine started 200 yrs ago
• Alternative Therapies present since civilization began
• Mid-20th Century, rapid elimination of CAM (considered quackery)
• Physicians tend to disregard practices that are not double-blinded placebo controlled
Complementary/Integrative Medicine

• Skepticism is healthy and important
• However, a closed mind negates consideration of potentially beneficial therapies
• Congressional mandate started NCCAM within the NIH in 1992
• Pts want a practitioner that is open-minded to CAM, particularly when conventional treatments are ineffective
Why do we need to integrate?

- Unexpressed desire of a majority of patients
- Emphasis on prevention and wellness rather than just fixing disease
- Lower cost than expensive technology, invasive surgeries, drugs, etc.
- Promotes patient engagement - critical for treatment of chronic illness
- Integrates the body, mind and spirit
- Emerging scientific evidence of efficacy
Descartes (in 1600’s) Initiated Thinking of Distinct Domains of Human “Construction” and the Exactness of Science
Holistic/Integrative Medicine Paradigm - Hypotheses:
• The domains of B-M-S are inseparable and out of balance in disease
• Optimal treatment involves addressing all domains TOGETHER
One glass of red wine may not get you drunk, but it does go to your head. Or, more specifically, to your ears. Researchers with the Henry Ford Health System found that when rats were given resveratrol, the wonder chemical in red wine, they had a 50 percent reduction in noise-induced hearing damage. “We’re confident this is just as effective in humans,” says Michael Seidman, M.D., the lead author.
Important information

• Sig number of older adults fail to get amounts and types of food to meet essential energy and nutrient needs (McCormack 1997; Cid-Ruzafa et al 1999; Marshall et al 2001 etc.)
• Deficiencies of vitamins and minerals predicted to affect ~ 1/3 of all older adults (>65 yrs) (Chandra 1997)
• “Pending strong evidence of effectiveness from randomized trials, it appears prudent for all adults to take vitamin supplements”
• All people should take MVI, antioxidants and (Fletcher and Fairfield JAMA 2002) other nutritional supplements based upon the most recent body of data (Seidman personal communication since 1981)
• Headlines in every major newspaper
  “Vitamins increase mortality”
• Yahoo, CNN, MSN all major networks
• Story found in most local papers and TV affiliates
• This is how we obtain our non-biased information!
• 68 Randomized trials adults using beta carotene, V-A,C, E and Se
• 232,606 subjects down to 47 studies and 180,938
• When all low and high bias risk trials of antiox suppl were pooled **NO SIGNIFICANT** effect on mortality
• Conclusion: Tx with B-carotene, V-A, E may increase mortality, not true with C or Se
Mortality in Randomized Trials of Antioxidant Supplements for Primary and Secondary Prevention
JAMA 2-28-07;297;(8) 842-857

Critique: flaws in methodology

- Eliminated 816 refs (747 trials) as mortality was “0” in the study groups!
- Discounts well-established support for antioxidants in preventing dz
- Subject pool too diverse, used varying combinations and doses tested in diff groups of people (109 elderly NH residents to a 12 year study of 22,071 Drs)
- Wide dose range
  - V-A 1333-200K i.u.
  - V-E (synthetic) 10-5000 i.u.
  - V-C (synthetic) 60-2000 mg
  - Selenium (natural) 20-200 mcg
Mortality in Randomized Trials of Antioxidant Supplements for Primary and Secondary Prevention
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**Critique: flaws in methodology**

- Many studies weeks, some 3 months some years (avg was 3.3 yrs) and avg age of participant was 62 (ie started late and used only for short period of time)
- Of a poss 815 studies 68 selected (91% of eligible studies arbitrarily excluded)
- Supplementing with a single nutrient, not likely to have notable benefit
- Of studies included several were misinterpreted
  - *(Brown et al 2001 NEJM* showed 1 death in drug plus antiox and 0 deaths in antiox alone, this article said 30 deaths)*
  - *(Marras et al 2005 Neurology* no increased mortality with high dose V-E, this article states significantly higher death rate)*
Appropriate conclusions & thoughts:

• Study does not advance understanding, easily leads to misinterpretation of the data *(Meir Stampfer, Prof Nutrition and Epidem Harvard)*

• “This is a flawed analysis… the totality of the evidence indicates that antioxidants from foods or supplements have many health benefits, reduces risks for cardiovascular disease, cancer, eye disease, and neurodegenerative dz, they are a key to enhanced immune system and resistance to infection *(Balz Frei Dir & Endowed Chair Linus Pauling Institute)*
Mortality in Randomized Trials of Antioxidant Supplements for Primary and Secondary Prevention
JAMA 2-28-07;297;(8) 842-857

Appropriate conclusions & thoughts:

• “One of the major premises of doing such a meta-analysis is that the studies should be comparable…here, they looked at primary prevention, treatment, old, young smokers, nonsmokers. Only when they used their own criteria of what was good and what was bad were they able to show an increase in all-cause mortality” (Jeffrey Blumberg, Dir of Antiox Res Lab Tufts Univ)

• Only when they included and excluded certain trials were they able to find this alleged inc in mortality, which they themselves can’t explain, There is plenty of data to show that regular use of antioxidant suppl maintain health” (Andrew Shao Center for Responsible Nutrition)
Essential Fatty Acids

- American diet rich in saturated fats and arachidonic acid (an Omega 6 EFA)
- Leads to high levels of series two prostaglandins causing heart disease, diabetes and cancer
- Ideal supplementation of EFAs in the diet is in the ratio of 3:1 of omega 3 to 6, favoring series one and three prostaglandins
- Typical American diet has EFAs in 1:20 (3’s to 6’s)
- Much to gain by altering diet and supplementing with an Essential Fatty Acid supplement that provides Omega 3’s preferentially to Omega 6’s
EFA’s and cardiac health

- American Heart Association; at least two servings of dark-meat fish per week for cardioprotection.
- Study of > 11,000 heart attack patients showed 45% decrease in risk of sudden death and 20% reduction in mortality from all causes when supplementing with fish oils for three to five years \((\text{Lancet 1999})\).
- Pts supplementing with Omega 3 FA demonstrated a reduction in the risk of death after myocardial infarction \((\text{Charnock, J., Prostaglandins, Leukotrienes \\& EFAs, 1999})\) and a reduction of the growth of plaque on arterial walls \((\text{Fan Y et al, Adv Exp Med Biol, 1999})\).
- They observed a significant inverse association between omega 3 fatty acids consumption and incidence of major CHD events in women. \((\text{Hu,F et al; Amer J Clin Nutr, 1999})\).
EFA’s and Cancer

• Flax seed slowed tumor growth in patients with breast cancer and skin cancer. Also improved symptoms of cyclical mastalgia (breast pain) without significant side effects (Goss, P, Presented at 23rd Annual San Antonio Breast cancer symposium, December, 2000)

• Omega 6 fatty acids offered benefits in some drug resistant cancers of the bladder and breast by improving uptake of chemotherapy agents. A 2001 study suggested that omega-3, not omega-6 EFAs, may inhibit skin cancer (Davies, C. et al., Euro J cancer, 1999)
EFA’s and other disorders

- **Weight loss** *(Vaddadi, K and Horrobin, D., IRCS J Med Sci, 1979)*
Grape seed extract

- Contains: Fatty acids, tocopherols, e-viniferin, procyanides and nucleotidase inhibitors
- Protects against noise induced hearing loss (Seidman et al in 2011, 2013)
- Reduces MtDNA del (anti-aging) (Seidman et al in press)
- Reduces age-related hearing loss & ↓ COX-2 (Seidman et al 2013)
- Powerful antioxidant and anti-inflammatory (Rice-Evans 1977; Inamori 1984) (50X more powerful than E; 20 X Vit C)
- Reduces oxidative stress in nerve cells (Draczynska-Lusiak et al 1998)
- Stimulates Map-kinase (nerve regen) (Tredici et al 1999)
- Inhibits PAF (Kimura et al 1985; Bertelli et al 1995)
- Decreases complex III activity (Zini et al 1999)
- Accounts for “French paradox” 42% less CAD despite high fat diets (WHO)
Alarming fact

Approximately 200 aspiring or current US Olympic athletes were asked if they would take a drug that would make it possible for them to be world champions for five years despite the fact that the drug would then kill them. More than half answered YES!

(Bamberger and Yaeger 1997)
Statistics

- In USA:
  - 100 million swimmers
  - 75 million cyclists
  - 25 million joggers/runners
- Injuries in “regular” exercisers occur in 45-70%
- Highly trained athletes (some high schoolers/college/Olympic/professional) need balance between intense conditioning and over-training
  
  *(O’Toole 1992; Ernst 1998)*
Performance enhancing

- Mitochondrial metabolites/Anti-age/Energy formula (Body Language Vitamin Co)
- Caffeine
- Creatine
- Beta-hydroxy beta-methylbutyrate (HMB)
- Phosphatidlyserine and Phosphatidylcholine
- Pyruvate and Dihydroxyacetone
- Ribose
- Antioxidants
- Herbs
Mitochondrial Enhancers

- Acetyl - L – Carnitine
  - may help ischemic muscle disease (including heart disease), reduces lactate and pyruvate levels after intense exercise

- Alpha lipoic acid
  - Both repair and enhance mitochondrial fxn
  - Can enhance energy production
  - Can act as antioxidants

- Glutathione
- Coenzyme Q-10

Anti-age/Energy Formula

• Patented
• Two mitochondrial metabolites + two mitochondrial precursors
• Mitochondria safely produces more energy and functions more efficiently
• Reverses aging in rats
• Enhances memory and energy in humans
• Reverses age related hearing loss by 7-12 dB

The Commissioner of Patents and Trademarks

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from offering, selling, using, or making the invention for the term of the patent from the date of grant of this patent.

If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.

S. Todd Robinson
Acting Commissioner of Patents and Trademarks

W. M. Person
Attorney
Caffeine

*I do not recommend*

- Increases use of fatty acids for energy
- Spares glycogen
- Mental/physical boost
- Irritates stomach
- Disrupts sleep
- Diuretic (can promote dehydration)
- Rapid tolerance (ie effect decreases with subsequent use)
Creatine

- For more creatine phosphate (to make more ATP)
- Produced in body
- For bursts of exercise (100 yard sprint, short shift ie hockey, typically 1-10 secs)
- May extend endurance and increase lactate threshold
- May increase water content of muscle and lead to muscle injury
- Load with 5 gms every 3 hrs to 20-25/d X 5 d then 2-5 gms/day
- Meta analysis (32 studies)-no effect on anaerobic performance

(O’Mathuna;2000)
Phosphatidylserine and Phosphatidylcholine

• Integral components of cell membranes
• PS may reduce the levels of cortisol thus protecting against protein breakdown
• May help to recover more quickly
• Recommend 200-800 mg daily
Ginseng (panax ginseng)

Claims: Fatigue, depression, stress, general well being, sexual energy and digestion: 6/8 controlled studies-neg results for ↑ performance (Volgler et al 1999; Bucci 2000; Bahrke and Morgan 2000)

Actions: Adaptogenic (and promotes secretion of ACTH-causing release of endorphins and enkephalins) stimulant, lowers RBS, inhibits platelet aggregation

CI: Avoid in HTN, DM and pregnancy; may interfere with anticoagulant tx

Side effects: High doses-insomnia, anxiety, GI upset

Interactions: Do not use with other anticoag, stim (ie caffeine), MAOI, antipsychotics

Dosage: 100-300 mg 1-3 x /d
Ma Huang (ephedra sinica)

- **Claims:** Asthma, reduces bronchial edema, stimulant
- **Actions:** Sympathomimetic, bacteriostatic, bronchodilator
- **CI:** Anxiety, HTN, angle closure glaucoma, pheochromocytoma and thyrotoxicosis, not shown safe or effective for weight loss
- **Side effects:** Hypertension, nervousness, insomnia, palpitations, hyperglycemia, death (400 reports of adverse rxn to FDA, 15 deaths)
- **Interactions:** Halothane, cardiac glycosides, MAOI, oxytocin, guanethidine and others
- **Dosage:** 15-30 mg total alkaloid or 300 mg herb/day
Guarana

**Claims:** Stimulant, arousing, increased energy, helps with breathing, weight loss? headaches

**Actions:** Sympathomimetic and caffeine like actions

**CI:** Heart problems, kidney disease, hyperthyroid or anxiety

**Side effects:** Increased HR, BP, anxiety, arrhythmias

**Interactions:** None listed, but avoid with other stimulants

**Dosage:** Caffeine content of 2.5-5% therefore 2X as strong as coffee (7-11 gms/day ~ 400 mg of caffeine)
# Average annual mortality rates

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<th>Factor</th>
<th>Deaths/yr</th>
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<tr>
<td>Vitamins</td>
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<tr>
<td>Herbs</td>
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<tr>
<td>Smoking</td>
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<tr>
<td>Poor diet</td>
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<tr>
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<td>Alcohol</td>
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The Wellness Vision at HFWBH
Creating An Experience Blueprint
Henry Ford Health System’s VITA and Center for Integrative Medicine: Strategies for Balancing the Whole Being in Many Dimensions Using Multimodal Therapy

- **Mind-body therapy**: brings awareness to subconsciously driven fixed patterns of expression that lead to disease; supports the dissipation of sx through stress alleviation and stim expression of confidence and satisfaction
- **St. John Neuromuscular Therapy**: manipulates soft tissues, restores balance in the NM system and posture; cranial manip to release excess compression may be valuable in disease or imbalance
- **Acupuncture**: balances the internal organ systems of the body
- **Movement reeducation**: brings awareness to brain re the NM system; promotes muscle relaxation and release, which reduces unnecessary expenditures of energy
- **Holistic and sensible nutrition/supplementation**
- **Yoga**
- **Health coaching**
Case report

• 42 year old male sustained right anterior cruciate ligament tear wakeboarding 7-20-02
• MRI tear of ACL at femoral insertion. The PCL was intact
• Patient elected to undergo ACL repair using an ipsilateral patellar graft 11-26-02
• Used Acupuncture and hypnotherapy for anesthesia
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  Nadir Ahmad, M.D.
- www.bodylanguagevitamins.com

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