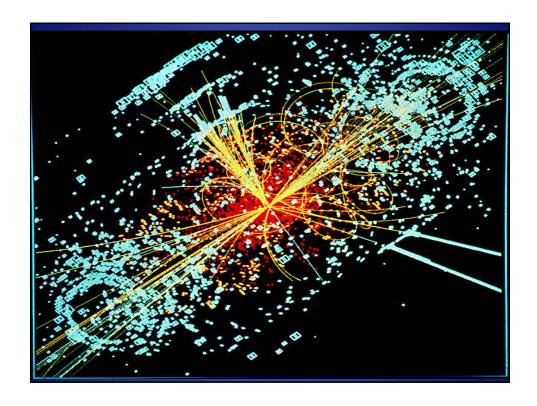


Objectives:

- Review perspectives of Integrative Medicine as they apply to expanding patient treatment options.
- Define Integrative Medicine and discuss specific Integrative Medicine Principles.
- Explore the similarities between Osteopathic and Integrative Medicine.
- Discuss and review the impact of diet and proper nutrition on overall health.



Totam Personam Curamus

"Integrative medicine is relationship-based care that focuses on the whole person; is informed by evidence; and makes use of all appropriate therapeutic approaches, healthcare professionals, and disciplines to promote optimal health and healing."

http://www.uptodate.com/contents/overview-of-complementary-and-alternative-medicine-in-pediatrics#H27

"Doctors of Osteopathic Medicine, are physicians who emphasize a whole-person approach to treatment and care. [They] focus on prevention, [and] how a patient's lifestyle and environment can impact their wellbeing. DOs strive to help you be truly healthy in mind, body and spirit -- not just free of symptoms."

www.osteopathic.org

Evolution of Titles in the Field:

- 1970's = Holistic Medicine
- 1980's = Complimentary and Alternative medicine
- 1990's = Integrative Medicine
- Future...Health and Healing-oriented medicine

Integrative Medicine, David Rakel. 3rd Edition

"To find <u>health</u> should be the object of the doctor. Anyone can find disease." -A.T. Still, M.D., D.O.

 Osteopathic philosophy and approach to patient care is congruent with integrative principles.





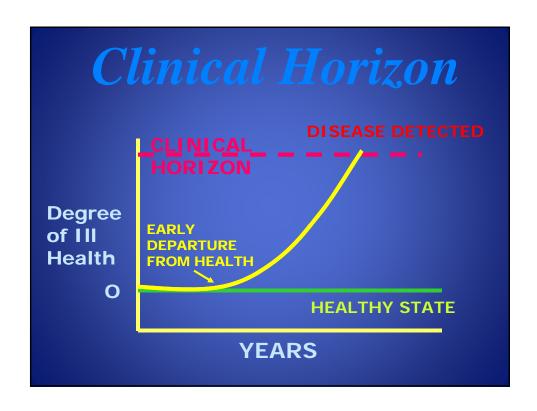
Why "Integrate"?

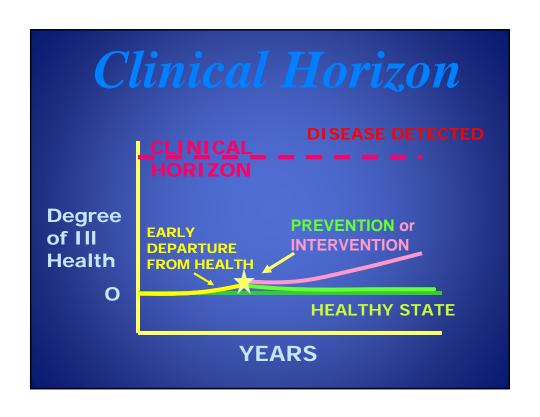
- 2002 data by the CDC showed that 62% of U.S. adults used "complementary" or "alternative" medicine (CAM) within 12 months of being interviewed.
- In 2007, the survey included children (11.8%) using CAM.
- Integrative methods encourage more time and effort on disease *prevention*.

Integrative Medicine, David Rakel. 3rd Edition

Integrative Focus:

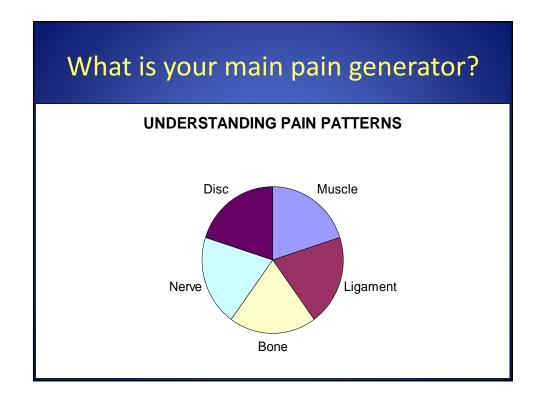
- Setting weight-loss goals
- Improving diet & nutrition
- Physical activity goals
- Barriers to change
- How to maintain beneficial lifestyle changes
- A variety of treatment modalities to manage musculoskeletal ailments (OMT, medical acupuncture, regenerative biomedicine, etc)

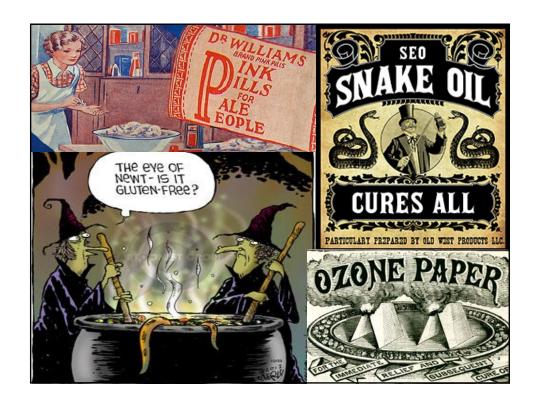




Integrative Modalities:

- OPTIONS:
 - OMM / OMT
 - Acupuncture
 - Yoga, Chi-Gung, Tai Chi, and other movement therapies
 - Injection therapies
 - Others
- Proper Diet, nutrition, and lifestyle
 - AVOID Fast food / Processed foods / GMOs
- Mind-body-spirit awareness
- (Prayer, meditation)
- Incorporation with "traditional" therapies





An analysis of 725 million Are prescriptions justified? prescriptions revealed 15 percent off-label with little that 21 percent were for or no scientific support treatments lacking 21 percent off-label approval from the U.S. **Food and Drug** 79 percent Administration. The FDA approved majority of those 6 percent off-label without FDA review had with strong scientific support little or no other independent scientific Database of 725 million drug prescriptions justification.



Doveryai, no Proveryai

"TRUST, BUT
VERIFY!!!!!"

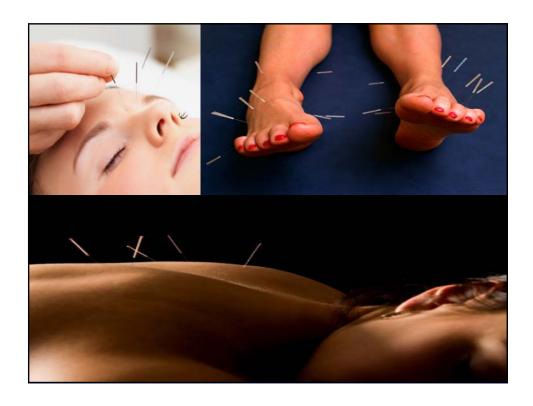




Acupuncture

- Latin: acus (needle) and punctura (puncture)
- A treatment that employs the induction of needles into specific tracks called, "meridians" to encourage or improve energy flow (Qi), to aid in health and healing.
- Earliest text source: Huang Di Nei Jing (Yellow Emperor's Inner Classic), compiled during the first century B.C.

Acupuncture Energetics, A Clinical Approach for Physicians. Joseph M. Helms

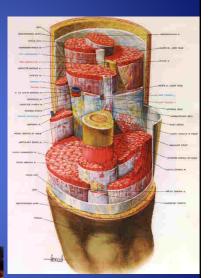


Fascia

- Fascia & peri-neural sheaths are rich in an electrical semiconductive matrix
- Fascia acts as a highway for transmission of Qi
- Most acupuncture points are found along muscle cleavages



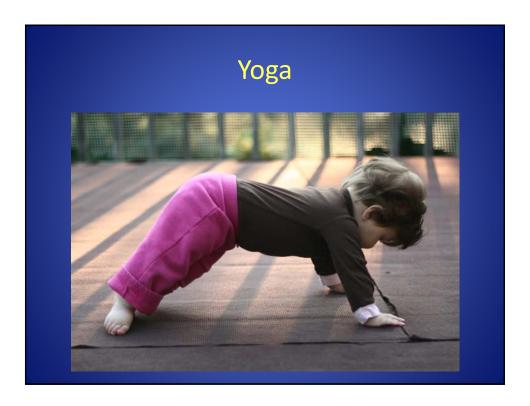




Movement Therapies: Tia Chi, Chi-Gung (Qi Gong), etc.

 "A growing body of carefully conducted research is building a compelling case for tai chi as an adjunct to standard medical treatment for the prevention and rehabilitation of many conditions commonly associated with age,"

-Peter M. Wayne, assistant professor of medicine at Harvard Medical School. Director of the Tai Chi and Mind-Body Research Program at Harvard Medical School.



Yoga Benefits

- Weight loss
- Decrease stress and anxiety
- Strengthening, conditioning, increased flexibility
- Lower blood pressure and cholesterol
- Improve posture
- Mental clarity
- Many others...

Yoga and Faith / Spirituality

- Classical yoga originates from Hinduism
- Teaches one to seek "enlightenment" through a series of exercises that unite the body, mind, and spirit.
- Many different branches of yoga (Ex: Bhakti, Hatha, Jnana, Karma, Mantra, Raja, etc)
- If practiced in its traditional form, may not be congruent with some peoples' spiritual beliefs.

http://www.catholic.com/magazine/articles/the-trouble-with-yoga

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NUTRITION ?????

After a two year visit to the United States, Michelangelo's David is returning to Italy . . .





His proud sponsors were:







U.S. Preventive Services Task Force Recommendations to combat obesity:

- Most effective interventions were comprehensive and were of high intensity.
- Behavioral interventions included multiple behavioral management activities, (group sessions, individual sessions, setting weight-loss goals).
- Improving diet & nutrition, physical activity, addressing barriers to change, active use of selfmonitoring, & strategizing how to maintain healthy lifestyle changes.

HHS and USDA New Dietary Guidelines to Prevent Chronic Diseases

- A variety of vegetables, including dark green, red and orange, legumes (beans and peas),
- Fruits, especially whole fruits
- Grains, at least half of which are whole grains
- Fat-free or low-fat dairy
- A variety of protein foods, including seafood, lean meats and poultry, eggs, legumes, etc.
- Oils, (soybean, sunflower, olives, etc)

http://www.hhs.gov/about/news/2016/01/07/hhs-and-usda-release-new-dietary-guidelines-encourage-healthy-eating-patterns-prevent-chronic.html

Specific recommendations fit into five guidelines in the new edition:

- 1. Follow a healthy eating pattern across the lifespan.
- 2. Focus on variety, <u>nutrient-dense foods</u>, and amount.
- 3. Limit calories from added sugars and saturated fats, and reduce sodium intake.
- 4. Shift to healthier food and beverage choices.
- 5. Support healthy eating patterns for all.

nttp://www.hhs.gov/about/news/2016/01/07/hhs-and-usda-release-new-dietary-guidelines-encourage-healthy-eating-patterns-prevent-chronic.html

HHS and USDA New Dietary Guidelines to Prevent Chronic Diseases:

- Consume less than 10 percent of calories per day from added sugars (sugars and syrups that are added when they are processed or prepared.)
- Less than 10 percent of calories per day from saturated fats. (butter, whole milk, meats that are not labeled as lean, and tropical oils such as coconut and palm oil).
- Less than 2,300 mg per day of sodium.

Should you supplement????

- Fruits and vegetables grown decades ago were far richer in nutrients than what we get today.
- Reasons:
 - modern agricultural methods have stripped nutrients from the soil.
 - "Each successive generation of fast-growing, pestresistant [food] is truly less good for you than the one before."
 - GMO's

http://www.scientificamerican.com/article/soil-depletion-and-nutrition-loss/

Landmark Study:

- University of Texas Department of Chemistry and Biochemistry in 2004:
- Studied U.S. Department of Agriculture nutritional data from both 1950 and 1999 for 43 different fruits and vegetables.
- Finding: "reliable declines" in the amount of calcium, phosphorus, iron, B complex, vitamin C, and other nutrients over the past half century.
- Reason: the preponderance of agricultural practices designed to improve traits (size, growth rate, pest resistance) **other than nutrition**.

http://www.scientificamerican.com/article/soil-depletion-and-nutrition-loss/

GMO's:

- Genetically modified crops the DNA is modified to introduce a new trait which does not occur naturally in the species.
- Ex: resistance to bugs, disease, or chemical treatments (e.g. resistance to a herbicide).
- They have the potential to contaminate forever.
- They increase herbicide use. Ex: Between 1996 and 2008, US farmers sprayed an extra 383 million pounds of herbicide on GMOs = <u>higher residues of toxic herbicides</u>. (linked with sterility, hormone disruption, birth defects, and cancer.)

http://www.responsibletechnology.org/10-Reasons-to-Avoid-GMOs

A long-term toxicology study on pigs fed a combined genetically modified (GM) soy and GM corn diet:

- Study showed a diet of GM feed had a significant effect on inflammation.
- This finding was statistically significant (p=0.004). GM-fed male pigs showed severe stomach inflammation at a rate of 4.0 times that of the non GM fed male pigs (p=0.041); and female pigs showed a rate of severe stomach inflammation that was 2.2 times the rate of the non-GM fed female pigs (p=0.034).

http://www.organic-systems.org/journal/81/8106.pdf



Figure 1. Different levels of stomach inflammation found (clockwise from top left): nil (from a non-GM-fed pig, number B41), mild (from a non-GM-fed pig, number B15), moderate (from a GM-fed pig, number C34) and severe (from a GM-fed pig, number D22).

Study Conclusions:

- Pigs fed a GMO diet exhibited heavier uteri and a higher rate of severe stomach inflammation than pigs fed a comparable non-GMO diet.
- "Given the widespread use of GMO feed for livestock as well as in humans, this is a cause for concern. The results indicate that it would be prudent for GM crops to undergo long-term animal feeding studies preferably before commercial planting, particularly for toxicological and reproductive effects."

http://www.organic-systems.org/journal/81/8106.pd

The Debate is Over????

 Report of an "Expert Panel" on the reanalysis by Séralini et al. (2007) of a 90-day study conducted by Monsanto in support of the safety of a genetically modified corn variety (MON 863)

> Food and Chemical Foxicology Volume 45, Issue 11, November 2007, Pages 2073–2085



The Debate is Over???

As Dr. Steven Novella notes in Neurologica:

"[T]his data is observational, meaning the authors are looking at data collected out there in the world and not part of any controlled prospective experiment."

http://www.forbes.com/sites/jonentine/2014/09/17/the-debate-about-gmo-safety-is-over-thanks-to-a new-trillion-meal-study/

Making Sense:

- "The vast majority of the research on genetically modified (GM) crops suggests that they are safe to eat.
- Yet not all criticisms of GM are so easily rejected, and pro-GM scientists are often dismissive and even unscientific in their rejection of the counterevidence.
- A careful analysis of the risks and benefits argues for expanded deployment and safety testing of GM crops."

http://www.scientificamerican.com/article/the-truth-about-genetically-modified-food/





- King James noted the potential that tobacco caused health problems, 1604
- 1st report in the medical literature suggesting link between tobacco and lung cancer published in 1912.

Formal studies showing a link published in the







https://en.wikisource.org/wiki/A_Counterblaste_to_Tobacco http://boards.straightdope.com/sdmb/showthread.php?t=619679

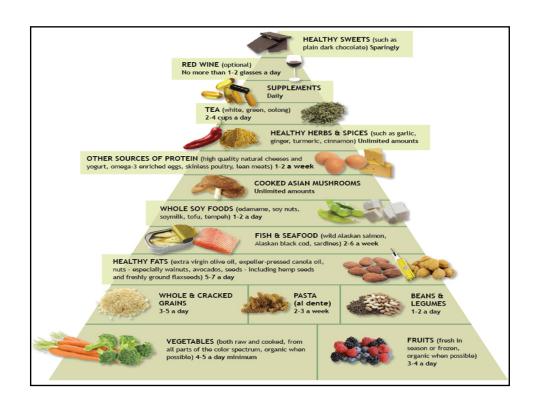
On January 11, 1964, the Surgeon General of the U.S. Public Health Service, released the first report of the Surgeon General's Advisory Committee on Smoking and Health.

(That's over 3 centuries from King James!)

Partial / Total GMO Bans:

- Italy
- Austria
- France
- Germany
- Luxembourg
- Portugal
- Greece
- Spain
- Egypt
- Algeria

- Switzerland
- Norway
- Australia
- New Zealand
- Thailand
- Philippines
- Saudi Arabia
- Brazil
- Paraguay



COULD GARLIC REDUCE CORONARY PLAQUE?

- Researchers followed 55 pts 40-75 yrs with metabolic syndrome.
- 27 pts were Rx'd a daily dose of 2400 mg of Aged garlic extract (AGE), and a control group of 28 patients took placebo.
- After 1 year, the AGE group had a reduced percentage of low-attenuation plaque compared to the placebo group.
- "Further studies are needed to evaluate whether AGE has the ability to stabilize vulnerable plaque and decrease adverse cardiovascular events."

http://www.consultant360.com/exclusives/could-garlic-reduce-coronary-plaque

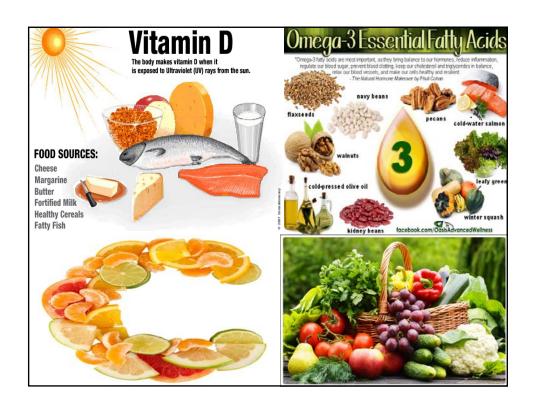


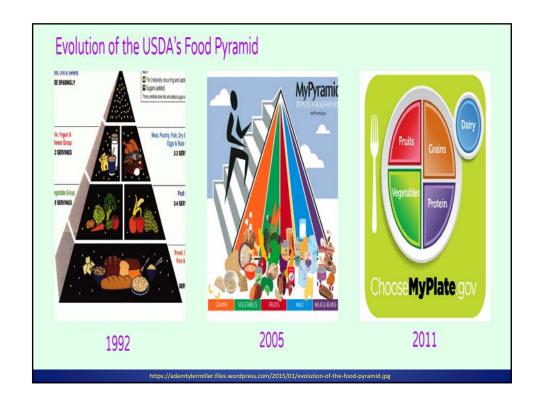
HONEY



- Research Study: "Effects of Honey and Its Mechanisms of Action on the Development and Progression of Cancer." Molecules. 2014
- Honey has been shown to inhibit or suppress three stages of carcinogenesis at initiation, proliferation, and progression.
- Acts by diverse mechanisms: cell cycle arrest, induction of apoptosis, modulation of oxidative stress, decreased inflammation, inhibition of angiogenesis in cancer cells.

Erejuwa OO, Sulaiman SA, Wahab MSA. Effects of Honey and its Mechanisms of Action on the Development and Progression of Cancer. Molecules. 2014; 19(2):2497-2522





Take Home Points:

- A "whole person" approach is paramount in assessment and treatment from an integrative, osteopathic paradigm.
- A multitude of non-prescription, yet scientifically based treatment modalities exist to help patients on their road to better health.
- Advocate for non-processed, non-GMO food choices and follow HHS and USDA Guidelines to Prevent Chronic Diseases

