

The Global Vision: A World to Care For

AIHM 2016

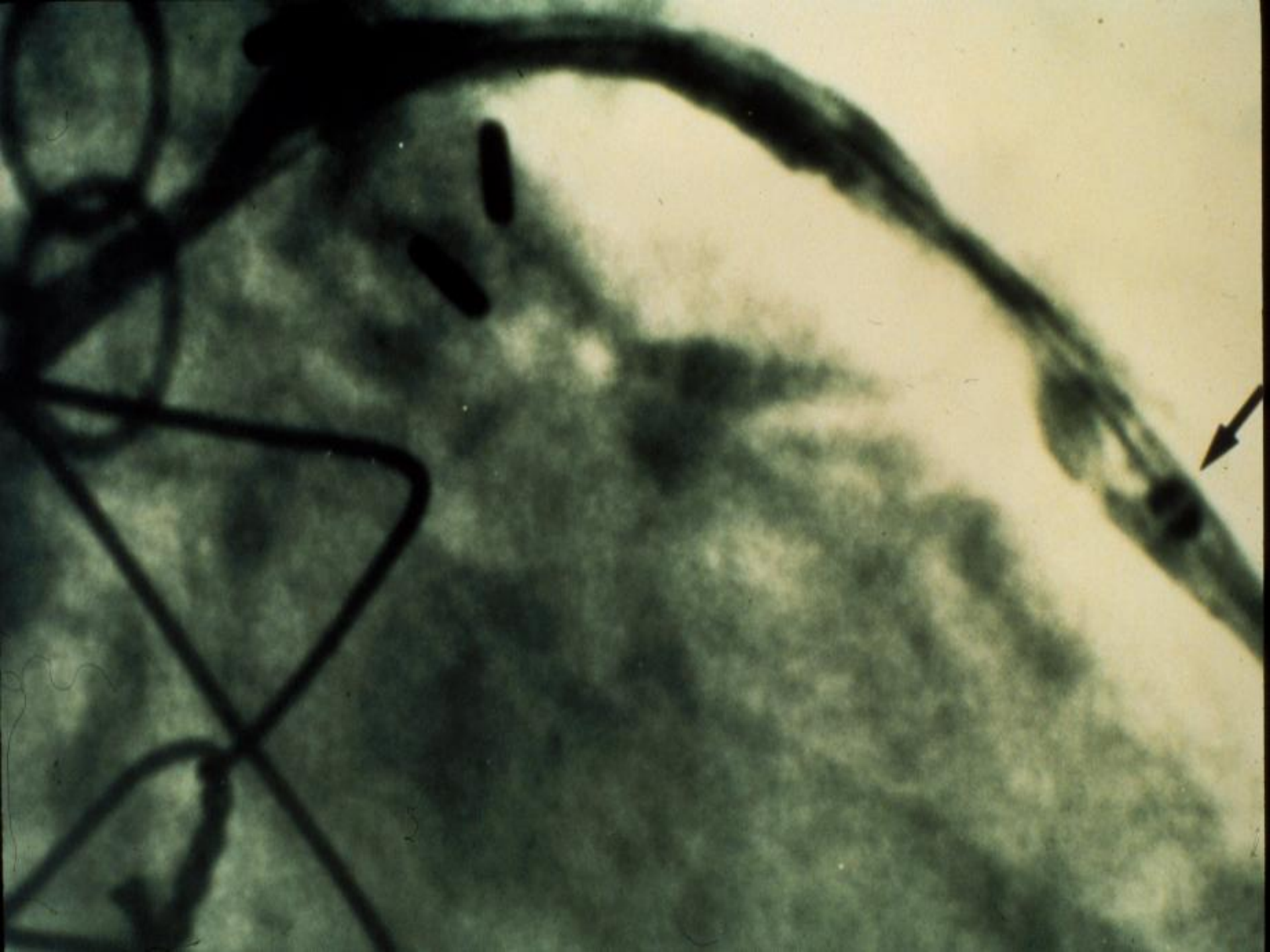
Mimi Guarneri MD FACC

Pres. Academy Integrative Health and Medicine

www.aihm.org

© Dr. Mimi Guarneri

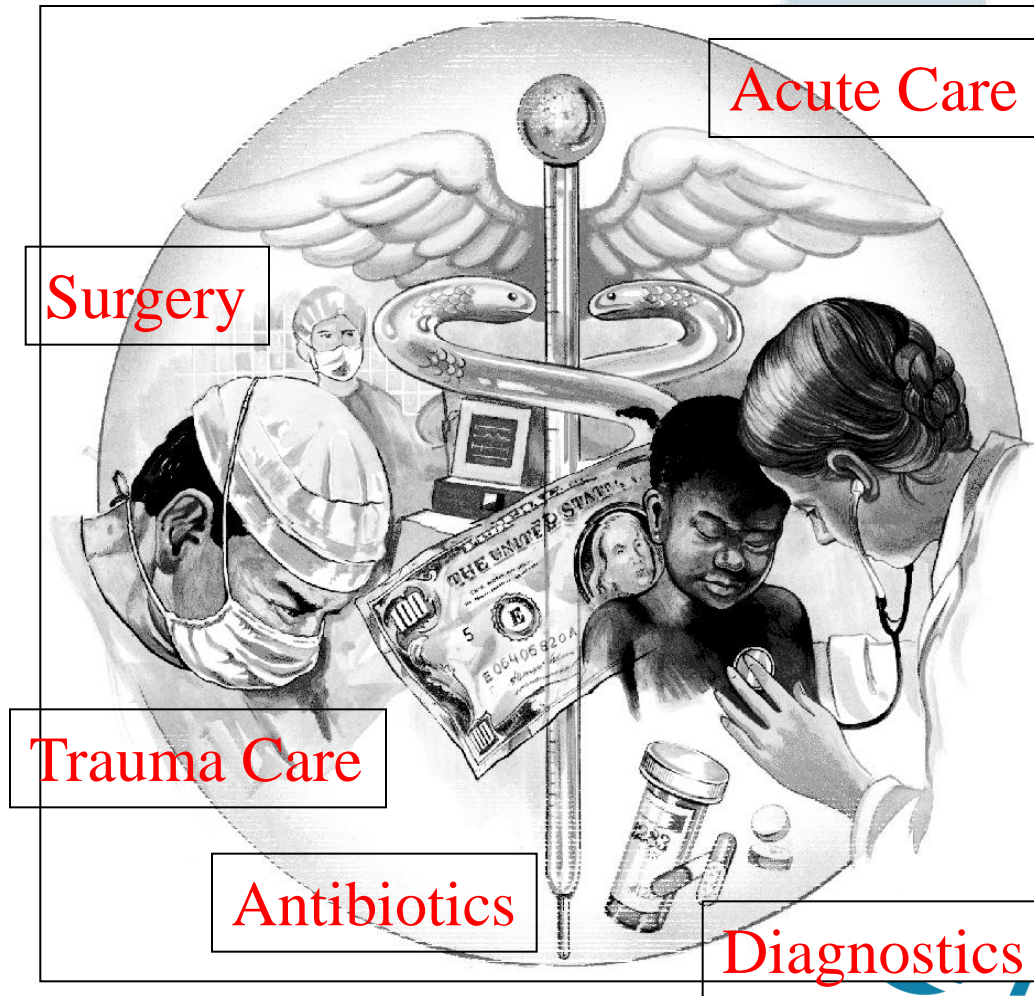








STRENGTH OF CONVENTIONAL WESTERN HEALTHCARE



AIHM

Cardiovascular diseases are the leading causes of death in the world



Around 3 in 10 deaths globally are caused by cardiovascular diseases – At least 80% of premature deaths from cardiovascular diseases could be prevented through a healthy diet, regular physical activity and avoiding the use of tobacco. WHO 2016

A photograph of a water treatment plant featuring several large, cylindrical concrete silos. The silos are arranged in a row, with various pipes, ladders, and metal structures attached to them. The sky is clear and blue. In the foreground, there is a white electrical cabinet and some yellow safety railings. Overlaid on the image are five purple rectangular boxes containing white text for medical specialties.

CARDIOLOGY

RHEUMATOLOGY

PULMONOLOGY

NEUROLOGY

NEPHROLOGY

Each individual diagnosis becomes a distinct entity unto itself.

NSAID

Dicyclomine

Osteoarthritis

Irritable Bowel Syndrome

ACE inhibitor

Hypertension

Migraines

Triptan

Depression

Hypercholesterolemia

SSRI

Gastroesophageal Reflux Disease

Statin

H2 blocker

AIHM

Academy of Integrative Health & Medicine



Prilosec
NOT FOR INDIVIDUAL SALE
14 TABLETS
OTC

Vamyst
Fluticasone Propionate
Nasal Spray
22.5 mg per spray

FLUTICASONE PROPIONATE
Nasal Spray
50 mcg

FLUTICASONE PROPIONATE
Nasal Spray
80 mcg

Atralin
(tretinoin) gel 0.05%

ZIANA
Combination of Zolpidem CR and Clonidine ER
12.5 mg / 0.1 mg

Atralin
(tretinoin) gel 0.05%

Veramyst
Fluticasone Propionate
Nasal Spray
22.5 mg per spray

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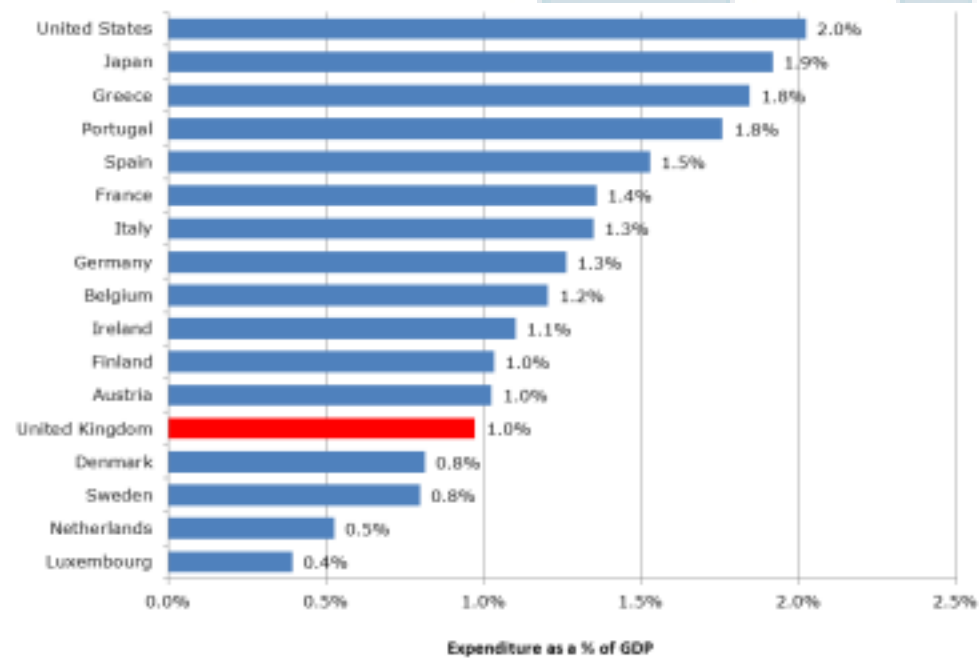
Veramyst
Fluticasone Propionate
Nasal Spray
22.5 mg per spray

Veramyst
Fluticasone Propionate
Nasal Spray
22.5 mg per spray

Poly-pills for poly-ills?



Pharmaceutical Industry and GDP

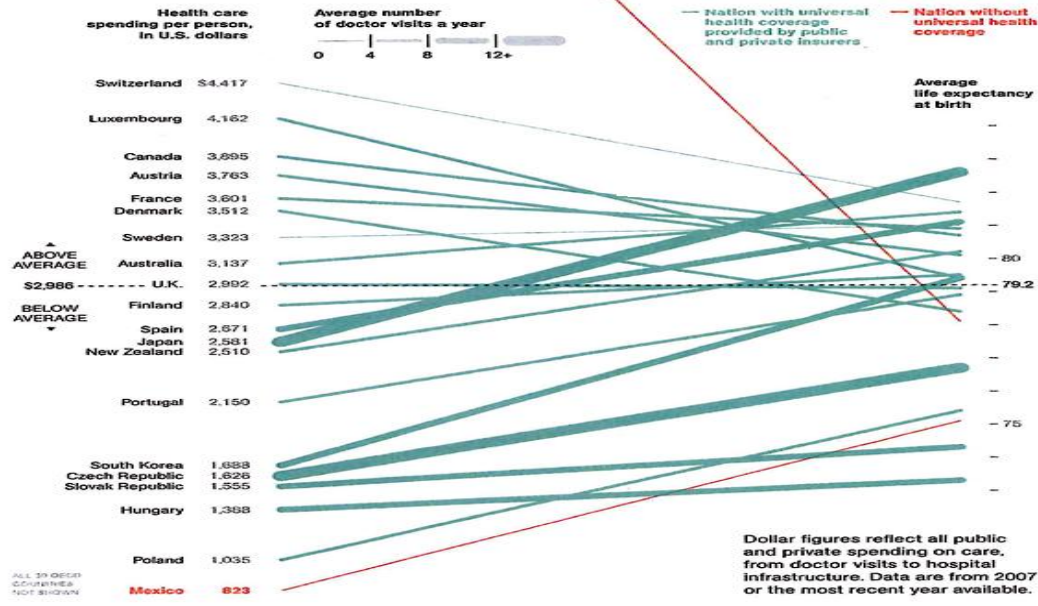


Sources: IMS Health World Review Analyst 2014.
World Bank Data. Accessed November 2014.

United States \$7,290

HEALTH

The Cost of Care The United States spends more on medical care per person than any country, yet life expectancy is shorter than in most other developed nations and many developing ones. Lack of health insurance is a factor in life span and contributes to an estimated 45,000 deaths a year. Why the high cost? The U.S. has a fee-for-service system—paying medical providers piecemeal for appointments, surgery, and the like. That can lead to unneeded treatment that doesn't reliably improve a patient's health. Says Gerard Anderson, a professor at Johns Hopkins Bloomberg School of Public Health who studies health insurance worldwide, "More care does not necessarily mean better care." —Michelle Andrews



Dollar figures reflect all public and private spending on care, from doctor visits to hospital infrastructure. Data are from 2007 or the most recent year available.

GRAPHIC: OLIVER DEBETI, NO STAFF SOURCE: "OECD HEALTH DATA 2009," ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT



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Dr. Batty's



For Your Health

ASTHMA CIGARETTES

SINCE 1882

*For the temporary relief of
paroxysms of asthma*

EFFECTIVELY TREATS:

ASTHMA, HAY FEVER, FOUL BREATH
ALL DISEASES OF THE THROAT,
HEAD COLDS, CANKER SOURS
BRONCHIAL IRRITATIONS

NOT RECOMMENDED FOR CHILDREN UNDER 6.



For a better start in life
start **COLA** earlier!



- Promotes Active Lifestyle!
- Boosts Personality!
- Gives body essential sugars!

How soon is too soon?

Not soon enough. Laboratory tests over the last few years have proven that babies who start drinking soda during that early formative period have a much higher chance of gaining acceptance and "fitting in" during those awkward pre-teen and teen years. So, do yourself a favor. Do your child a favor. Start them on a strict regimen of sodas and other sugary carbonated beverages right now, for a lifetime of guaranteed happiness.

The Soda Pop Board of America
1515 W. Hart Ave. - Chicago - ILL.



Guard Against Throat-Scratch

enjoy the smooth smoking of fine tobaccos

... smoke **PALL MALL**
the cigarette whose mildness
you can measure



Study This Puff Chart:

PUFF BY PUFF... YOU'RE ALWAYS AHEAD WITH PALL MALL



1
The further your cigarette filters the smoke through fine tobaccos, the milder that smoke becomes. At the first puff, PALL MALL's smoke is filtered further than that of any other leading cigarette.



2
Again after 5 puffs of each cigarette your own eyes can measure the extra length for extra mildness as the smoke of PALL MALL's traditionally fine tobacco is filtered further. Moreover, after 10 puffs of each cigarette...



3
... or 17 puffs, Pall Mall's greater length of fine tobaccos still travels the smoke further—filters the smoke and makes it mild. Thus Pall Mall gives you a smoothness, mildness and satisfaction no other cigarette offers you.

Wherever you go today, you will see more and more people smoking PALL MALL—the cigarette whose mildness you can measure.

Outstanding
...and they are mild!



P.S. LET A CARTON OF PALL MALLS SAY "MERRY CHRISTMAS" FOR YOU

jonwilliamson.com



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Give her a Hoover and you give her the best

Christmas morning (and forever after) she'll be happier with a Hoover



P. S. to husbands:

She never absent her home, you know, so if you really care about her ... wouldn't it be a good idea to consider a Hoover for Christmas? Prices start at \$66.50. Model 25 (shown here) \$90.50. Low down payment, easy terms. See your Hoover dealer now.

THE HOOVER COMPANY
North Canton, Ohio



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**SUSTAINABLE
DEVELOPMENT
GOALS**

Sustainable Development Goals

End Poverty

Zero Hunger

Good Health and Well-Being

Quality Education

Gender Equality

Clean Water Sanitation

Affordable clean energy

Decent work

Industry Innovation

Reduced inequalities

Sustainable cities

Climate action

Life below water

Life on land

Peace Justice

Partnership



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6.6 Million Children Under the age of 5 die each year



Almost all of these children's lives could be saved if they had access to simple and **affordable interventions such as breastfeeding, inexpensive vaccines and medication, clean water and sanitation.**



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Life Expectancy Disparities



A baby born in 2012
could expect to live to
62 years in low-income
countries to 79 years in
high-income countries

WHO2016

Every day, about 800 women die due to complications of pregnancy and childbirth



Maternal mortality is a health indicator that shows very wide gaps between rich and poor, both between countries and within them
WHO 2016

Mental health disorders such as depression are among the 20 leading causes of disability worldwide

Depression affects around 300 million people worldwide and this number is projected to increase. Fewer than half of those people affected have access to adequate treatment and health care.



WHO Traditional Medicine Strategy



The strategy aims to support Member States in developing proactive policies and implementing action plans that will strengthen the role traditional medicine plays in keeping populations healthy.



The doctor of the future will give no medicine, but will interest her or his patients in the care of the human frame, in a proper diet, and in the cause and prevention of disease.

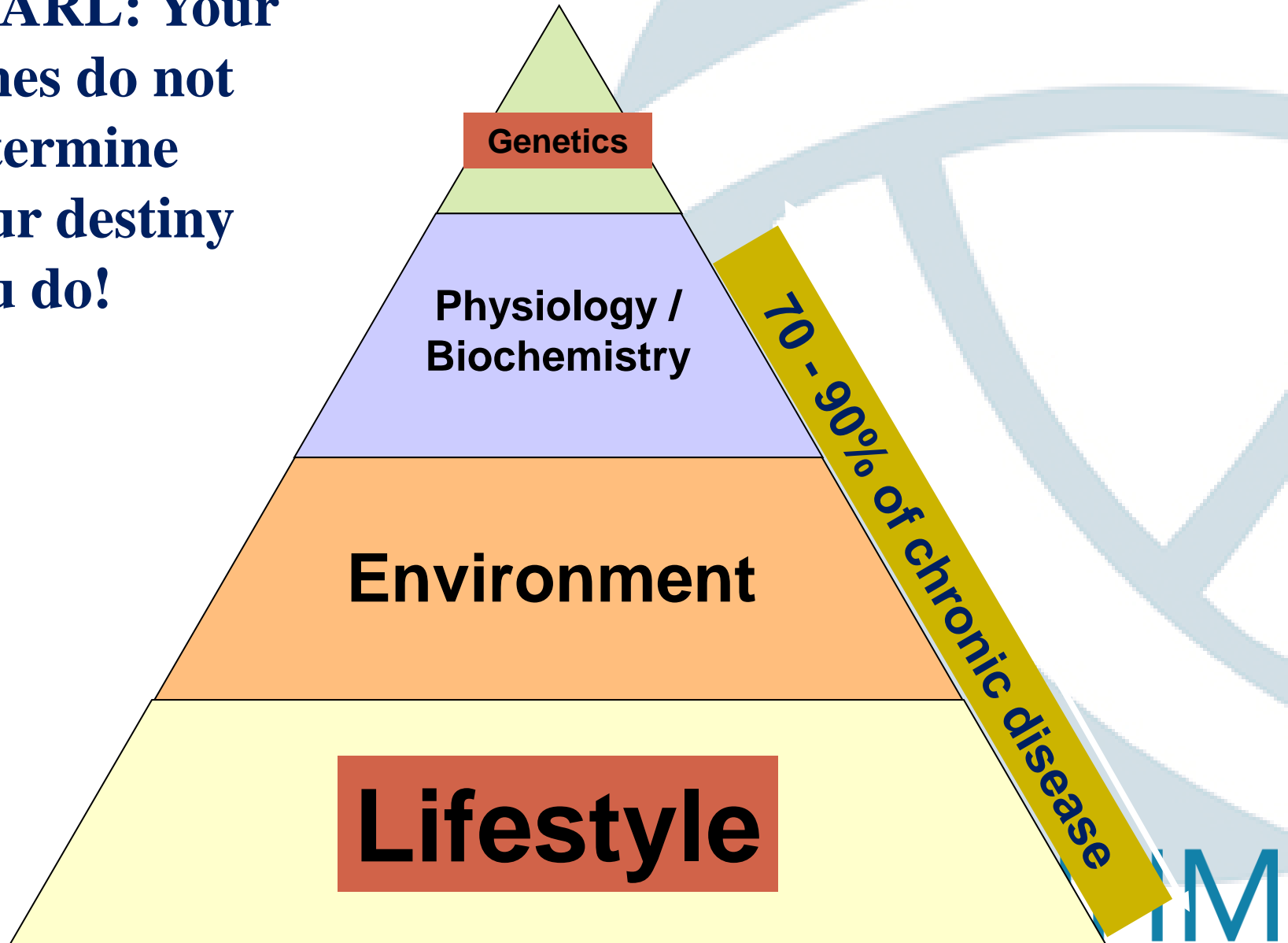
Thomas Edison



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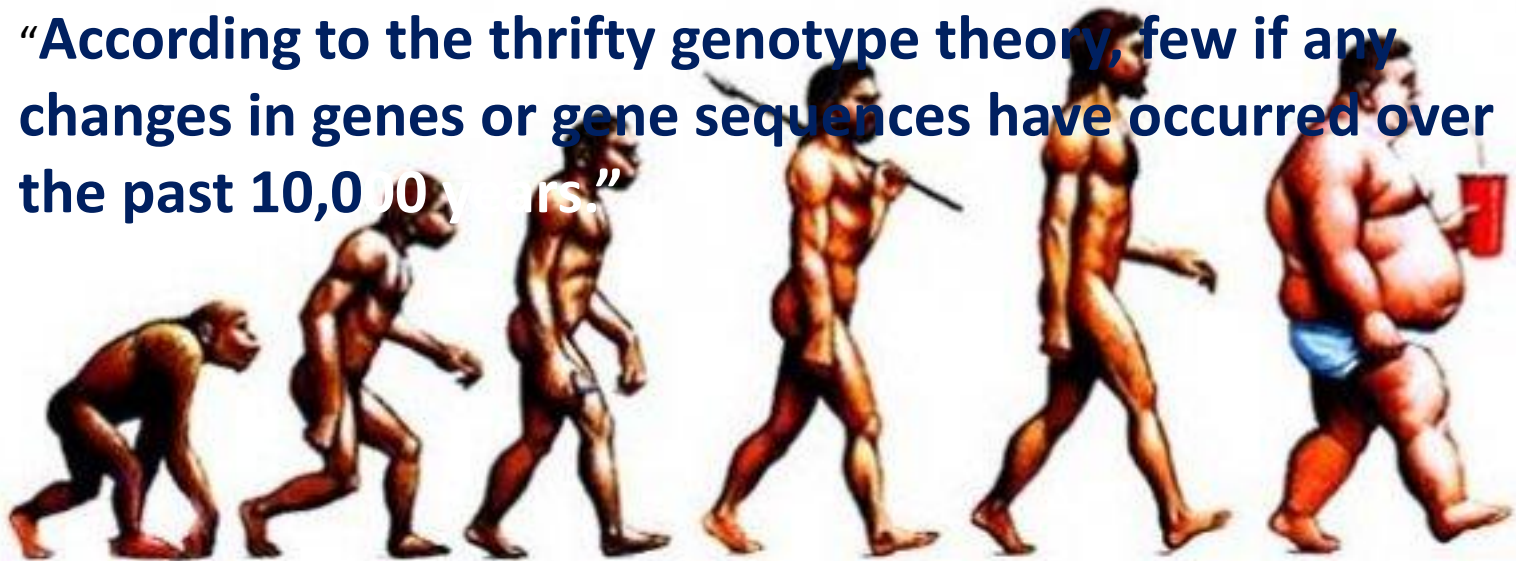
The best way to predict the future is to create it!

PEARL: Your genes do not determine your destiny you do!



Our genes haven't changed, but our environment has...

“According to the thrifty genotype theory, few if any changes in genes or gene sequences have occurred over the past 10,000 years.”

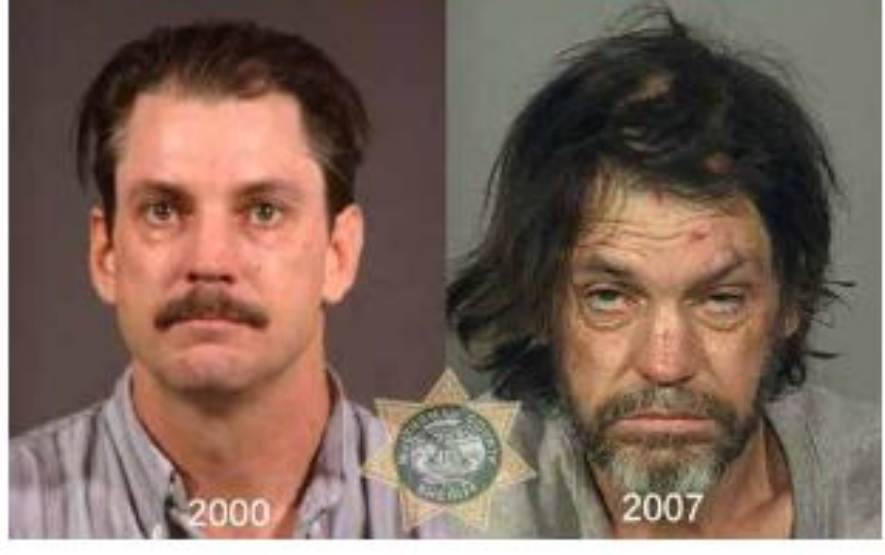
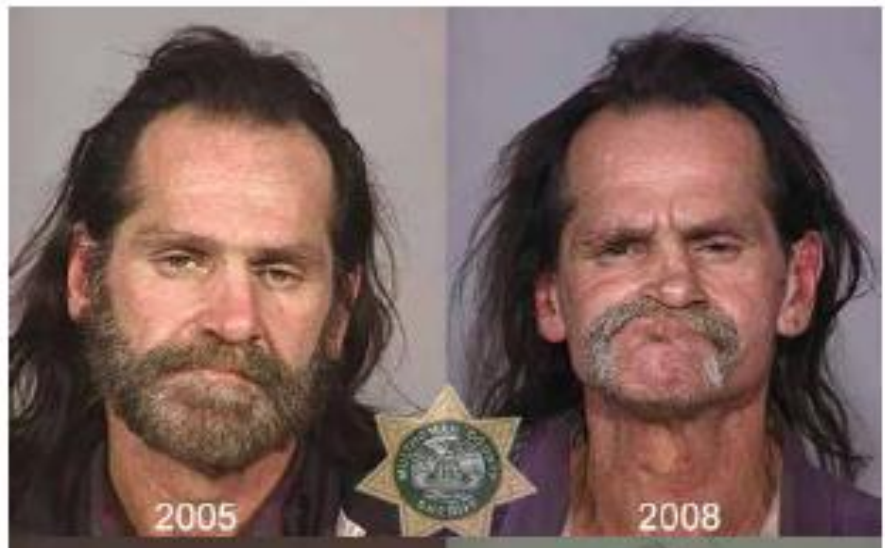


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Sullivan VK. *J Amer Diet Assoc* May 2006;106(5):668-671.

What Epigenetics Means

The Gene-Environment Connection



FTO Obesity Gene Trumped by Physical Activity



Rampersaud E, et al. Physical activity and the association of common FTO gene variants with body mass index and obesity. Arch Intern Med. 2008;168(16):1791-7



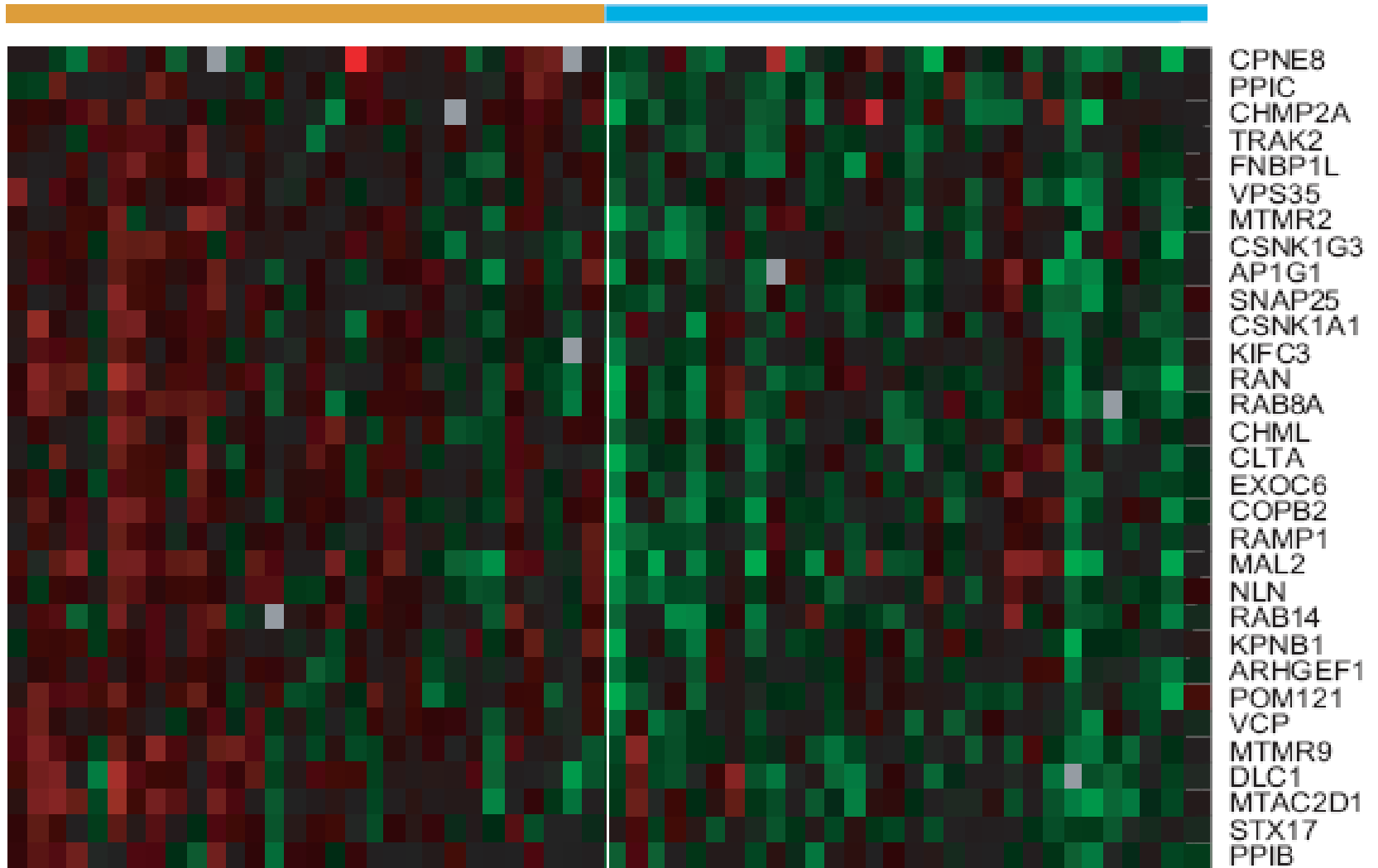
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“Turning Off” Cancer-Causing Genes by Intensive Lifestyle Changes

(red = turned on; green = turned off)

Pre-intervention

Post-intervention



Understanding The Origin Of Chronic Disease



Environment

Toxic Chemical Exposure

Radiation

Drugs, Alcohol

Smoking

Poor Diet

Stress, Negative Emotions

Trauma

Lack of Exercise

Body

Decreased Energy Production

Oxidative Stress

Expression of Genomic Inflammation and Preclinical Symptoms

Inflammation

Chronic Disease

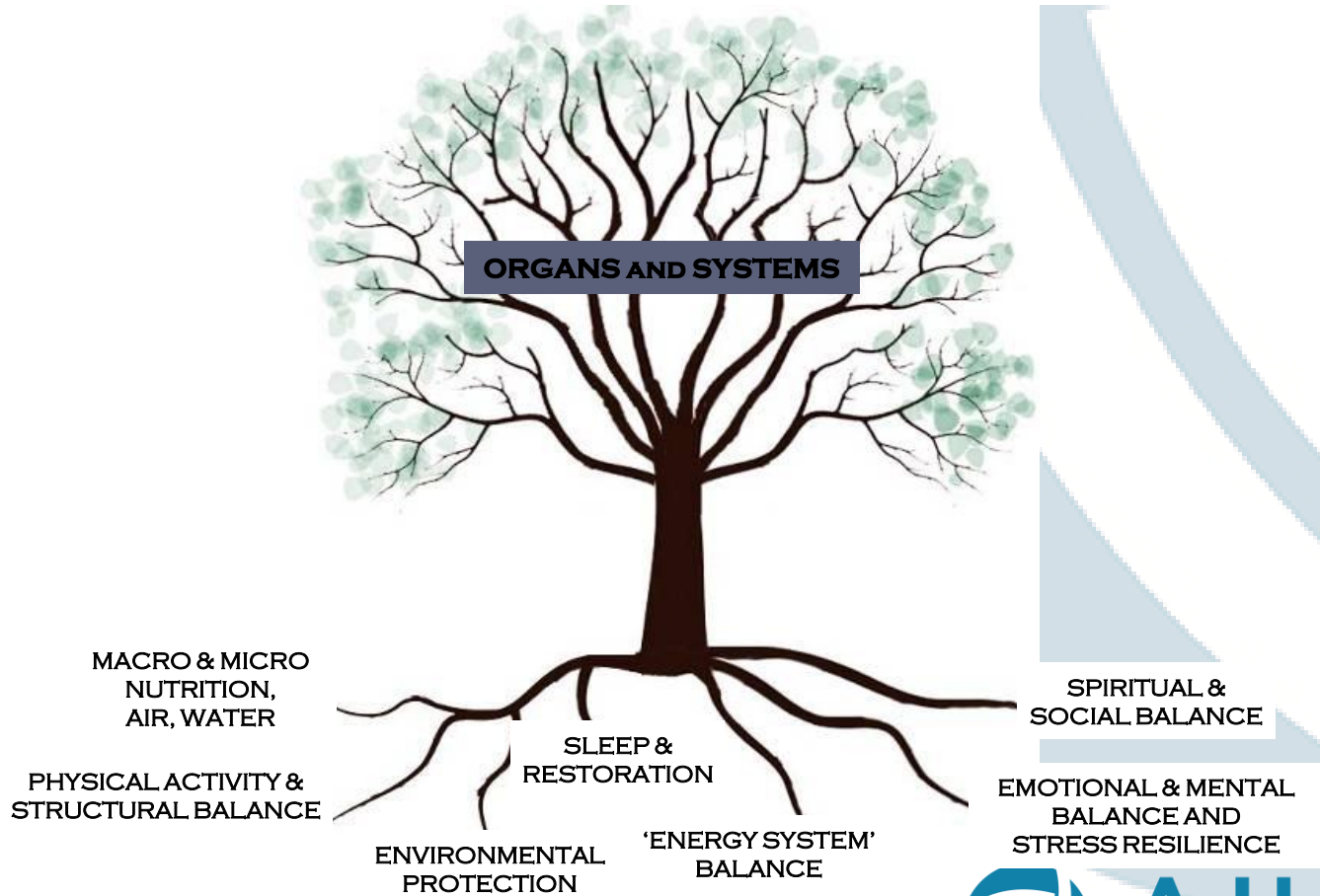
Structural Stresses

Kirkland: Nature's Not a Destiny

- Lower levels of behavioral conduct disorders
- Less anxiety
- Less depression
- A higher sense of self-worth
- Recovered more quickly from stressful life events



Pearl: Don't Just Treat Disease Create Health



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Lifestyle is an Intervention





When Your Biography Becomes Your

Let Food Be Your Medicine



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Mediterranean Diet

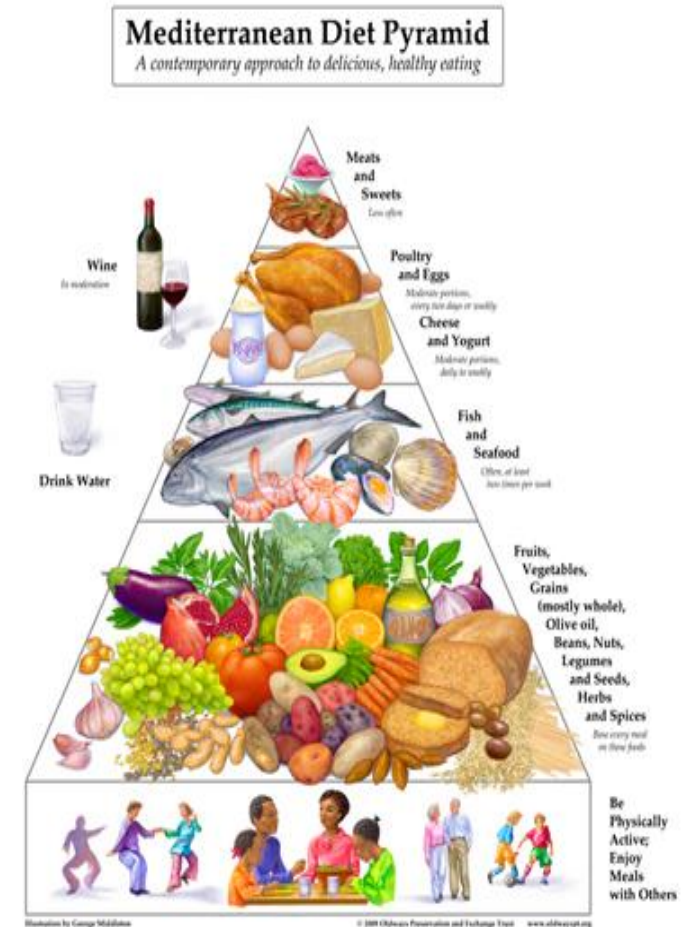
Lyon Diet Heart Study

4-year Prospective RCT (secondary prevention)

-Patients with CVD:
randomized to Mediterranean Diet (MD) or control

-Stopped early after 27 months r/t
-significantly ↓ mortality in Mediterranean diet group,
-70% ↓ in death & recurrent events
-Total fat intake was the same, 31%, in both group

Additional f/u @ 47 months :
-persistent benefits & continued adherence to MD



Optimal Diets for Prevention of Coronary Heart Disease

Frank B. Hu, MD, PhD

Walter C. Willett, MD, DrPH

THE RELATIONSHIP BETWEEN DIET and coronary heart disease (CHD) has been extensively studied since 1908, when Ignatowski reported atherosclerosis in rabbits with high cholesterol and saturated fat diets.¹ In the controlled feeding studies that followed, saturated fat diets increased cholesterol concentrations in rabbits.² Meanwhile, studies in humans found that increased cholesterol levels predicted risk of CHD in these populations. These findings led to the classic diet-heart hypothesis, which postulated that saturated fat was the primary cause of atherosclerosis in humans.³ The diet-heart hypothesis has further support from epidemiologic studies relating saturated fat intake to rates of CHD in both developed and developing countries⁴ and from interventional trials in which low-fat diets reduced CHD risk.⁵

Until recently, most epidemiologic and clinical investigations of diet and CHD have been dominated by the diet-heart hypothesis. However, the original hypothesis was overly simplistic because the effects of diet on CHD can be mediated through multiple biological pathways other than serum total cholesterol or low-density lipoprotein cholesterol (LDL-C) (FIGURE 1).⁶ The existence of these multiple pathways heightens the need to study clinical outcomes because the use of a single in-

Context Coronary heart disease (CHD) remains the leading cause of mortality in industrialized countries and is rapidly becoming a primary cause of death worldwide. Thus, identification of the dietary changes that most effectively prevent CHD is critical.

Objective To review metabolic, epidemiologic, and clinical trial evidence regarding

“Substantial evidence indicates that diets using non hydrogenated fats as the predominant dietary fat, whole grains as the main form of carbohydrates, an abundance of fruit and vegetables, and adequate omega-3 fatty acids can offer significant protection against CHD”.

J Am Med Assoc 2002; 298: 2569-78.

JAMA. 2002;288:2569-2578

www.jama.com

termediate end point as a surrogate of CHD risk could be misleading. In the past 2 decades, understanding of the nutrients and foods likely to promote cardiac health has grown substantially owing to studies of the molecular mechanisms of atherosclerosis and the metabolic effects of various nutrients and foods, large and carefully conducted prospective cohort investigations, and dietary intervention trials. Although the search for the optimal diet

for prevention of CHD is far from over, more specific and firmer evidence on diet and CHD is now available.

Author Affiliations: Departments of Nutrition and Epidemiology, Harvard School of Public Health, and Channing Laboratory, Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, Boston, Mass.

Corresponding Author and Reprints: Frank B. Hu, MD, PhD, Department of Nutrition, Harvard School of Public Health, 665 Huntington Ave, Boston, MA 02115 (e-mail: frank.hu@channing.harvard.edu).

Clinical Cardiology Section Editor: Michael S. Lauer, MD, Contributing Editor.

Effect of a Mediterranean-Style Diet on Endothelial Dysfunction and Markers of Vascular Inflammation in the Metabolic Syndrome

A Randomized Trial

Katherine Esposito, MD

Context: The metabolic syndrome has been identified as a target for dietary therapy

“Compared with patients consuming the control diet, patients consuming the intervention diet had significantly **reduced serum concentrations of hs-CRP, IL-6, IL-7, and IL-18**, as well as **decreased insulin resistance.**”

“A **Mediterranean-style diet** might be effective in **reducing the prevalence of the metabolic syndrome and its associated cardiovascular risk.**”

Moreover, evidence has accumulated indicating that low-grade inflammation is associated with endothelial dysfunction.^{9,10}

Conclusion: A Mediterranean-style diet might be effective in reducing the prevalence of the metabolic syndrome and its associated cardiovascular risk.

JAMA. 2004;292:1440-1446

www.jama.com

See also pp 1433 and 1490.

Author Affiliations are listed at the end of this article. Corresponding Author: Dario Giugliano, MD, PhD, Division of Metabolic Diseases, Department of

Geriatrics and Metabolic Diseases, Policlinico Seconda Università di Napoli, Piazza L. Miraglia, 80091 Naples, Italy (dario.giugliano@unina2.it).

1440 JAMA, September 22/29, 2004—Vol 292, No. 12 (Reprinted)

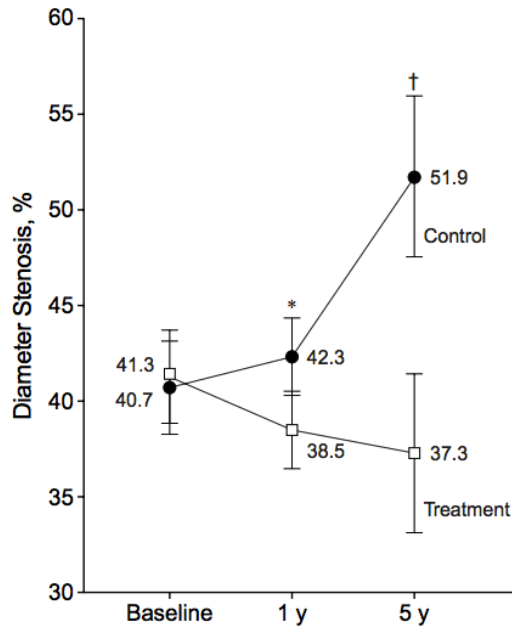
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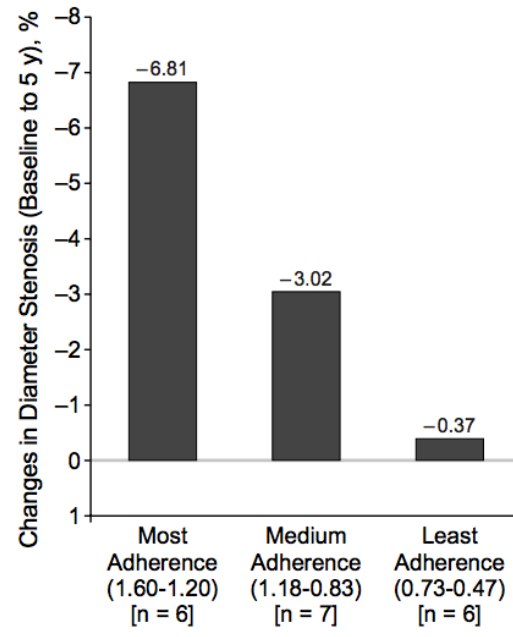
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Lifestyle Heart Trial

Stenosis Reduction

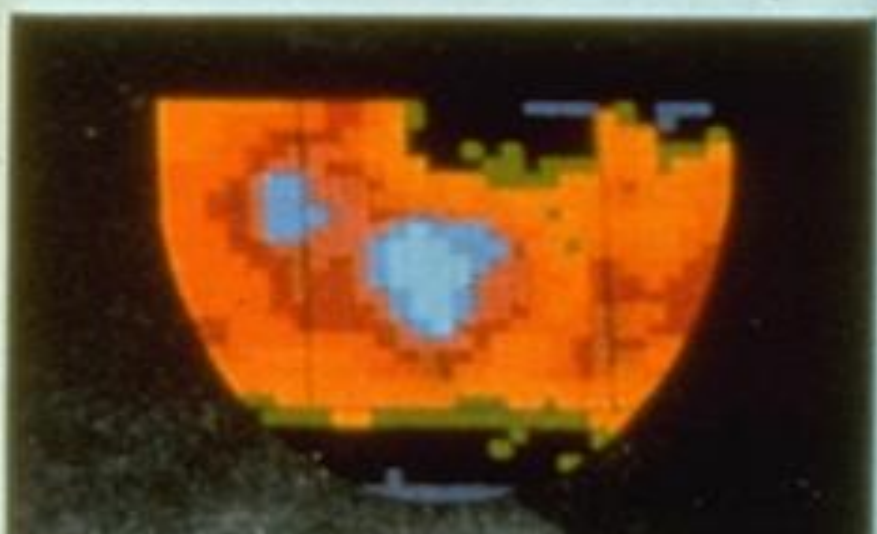


Treatment vs Control



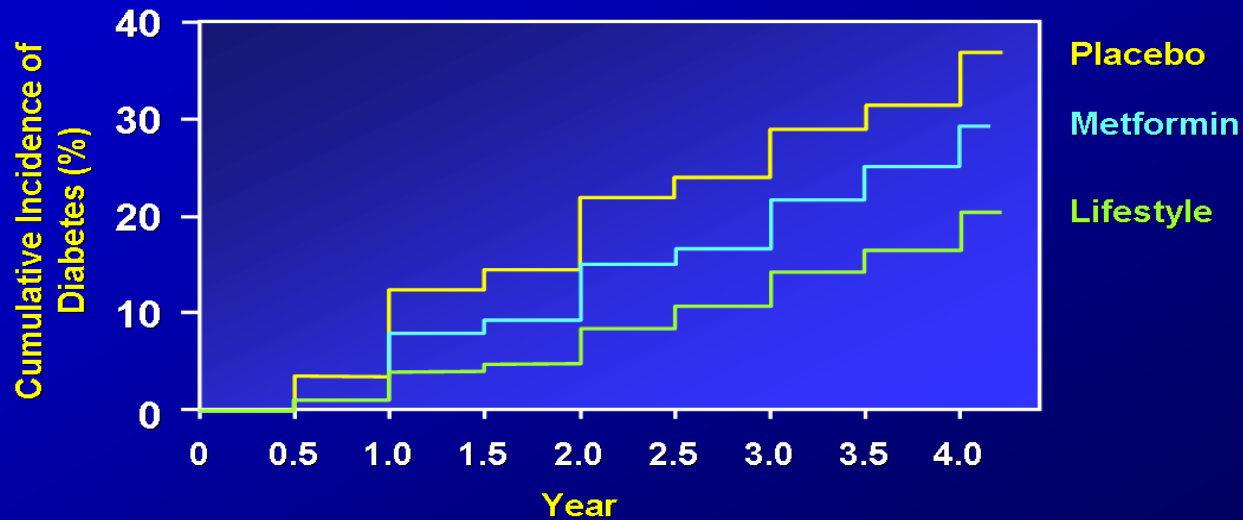
Most Adherence vs Least Adherence

Ornish D, Scherwitz LW, Billings JH, Brown SE, Gould KL, Merritt TA, Sparler S, Armstrong WT, Ports TA, Kirkeeide RL, Hogeboom C, Brand RJ. Intensive lifestyle changes for reversal of coronary heart disease. JAMA. 1998 Dec 16;280(23):2001-7.



Diabetes Prevention Program

Cumulative Incidence of Diabetes According to Study Group



Diabetes Prevention Program Research Group. *N Engl J Med.* 2002;346:393-403.

The HALE Study

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



Knoops KTB et al. *JAMA* 2004;292(12):1433-9.

The HALE Study

“In total, lack of adherence to this low-risk pattern was associated with a population attributable risk of 60% of all deaths, 64% of deaths from coronary heart disease, 61% from cardiovascular diseases, and 60% from cancer.

**Knoops KTB et al.
JAMA 2004;292(12):1433-9.**



PREDIMED: Mediterranean Diet vs. Low-Fat Diet

Three groups:

1. Med. Diet + EVOO (Extra Virgin Olive Oil)
2. Med. Diet + nuts
3. Low-fat diet
4. Among persons at high cardiovascular incidence of major cardiovascular respectively

Table 1. Summary of Dietary Recommendations to Participants in the Mediterranean-Diet Groups and the Control-Diet Group.

Food	Goal
Mediterranean diet	
Recommended	
Olive oil*	≥4 tbsp/day
Tree nuts and peanuts†	≥3 servings/wk
Fresh fruits	≥3 servings/day
Vegetables	≥2 servings/day
Fish (especially fatty fish), seafood	≥3 servings/wk
Legumes	≥3 servings/wk
Sofrito‡	≥2 servings/wk
White meat	Instead of red meat
Wine with meals (optionally, only for habitual drinkers)	≥7 glasses/wk
Discouraged	
Soda drinks	<1 drink/day
Commercial bakery goods, sweets, and pastries§	<3 servings/wk
Spread fats	<1 serving/day
Red and processed meats	<1 serving/day
Low-fat diet (control)	
Recommended	
Low-fat dairy products	≥3 servings/day
Bread, potatoes, pasta, rice	≥3 servings/day
Fresh fruits	≥3 servings/day
Vegetables	≥2 servings/wk
Lean fish and seafood	≥3 servings/wk
Discouraged	
Vegetable oils (including olive oil)	≤2 tbsp/day
Commercial bakery goods, sweets, and pastries§	≤1 serving/wk
Nuts and fried snacks	≤1 serving/wk
Red and processed fatty meats	≤1 serving/wk
Visible fat in meats and soups¶	Always remove
Fatty fish, seafood canned in oil	≤1 serving/wk
Spread fats	≤1 serving/wk
Sofrito‡	≤2 servings/wk

Dietary Interventions: Summary

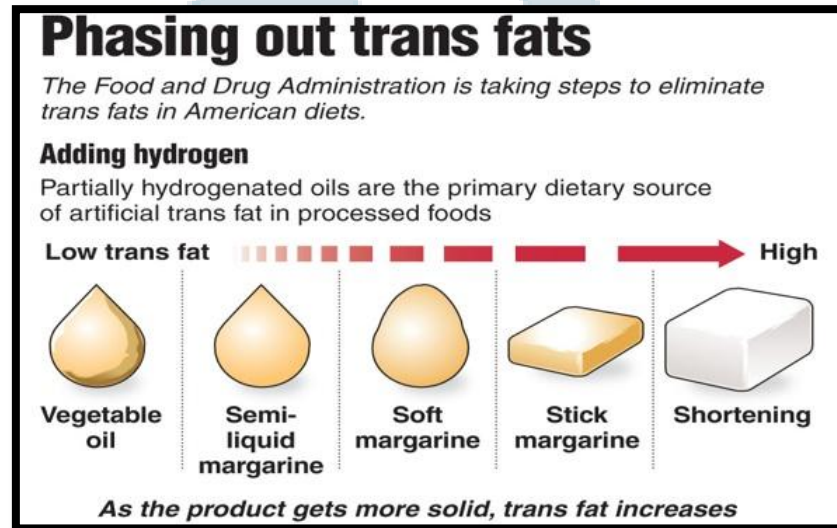
Cardiovascular-Related Outcomes of Selected Diets

DIET TYPE	LDL	HDL	TRIGLYCERIDES	CARDIOVASCULAR EVENTS	BMI	STRENGTH OF EVIDENCE FOR CARDIOVASCULAR OUTCOMES
Very low-carbohydrate	No change	Increase	Decrease	No data	Decrease	C
Low-carbohydrate/low-glycemic index	No change	No change	No change	No data	Decrease	C
Very low-fat	Decrease	Decrease	Decrease	Decrease	Decrease	B
Mediterranean diet	Decrease/no change	Increase	Decrease	Decrease	No change	A
American Heart Association guidelines	Decrease	Increase	No change	No data	Decrease	C*

Walker, C., & Reamy, B. V. (2009). Diets for cardiovascular disease prevention: what is the evidence?. *American family physician*, 79(7).

Trans Fats—as bad as we thought

- ↓ HDL-C 2–3%
- ↑ TC 8%
- ↑ LDL-C 9%;
- ↑ TG & VLDL 9%
- ↑ TC/HDL ratio



Brouwer IA, et. al. (2013). Review: Trans fatty acids and cardiovascular health: European Journal of Clinical Nutrition. 67: 541–547.

Brouwer IA, Wanders AJ, Katan MB (2010) Effect of Animal and Industrial Trans Fatty Acids on HDL and LDL Cholesterol Levels in Humans – A Quantitative Review. PLoS ONE 5(3): e9434.

Mena Farid, et. al. (2013). Trans-fatty acids, dangerous bonds for health? A background review paper of their use, consumption, health implications. Eur J Nutr. 52(4):1289-302..

MUFA



High circulating E-selectin concentrations are associated with endothelial activation and atherosclerosis.

E-selectin was significantly reduced when MUFAs were substituted for SFAs (~9.5% of total energy)

Foods high in MUFA: EVOO olive oil, olives, avocado, avocado oil, canola oil, almonds, cashews, hazelnuts, macadamia nuts, peanuts, pecans, pistachios, flax seeds

Vafeiadou Katerina, et. al. (2015). Replacement of saturated with unsaturated fats had no impact on vascular function but beneficial effects on lipid biomarkers, E-selectin, and blood pressure: results from the randomized, (DIVAS) study. *The American Journal of Clinical Nutrition*. 102:40-8.

Eat Fiber-Rich, Whole Foods

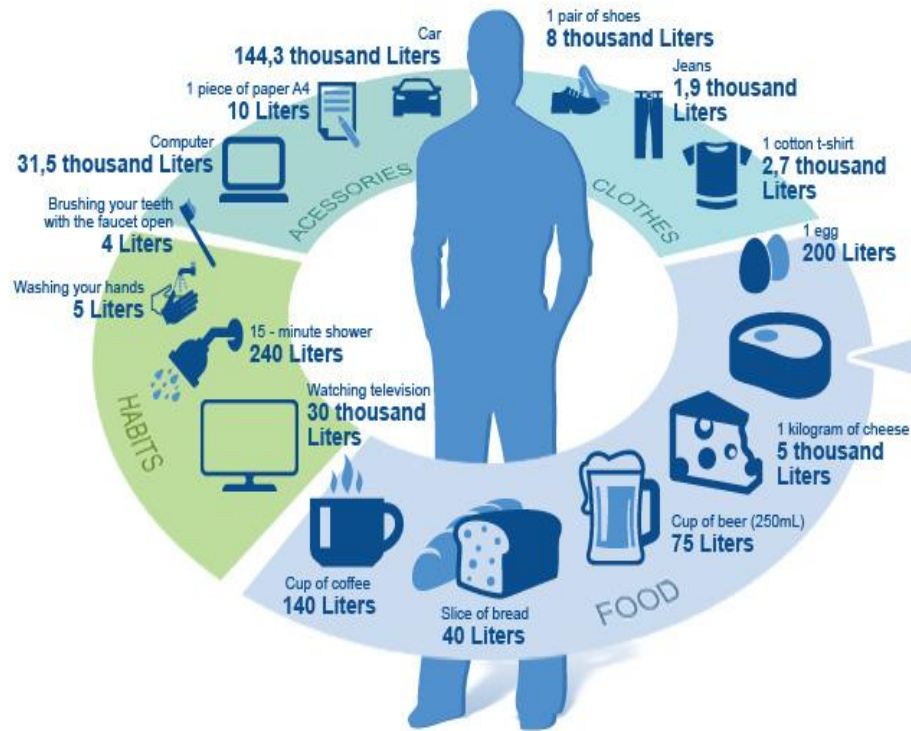
Intake of vegetables, fruit, minimally processed whole grains, legumes,



Siri-Tarino, et. al. (2015). Saturated Fats Versus Polyunsaturated Fats Versus Carbohydrates for Cardiovascular Disease Prevention and Treatment. Annual Review of Nutrition. 35:517-543.

Each Brazilian consumes, on average
5,559 liters of water each day

This count is made by summing all the water used, directly and indirectly, in the production of goods, and also the typical daily activities



Water Footprint
 Brazilian average



Virtual Calculation of Water Used in the production of Beef.

Up until the Cattle is slaughtered (approximately 3 years), it spends on average:



3,069 million
 liters of water

- + 24 mil Liters of water for drinking
- + 7 mil Liters of water for service/cleaning
- = **3,1 million liters** of water used

1 kg of beef consumes
15,500 liters of water

Source: Exame.com Magazine | Superinteressante Magazine
 Water Footprint Network: Water Footprint of Brazil:
 2,029 million of liters per year per capita

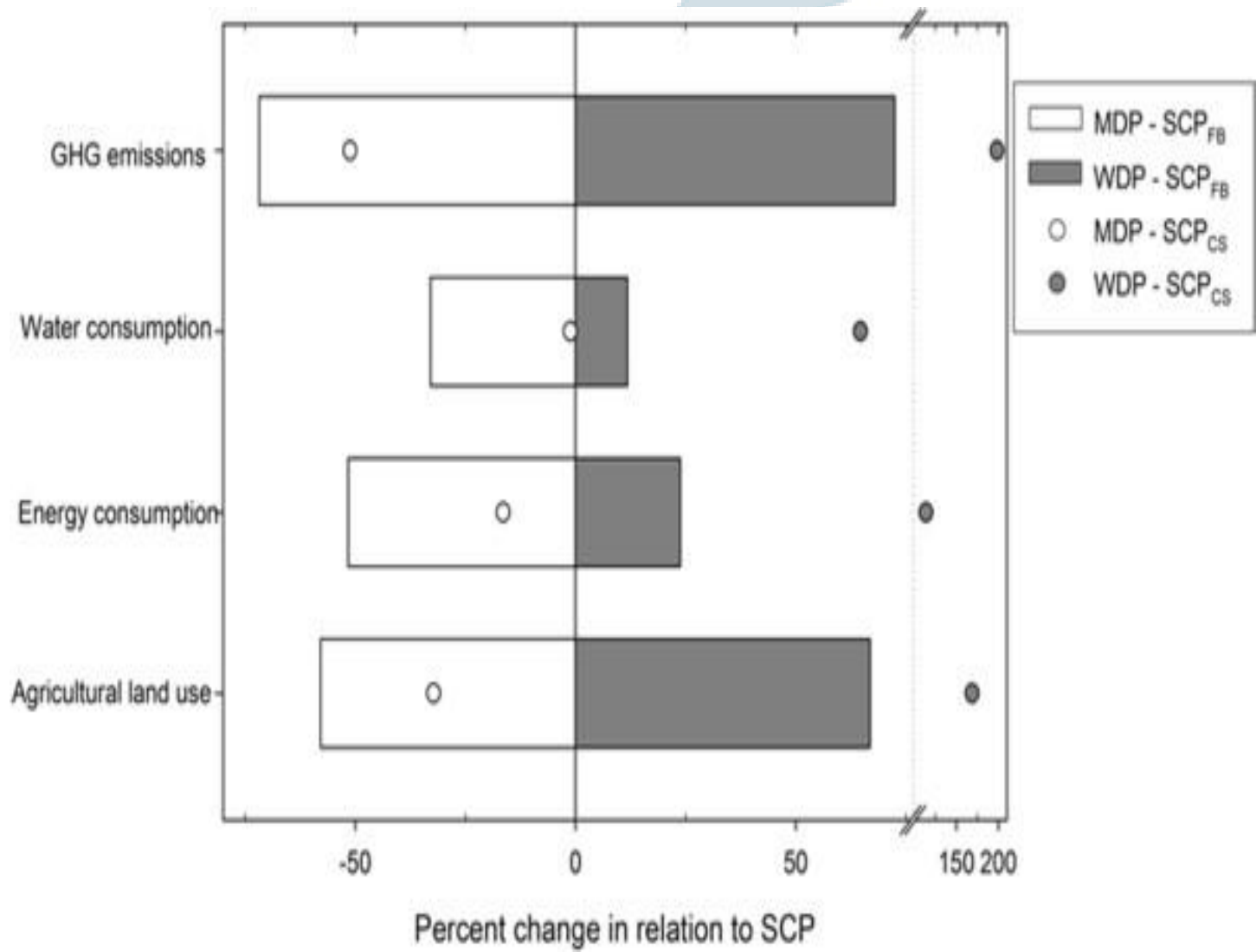
May 2016 Report Shows World Heritage Icons at Risk from Climate Change



Around **700 million** people in 43 countries suffer today from water scarcity. By 2025, **1.8 billion** people will be living in countries or regions with absolute water scarcity, and **two-thirds** of the world's population could be living under water stressed conditions.



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Precautionary Principle

The “precautionary principle” is the primary mechanism for implementing the basic tenets of ecological medicine. This principle argues that science and industry must fully assess the impact of their activities before they impose them upon the public and the environment.

Preserve Your Health, Protect The Planet



“ The greatness of a nation and its moral progress can be judged by the way its animals are treated” Mohandas Gandhi

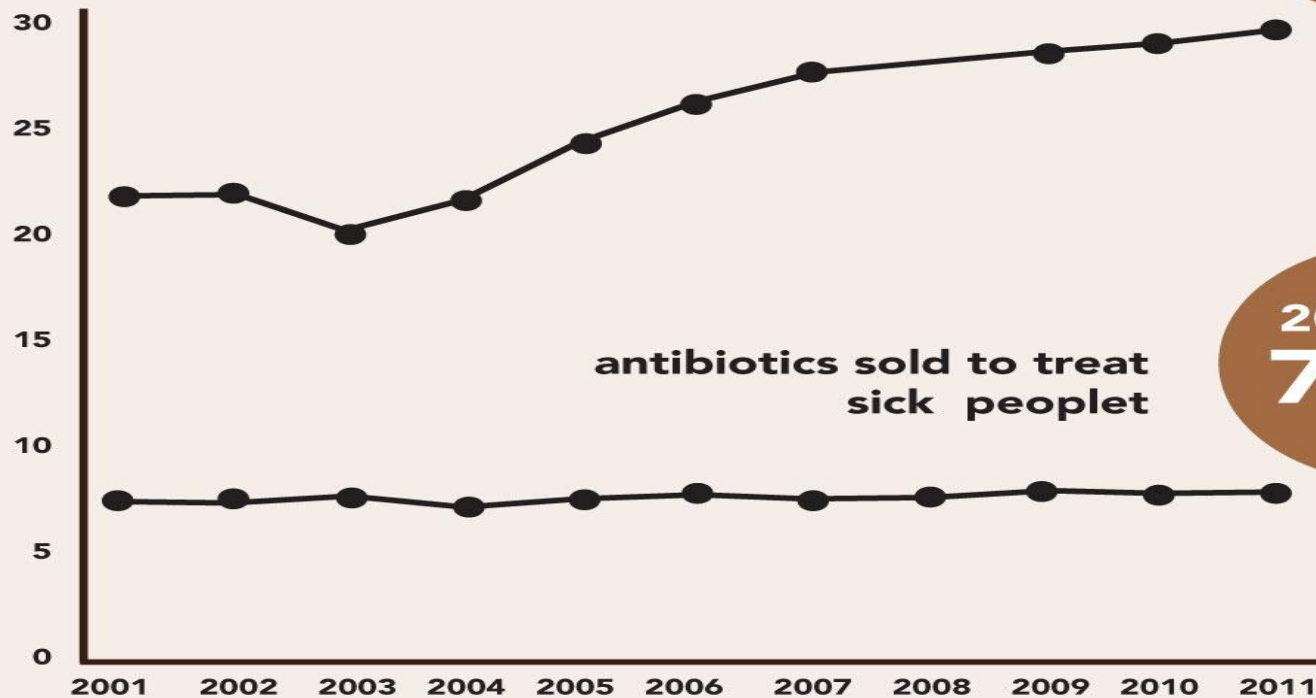
Good Intentions: Dangerous Consequences



- Limited (no) outdoor access
- Closed worker environment
- Concentrated fecal waste exposure
- Cramped, stressed environment
- Results:
 - Pro Inflammatory
 - Hormones
 - Antibiotics Resistance

MOST DRUGS GO TO LIVESTOCK

millions of
pounds
sold



2011
29.9M

2011
7.7M

Source: Pew Charitable Trusts. 2013. Record-high antibiotic sales for meat and poultry production. Available:

<http://www.pewhealth.org/other-resource/record-high-antibiotic-sales-for-meat-and-poultry-production-85899449119>

WHO 2016 Antimicrobial Resistance

The cost of health care for patients with resistant infections is higher than care for patients with non-resistant infections due to longer duration of illness, additional tests and use of more expensive drugs.

Globally, 480 000 people develop multi-drug resistant TB each year, and drug resistance is starting to complicate the fight against HIV and malaria, as well.

Teach your children what we have taught our children, that the earth is our mother.

Whatever befalls the earth befalls the sons and daughters of the earth...

The earth does not belong to us, we belong to the earth...

We did not weave the web of life, we are merely a strand in it.

Whatever we do to the web we do to ourselves...

Chief Seattle



Academy of Integrative Health & Medicine

Millennium Assessment Bottom Line

“At the heart of this assessment is a stark warning. Human activity is putting such strain on the natural functions of Earth that the ability of the planet’s ecosystems to sustain future generations can no longer be taken for granted.”

Atrazine, Insulin Resistance and Obesity

“These results suggest that long-term exposure to the herbicide ATZ (atrazine) might contribute to the development of insulin resistance and obesity, particularly where a high-fat diet is prevalent.

ATZ has been extensively used in the USA since the early 1960s, a time frame that corresponds to the beginning of the present obesity epidemic.

ATZ-usage and obesity maps show striking overlaps, suggesting that heavy usage of ATZ may be associated with the risk of obesity.”

Persistent organic pollutants, mitochondrial dysfunction, and metabolic syndrome

Soo Lim,^{1,2} Young Min Cho,¹ Kyong Soo Park,¹ and Hong Kyu Lee^{1,3}

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The number of individuals with metabolic syndrome is increasing worldwide, constituting a major social problem in many countries. Recently, epidemiological and experimental studies have associated insulin resistance or type 2 diabetes with elevated body burdens of persistent organic pollutants (POPs). It has been proposed that mitochondrial dysfunction plays a key role in this association. Mitochondrial DNA abnormalities are known to cause pancreas beta cell damage, insulin resistance, and diabetes mellitus. Recently, much evidence has emerged showing that environmental toxins, including POPs, affect mitochondrial function and subsequently induce insulin resistance. In this review, we present a novel concept in which metabolic syndrome is the result of mitochondrial dysfunction, which in turn is caused by exposure to POPs. The potential mechanism including POPs for mitochondrial dysfunction on metabolic syndrome is also discussed. We propose that the mitochondrial paradigm for the etiology of metabolic syndrome will facilitate the prevention and treatment of this major health problem.

Keywords: persistent organic pollutants; mitochondrial dysfunction; metabolic syndrome; insulin resistance

Introduction

What is metabolic syndrome?

During the past few decades, cardiovascular disease has been ranked as the main cause of morbidity and mortality in developed countries. Multiple cardiovascular disease risk factors, such as obesity, type 2 diabetes mellitus (T2DM), dyslipidemia, and hypertension are often present.¹ This clustering of risk factors and its association with insulin resistance led investigators to propose a pathophysiological condition called “metabolic” or “insulin resistance” syndrome.²

While the definition of metabolic syndrome emphasizes its clinical aspect, insulin resistance is regarded as its common pathophysiological abnormality. Insulin resistance is an important pathophysiological factor in the development of T2DM and cardiovascular disease. Insulin resistance is caused by a complex interplay between nutrient overload, systemic fatty acid excess, oxidative damage, inflammation, hypoad-

iponectinemia, and endoplasmic reticulum (ER) stress.

Reactive oxygen species and oxidative damage.

During the process of reduction of oxygen to water by the electron transport chain, reactive oxygen species (ROS), such as superoxide, hydrogen peroxide, the hydroxyl radical, and nitric oxide, are generated and cause oxidative damage to target tissues.³ An imbalance between the production of ROS and antioxidant defenses plays a major role in inducing alterations in insulin signaling pathways.⁴ Close associations between ROS and insulin resistance and between reduced insulin resistance and antioxidant treatment have been demonstrated.^{5,6}

Inflammation. Obesity, insulin resistance, and T2DM are closely associated with chronic “inflammation” characterized by abnormal cytokine production, increased levels of acute-phase reactants, and activation of a network of inflammatory signaling pathways. There is much experimental and

“Much evidence has emerged showing that environmental toxins, including POPs, affect mitochondrial function and subsequently induce insulin resistance.”

doi: 10.1111/j.1749-6632.2010.05622.x

Ann. N.Y. Acad. Sci. 1201 (2010) 166–176 © 2010 New York Academy of Sciences.

Hayes TB, Khoury V, et al. PNAS USA 2010;107(10):4612-7.
Hayes TB, Collins A, et al. PNAS USA 2002;99(8):5476-80.

Arsenic in Drinking Water

Elevated mortality rates were observed for both males and females for all diseases of the circulatory system [SMR \approx 1.13], cerebrovascular diseases [SMR = 1.19], diabetes mellitus [SMR \approx 1.28], and kidney diseases [SMR \approx 1.33].

Meliker JR et al. *Environ Health* 2007.




WHO 2015 Geneva

Delegates at the World Health Assembly adopted a resolution to address the health impacts of air pollution – the world’s largest single environmental health risk. Every year **4.3 million deaths occur from exposure to indoor air pollution and 3.7 million deaths are attributable to outdoor air pollution.** This was the first time the Health Assembly had debated the topic.

CAPITAL BREATHES UNEASY

Tops global cities with worst air pollution



- 1** NEW DELHI, INDIA
- 2** BEIJING, CHINA
- 3** CAIRO, EGYPT
- 4** SANTIAGO, CHILE
- 5** MEXICO CITY, MEXICO

INDIA SLIPS IN RANK TOO

Is second most polluted among its neighbours

	2014	2010
Bangladesh	169	139
India	155	123
Pakistan	148	125
Nepal	139	38
China	118	121
Sri Lanka	69	58

- Ranking based on 9 parameters: Health impact, air pollution, water & sanitation, water resources, agriculture, fisheries, forests, biodiversity & habitat, climate change & energy
- On list of 178 countries, India ranks as low as 174 on air pollution, 127 on health impact

5 CLEANEST COUNTRIES:

Switzerland, Luxembourg, Australia, Singapore and Czech Republic

Good Intentions: Dangerous Consequences



Plastic constitutes 90 percent of all trash floating in the world's oceans [source: [LA Times](#)]. 2016 eight million metric tons of our plastic waste enter the oceans from land each year.]. In some areas, the amount of plastic outweighs the amount of plankton by a ratio of six to one.

Midway Atoll

Photographer Chris Jordan in September traveled to Midway Atoll, a tiny island in the Pacific, to photograph decaying albatross carcasses, their stomachs and intestines full of plastic, in order to show how much discarded plastic is in the oceans and the food chain





World Watch Institute 2016

Amount of money needed each year to provide reproductive health care for all women in developing countries **\$12 billion**

Amount of money spent annually on perfumes in Europe and the United States **\$12 billion**

Amount of money needed each year to provide water and sanitation for all people in developing nations **\$9 billion**

Amount of money spent annually on cosmetics in the United States **\$8 billion**

Amount of money needed each year to provide basic health and nutrition needs universally in the developing world **\$13 billion**

Amount of money spent each year on pet food in Europe and the United States **\$17 billion**

Amount of money needed each year to provide basic education for all people in developing nations **\$6 billion**

Amount of money spent each year on militaries worldwide **\$780 billion**

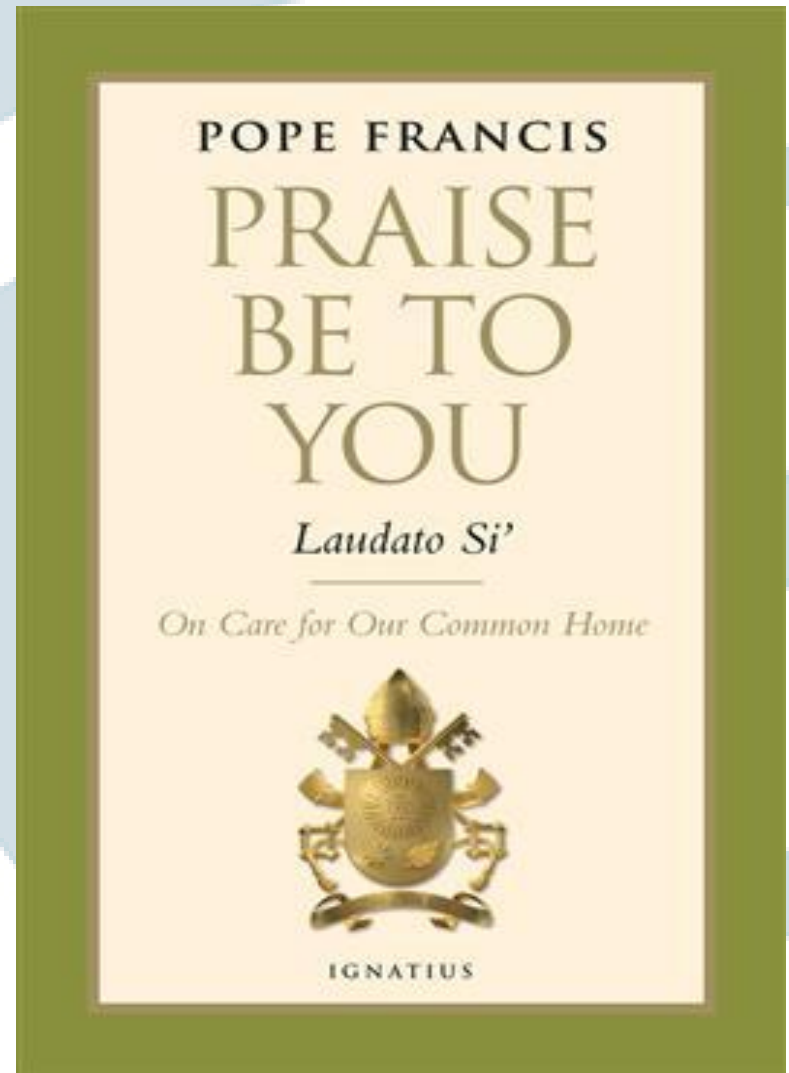
Combined wealth of the world's richest 225 people **\$1 trillion**

Combined annual income of the world's poorest 2.5 billion people **\$1 trillion**

We can see signs that things are now reaching a breaking point, due to the rapid pace of change and degradation; these are evident in large-scale natural disasters as well as social and even financial crises, for the **world's problems cannot be analyzed or explained in isolation.**

139. **We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis** which is both social and environmental.

175. **The same mindset which stands in the way** of making radical decisions to reverse the trend of global warming also stands in the way of achieving the goal of eliminating poverty.



Farm Fresh Healthcare Project

The Fruit and Vegetable Prescription Program (FVRx), coordinated by the Center for Prevention at Blue Cross and Blue Shield of Minnesota, allows physicians at NorthPoint Health and Wellness in North Minneapolis to “prescribe” fresh fruits and vegetables to patients, redeemable at a nearby farmers market.



Pearl: Think Globally Act Locally

Palomar Health began their 'Less Meat, Better Meat' journey in 2010 by successfully reducing their meat consumption by 10 percent year over year for three years.

Increase of purchases of sustainable, local and organic produce by 60 percent in two hospitals during their fiscal 2014 year resulting in an overall total food purchasing of 13 percent sustainable, local and organic.

Ridgewood Medical Center
Waconia

Committed to increasing the purchase of healthy beverages by 20%

Lakewood Health System has created an innovative farmers market program for patients experiencing food insecurity.



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Pearl: Preserve Your Health, Protect The Planet

40 THINGS you can do to save the planet

EPA's mission is to protect human health and the environment. To honor the 40th anniversary of Earth Day, we invite you to join us by taking individual action—here are 40 things we can each do to reduce greenhouse gases and help save the planet:



40 THINGS



AT HOME

- 1 Stop junk mail (opt out)
- 2 Replace incandescent bulbs with compact fluorescent lights—and turn them off when not in use
- 3 Buy local, sustainably produced food
- 4 Adjust your thermostat—up in summer, down in winter
- 5 Install water saving fixtures in bath and kitchen
- 6 Buy Energy Star certified appliances (www.energystar.gov)
- 7 Install solar panels or switch to renewable energy sources
- 8 Shop at thrift stores and buy used or refurbished products

AT SCHOOL

- 9 Perform an energy audit of school buildings
- 10 Teach students how to make eco-friendly choices
- 11 Start a recycled materials art program
- 12 Create a compost bin for food scraps—and recycle cans, bottles and paper
- 13 Create an organic vegetable garden
- 14 Reduce or recycle toxic chemicals in school laboratories
- 15 Help students volunteer for local habitat restoration projects
- 16 Rent college textbooks instead of buying them

ON THE ROAD

- 17 Drive a more fuel efficient car, or join a car share
- 18 Walk, bike, carpool or take transit as much as possible
- 19 Reduce your air travel and use e-tickets instead of paper
- 20 Go easy on the accelerator, use cruise control, and keep your car tuned up and tires well inflated
- 21 Make sure your mechanic recycles used automotive oil and coolant
- 22 Choose a green hotel, eco-tours and other earth-friendly travel choices
- 23 Ask hotel staff not to replace your towels and sheets every day
- 24 Bring a reusable water bottle

AT WORK

- 25 Print less, use 100% recycled paper and print double sided
- 26 Reduce commuting by working from home when possible
- 27 Use environment-friendly cleaning supplies (e.g. Green Seal approved)
- 28 Buy EPEAT certified computers and monitors (www.epeat.net)
- 29 Use video and telephone conferences to reduce travel
- 30 Green your meetings—replace paper handouts with e-documents, recycle waste
- 31 Start a composting program and set a goal of zero waste
- 32 Organize co-workers to carpool or bike to work

EVERYWHERE!

- 33 Get involved—exercise your rights to promote sustainable choices
- 34 Switch to reusable items, such as bags and lunch containers
- 35 Turn off lights, appliances and electronics when not in use
- 36 Bring your own reusable mug when you go out for coffee or tea
- 37 Buy recycled and recyclable products, eliminate plastic and styrofoam
- 38 Compost your food/organic waste
- 39 Recycle paper, glass, plastics, electronics
- 40 Keep reusable shopping bags handy and use everywhere you shop

DO JUST ONE THING FOR A YEAR... AND IT ADDS UP

If one person drinks tap water instead of one liter of bottled water each day, it would save the energy equivalent 1.6 Kilo-watt-hours per day, 46 gallons of gas per year, or 0.41 metric tons of CO₂.

If all 49 million people in the Pacific Southwest Region did the same, it would save the equivalent of 2.3 billion gallons of gas per year—the amount used by 3.8 million cars, or 20 million metric tons of CO₂.

If everyone in the USA did the same, it would save the equivalent of 14.2 billion gallons of gas per year—the amount used by 24.1 million cars, or 126 million metric tons of CO₂.*

*This is an estimate of the greenhouse gas savings for bottled water produced and used locally. For bottled water from distant locations, the carbon footprint may double! The calculation assumes that the water is bottled using electricity with the U.S. average carbon emissions.

[Sources: Gleick & Cooley, "Energy Implications of Bottled Water," Pacific Institute, Oakland, Calif., 2009; U.S. EPA, Greenhouse Gas Equivalencies Calculator (www.epa.gov/ROEE/energy-resources/calculator.html)]

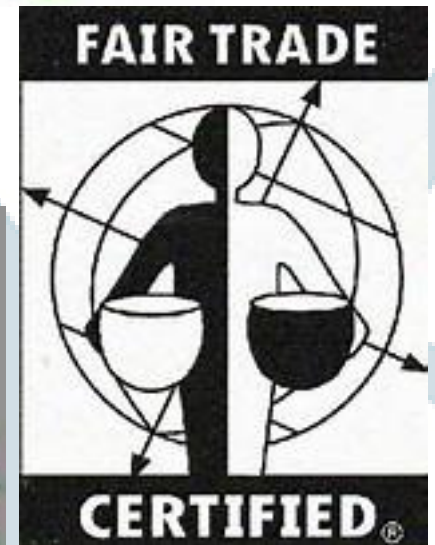
Be A Conscious Consumer

www.EWG.org

Fair Trade

Fair Food

Certified Humane

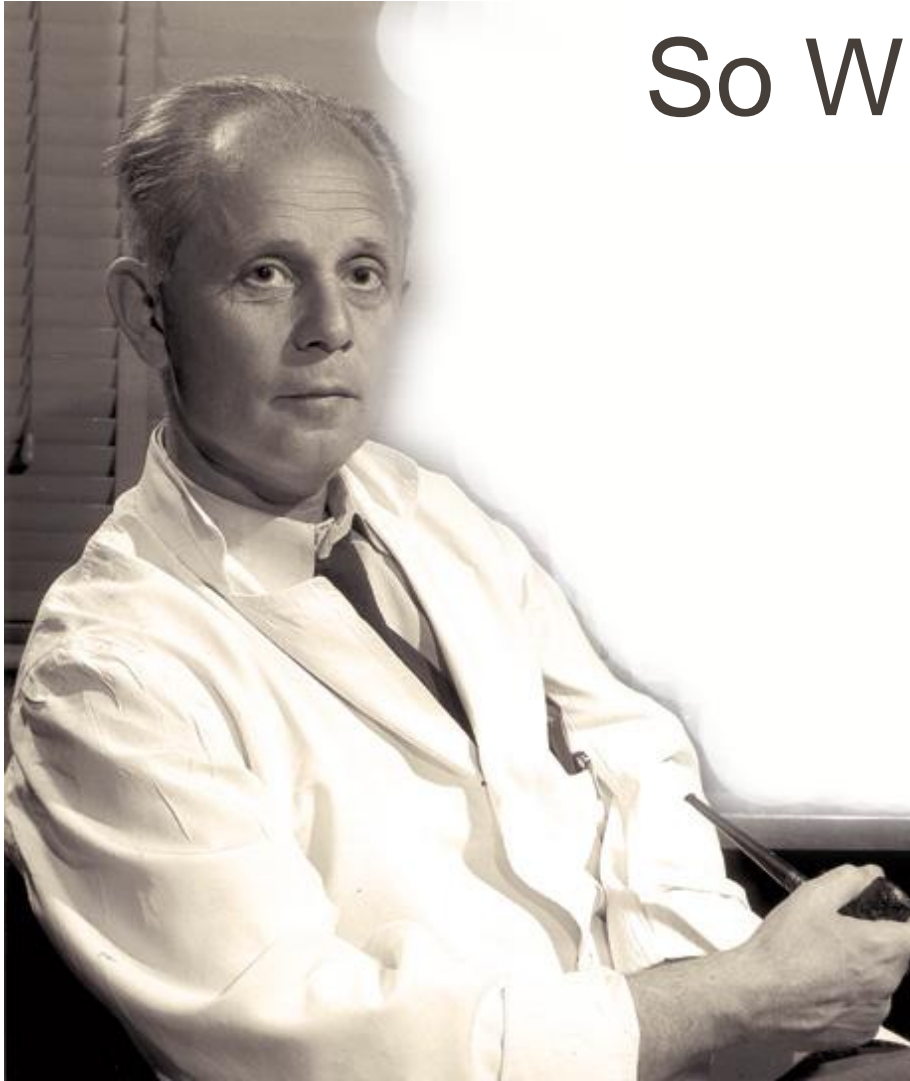


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1. Support local farmers and farmers markets
2. Refuse to use plastic. Recycling is not enough!!
3. Make some days meatless
4. Walk don't drive/carpool
5. Plant an organic vegetable garden/compost
6. Opt out of junk mail
7. Install water and energy saving fixtures in your home
8. Purchase consciously





So What Is Stress?

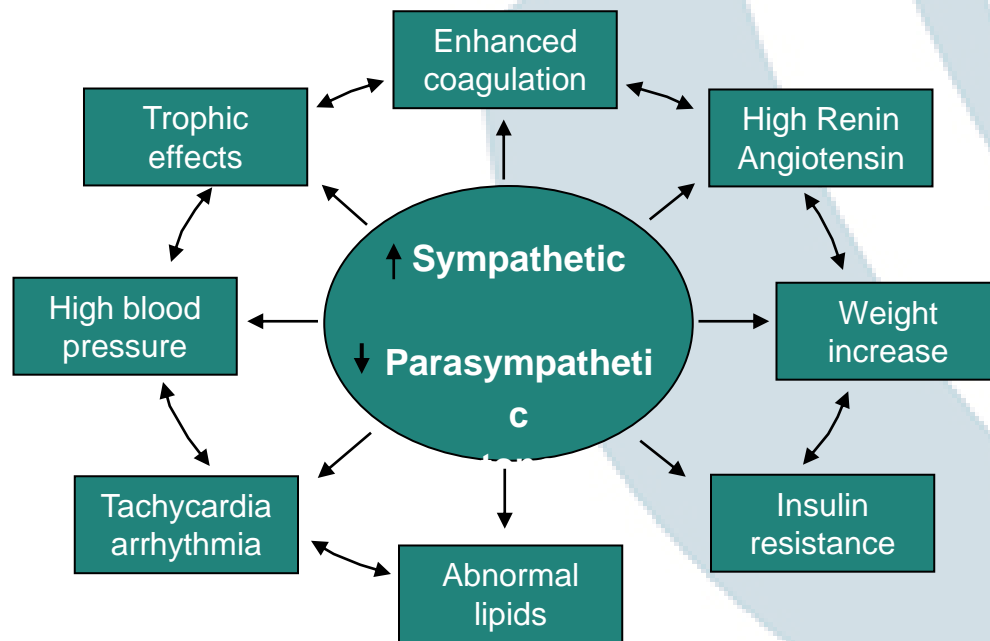
Stress can be defined as a state one experiences when there is a mismatch between perceived demands and our perceived ability to cope.

Stress can be acute or chronic.

“The chief and primary cause of ... the very rapid increase of nervousness **is modern civilization**, which is distinguished from the ancient by these five characteristics: steam power, the periodical press, the telegraph, the sciences and the mental activity of women.”

American Nervousness, Its Causes and Consequences, George M. Beard,
1881

The Stress Response





Warning Signs

- Loss of focus and mental clarity
- Lack of ability to relax and sleep
 - Loss of self esteem
- Feeling tired and on edge/Anger

Top Ten U.S. Addictions

1. Alcohol
2. Smoking
3. Drugs
4. Gambling
5. Overeating
6. Video games
7. Internet
8. Sex
9. Shopping
10. Work



Pearl: Turn Stress Into Strength



- Response
- Perception
- Initiating Event
- Effect

Mantra Repetition

A mantra is a sacred word, chant, or sound that is repeated to promote relaxation and cultivate inner peace.

It could be the repetition of a word like Shalom, Rama, or many others.

The word mantra in its most literal sense means to free from the mind.

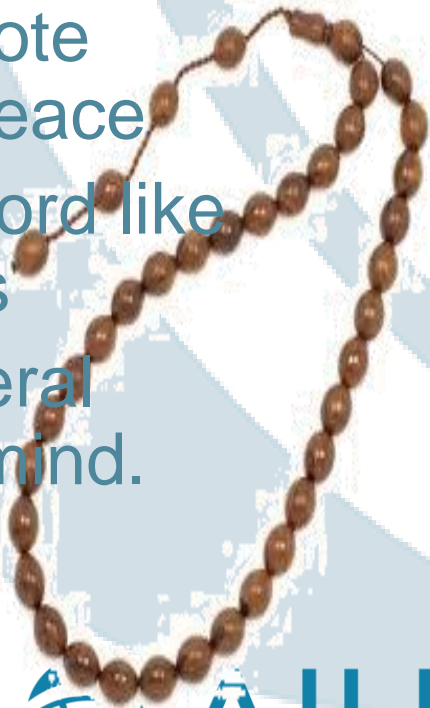


TABLE 1
List of Common Mantrams Used in Intervention

<i>Mantram and Pronunciation</i>	<i>Meaning</i>
<i>Buddhist</i>	
Om Mani Padme Hum (Ohm Mah-nee Pod-may Hume)	An invocation to the jewel (Self) in the lotus of the heart
Namo Butsaya (Nah-mo boot-sie-yah)	I bow to the Buddha.
<i>Christian</i>	
My God and my all	St. Francis of Assisi's mantra
Maranatha (Mar-uh-nah-tha)	Lord of the heart (Aramaic)
Kyrie Eleison (Kir-ee-ay Ee-lay-ee-son)	Lord have mercy, or the Lord is risen.
Christe Eleison (Kreest-ay Ee-lay-ee-son)	Christ have mercy, Christ has risen
Jesus, Jesus or Lord Jesus Christ	Jesus, Son of God
Hail Mary or Ave Maria	Mother of Jesus
<i>Hindu/Indian</i>	
Rama (Rah-mah)	Eternal joy within. Gandhi's mantra.
Ram Ram Sri Ram (rahm rahm shree rahm)	(variation on Rama)
Om Namah Shivaya (Ohm Nah-mah Shee-vy-yah)	An invocation to beauty and fearlessness
Om Prema (Ohm Pray-Mah)	A call for universal love
Om Shanti (Ohm Shawn-tee)	In invocation to eternal peace.
So Hum (So hum)	I am that Self within.
<i>Jewish</i>	
Barukh Atiah Adonoi (Bah-ruke Ah-tah Ah-don-aye)	Blessed are Thou' O Lord
Ribono Shel Olam (Ree-boh-noh Shel Oh-lahm)	Lord of the Universe
Shalom	Peace
Sheheena (Sha Hee-nah)	Feminine aspect of God
<i>Muslim</i>	
Allah	One True God
Bismallah Ir-rahman Ir-rahim (Beese-mah-lah ir-rah-mun ir-rah-heem)	In the name of Allah, the merciful, the compassionate
<i>Native American</i>	
O Wakan Tanka	Oh, Great Spirit

Source: Bormann (2005). Permission granted by Lippincott Williams & Wilkins (<http://lwww.com>).

Tame Your Monkey Mind

TABLE 3
Mean Outcome Scores Using Repeated Measures
ANOVA on Participants With Sessions of Mantram Data

<i>Outcomes^a</i>	<i>Pretest</i>		<i>Posttest</i>		<i>F</i>	<i>df</i>	<i>p value</i>	<i>partial η^{2b}</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
Perceived stress (<i>n</i> = 52)	21.3	7.03	16.8	7.04	32.79	(1,51)	.001	.39
State anxiety (<i>n</i> = 40)	44.1	13.33	38.2	10.67	13.92	(1,39)	.001	.26
Trait anxiety (<i>n</i> = 36)	46.1	10.71	42.6	10.64	5.11	(1,35)	.030	.13
State anger (<i>n</i> = 41)	13.8	6.63	11.8	4.49	5.20	(1,40)	.030	.12
Trait anger (<i>n</i> = 41)	17.9	7.09	15.9	5.89	9.43	(1,40)	.010	.19
PTSD symptoms (<i>n</i> = 30)	39.4	12.30	34.0	12.05	7.45	(1,29)	.020	.24
Quality of life (<i>n</i> = 43)	42.6	10.36	47.5	10.42	23.91	(1,42)	.001	.36
Existential well-being (<i>n</i> = 43)	38.6	11.26	43.4	9.63	26.02	(1,42)	.001	.38
Religious well-being (<i>n</i> = 42)	41.6	11.90	44.9	13.55	12.56	(1,41)	.001	.23
Total spiritual well-being (<i>n</i> = 43)	79.2	21.94	88.0	20.74	30.45	(1,42)	.001	.42

a. Higher scores indicate greater levels of variable.

b. Partial eta-squared values for effect sizes: small = .01, medium = .06, large = .15.



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MEDITATION IS MEDICINE

RCT of Transcendental Meditation and Health Education in African Americans
Robert H. Schneider, MD FACC AHA Nov. 2012

Follow-up of 5.4 years, there was a 48% risk reduction in the primary end point in the TM group (hazard ratio, 0.52; 95% confidence interval, 0.29–0.92; $P=0.025$).

The TM group also showed a 24% risk reduction in the secondary end point (hazard ratio, 0.76; 95% confidence interval, 0.51–1.13; $P=0.17$).

There were reductions of 4.9 mmHg in systolic blood pressure (95% confidence interval –8.3 to –1.5 mmHg; $P=0.01$) and anger expression ($P<0.05$ for all scales). Adherence was associated with survival.

Intensive Meditation Training, Immune Cell Telomerase Activity, and Psychological Mediators

[Psychoneuroendocrinology](#). 2011 Jun;36(5):664-81. Epub 2010 Oct 29

Telomerase activity was significantly greater in retreat participants than in controls at the end of the retreat ($p < 0.05$).

Increases in Perceived Control, decreases in neuroticism, and increases in both Mindfulness and Purpose in Life were greater in the retreat group ($p < 0.01$).

Perception is Everything



Pearl: Create Sacred Space



Healthy Relationships Matter

Embraces the healing power of intention and acknowledges that we are all connected

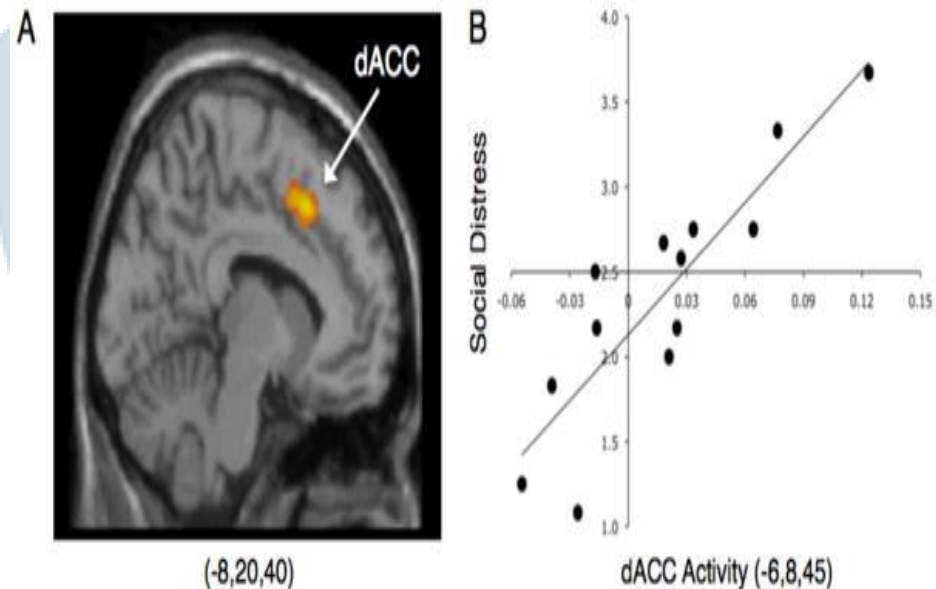
**“the I in illness is isolation
the W in wellness is we”**

Satchinanda

The Pain of Loneliness

Upon being excluded from the game, compared to when being included, participants showed increased activity in both the dACC and anterior insula—a pattern very similar to what is typically observed in studies of physical pain. Moreover, individuals who showed greater activity in the dACC reported stronger feelings of social distress (e.g., “I felt rejected,” “I felt meaningless”) in response to the exclusion episode **Thus, for the first time in humans, it was demonstrated that an experience of social exclusion activated neural regions typically associated with physical pain distress**

[Eisenberger](#)



Julianne Holt-Lunstad and Timothy Smith

PLoS Medicine

Social connections -- friends, family, neighbors or colleagues -- improve our odds of survival by 50 percent.

How low social interaction compares to more well-known risk factors:

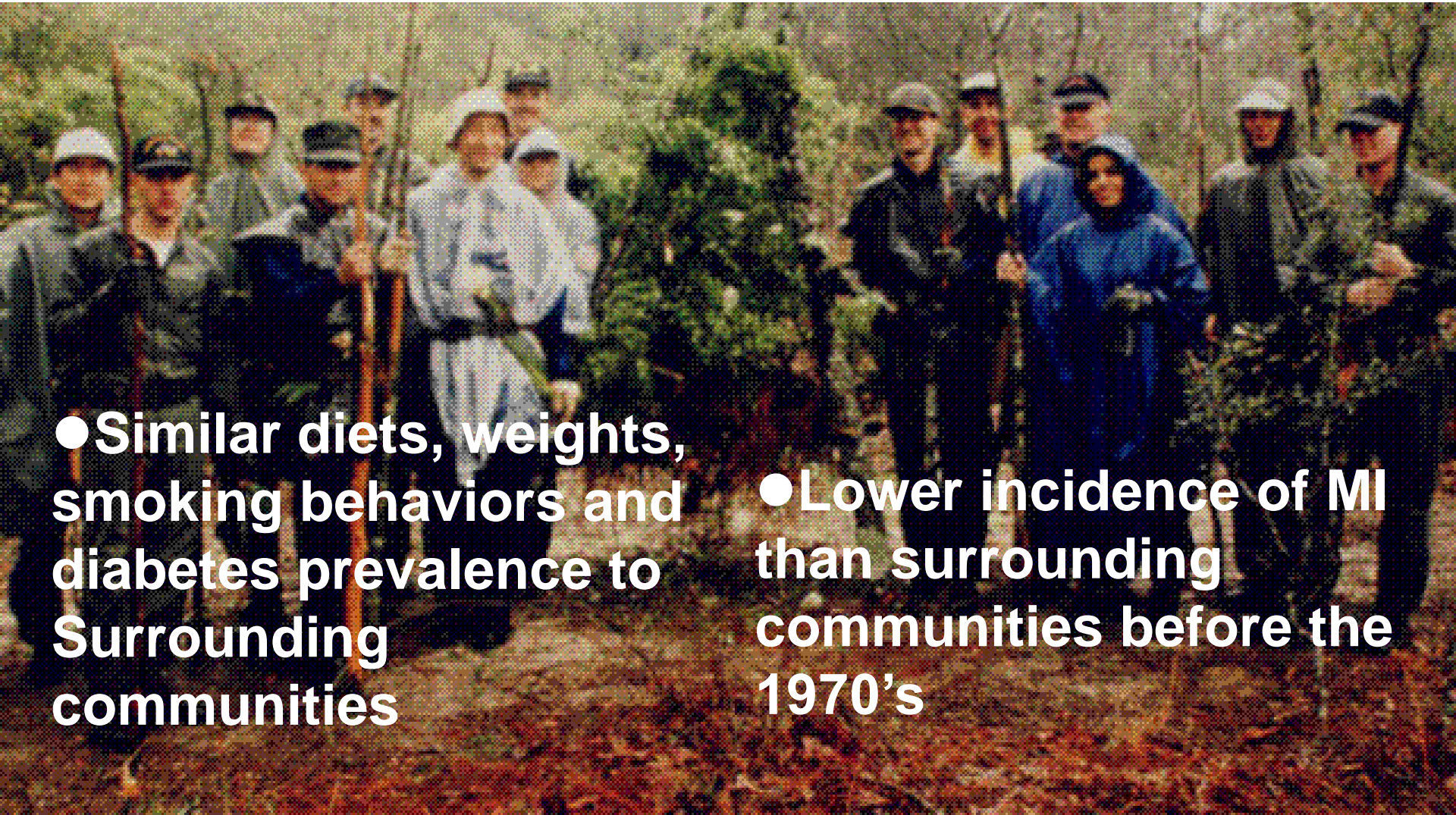
Equivalent to smoking 15 cigarettes a day

Equivalent to being an alcoholic

More harmful than not exercising

Twice as harmful as obesity

Community and Disease Risk: Roseto, PA



● Similar diets, weights, smoking behaviors and diabetes prevalence to Surrounding communities

● Lower incidence of MI than surrounding communities before the 1970's

Predictors of MI in Roseto, PA 50 Years Prevalence Shift

● Before the 1970's:

- Three generation households were prevalent
- High degree of religiosity and traditional values

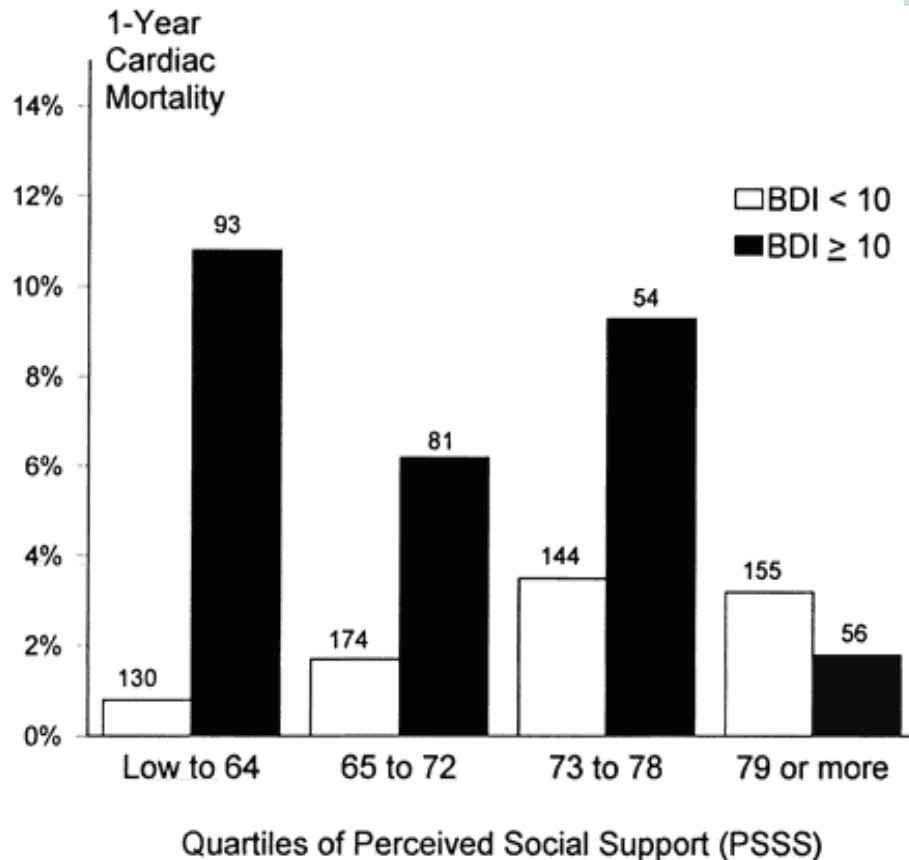
● After the 1970's:

- Break up of multigenerational households
- Decreasing church attendance
- Increasing mobility
- MI prevalence equal to surrounding communities



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Social Support, Depression, and Cardiac Death Rates



This effect was negated when people felt socially supported

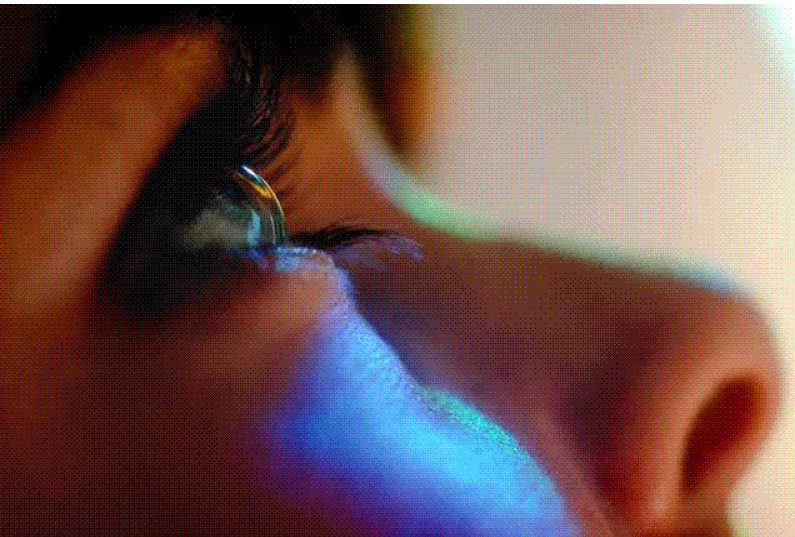
● Frasure-Smith et al, Circulation, 2000 vol. 101

Support Groups in Melanoma

- Patients: post surgical removal of malignant melanoma
- Intervention: 6 week support group
- Outcome, 5 years later:
 - control group - 13 recurrences, 10 deaths
 - Intervention group - 7 recurrences, 3 deaths

Fawzi, FI et al, Archives of General Psychiatry, 1993, 50:681-89

Connection And The Common Cold



- **276 healthy volunteers given rhinovirus containing nasal drops, all were shown to shed virus**
- **Questioned about 12 types of social relationships - parental, childhood, groups etc.**
- **Those who scored only 3 out of 12 developed cold symptoms 4 times more frequently**

● **Cohen, S et al,
JAMA, 1997,
277:1940-44**

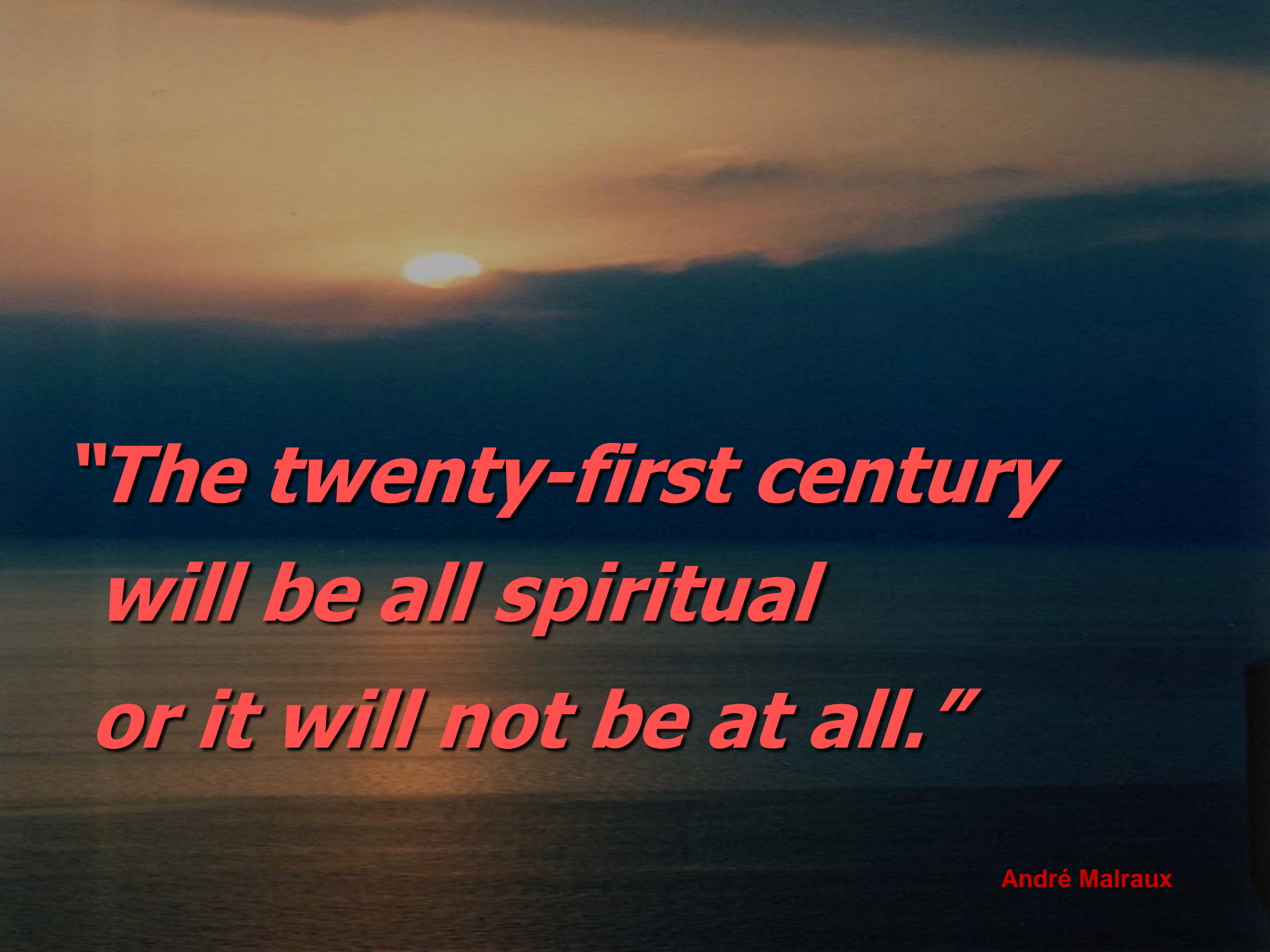
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Social Connection and The HPA Axis



The same stressor that when given to an animal who is alone increases plasma cortisol by 50%, does not increase the cortisol level at all when the animal is surrounded by familiar companions.

Levine S., Lysons DM, Schatzberg AF.
Psychobiological consequences of
social relationships. *Ann NY Acad Sci.*
1997; 807:210-218.

A sunset over a body of water. The sun is low on the horizon, partially obscured by a layer of clouds. The sky transitions from a pale orange near the sun to a deep blue at the top. The water in the foreground is dark and reflects the colors of the sky.

***"The twenty-first century
will be all spiritual
or it will not be at all."***

André Malraux

Florence Nightingale on Spirituality

“The needs of the spirit are as crucial to health as those individual organs which make up the body.”





**The HUMAN HEART
has a hidden want which
science cannot supply.”**

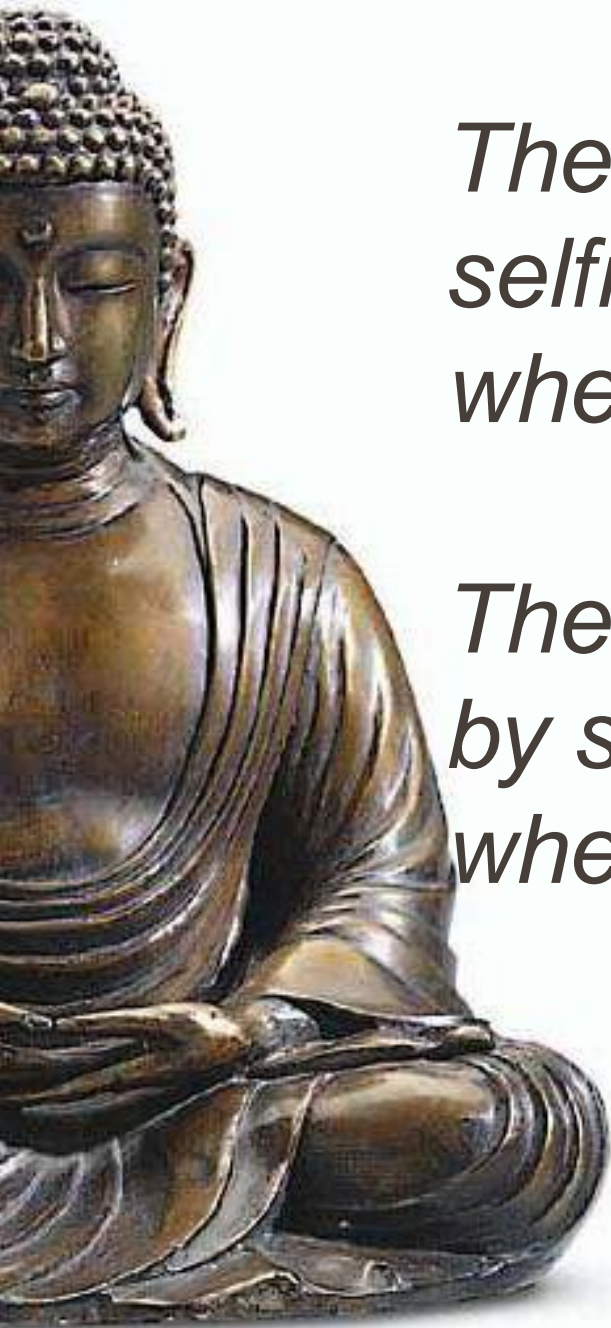
-Sir William Osler, M.D.

Pearl: Strengthen Your Spirituality

A sense of connection with the source of ultimate meaning

- Spirituality includes connection with self, others, nature, and a higher power
- This connection helps an individual make sense of their **life**





The man who is shaped by selfish thoughts causes misery whenever he speaks or acts.

The man whose mind is shaped by selfless thoughts gives joy whenever he speaks or acts.

Buddha



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It Is Better To Give Than To Receive

- A study of 700 older adults
- Those who gave love and support to others had significantly fewer health issues.
 - Depner, CE and Ingersoll-Dayton, Psychology and Aging, 1988,3:348-57

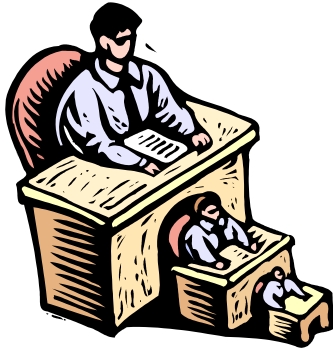


Helper's High

- Half of helpers report a high feeling
- 43% felt stronger and more energetic
- 28% felt warm
- 22% calm and less depressed
- 21% greater feeling of self worth
- 13% fewer aches and pains

Luks. Psychology Today, 1988

FIXING



HELPING

SERVING



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* Rachel Naomi Remen, MD

Pearl: Pray It All Away

Infinite Light

For me, My family, and Our Entire Lineage,
And All Humanity

Throughout All Time, Past Present, and Future,
Please help Us All Forgive Each Other,
Forgive Ourselves, Forgive All People
And All People Forgive Us

Completely and Totally, Now and Forever
Please and Thank You, Thank You

Howard Wills



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*“It is the physician’s job
to amuse the patient
while nature cures the
disease”*

Voltaire

Effects of Perceived Empathy on Common Cold

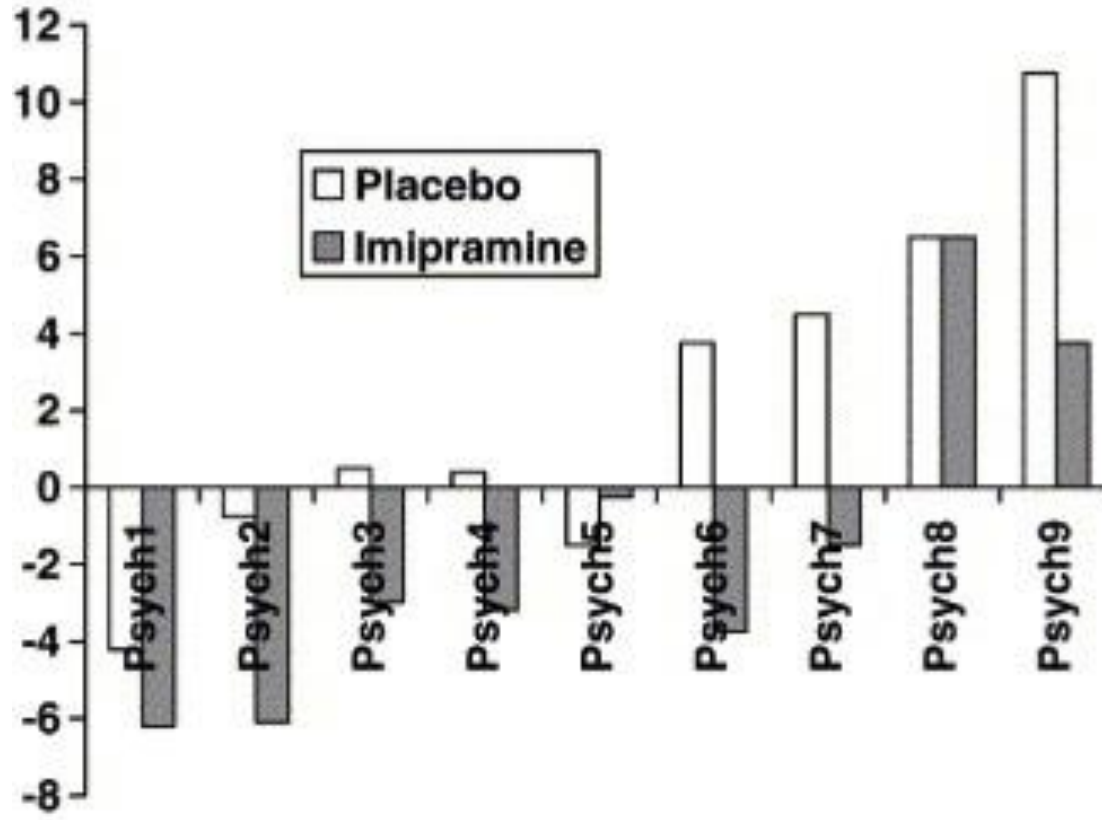
	No Visit	< Perfect	Perfect	P Value
Duration	6.75 days	7.0 days	5.89 days	0.003
Severity	262.19	270.58	223.38	0.04





PRACTITIONER EFFECTS

For Depression; Good Therapist + Placebo > Poor Therapist + Imipramine



McKay KM, Imel ZE, Wampold BE. Psychiatrist effects in the psychopharmacological treatment of depression. *J Affect. Disord.* 2006;92:287-90.



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Practitioner Effects on IBS

IBS Pts Randomized to: Improvement in Symptoms;

- Wait List Control.....28%
- Limited Clinical Visit.....44%
- Augmented Clinical Visit.....62%

Kaptchuk TJ. et al. Components of the Placebo Effect: RCT in patients with IBS. *BMJ* 336 (7651), 2008



Physician Empathy and Diabetes/Cholesterol Control

Table 2

Frequency and Percent Distributions of the Hemoglobin A1c and LDL-C Test Results for 891 Diabetic Patients, Treated Between July 2006 and June 2009, by Levels of Their Physicians' Empathy*

Patient outcome	No. (%) of patients by levels of physicians' empathy		
	High (n = 205)	Moderate (n = 282)	Low (n = 404)
Hemoglobin A1c[†]			
<7.0%	115 (56)	139 (49)	163 (40)
≥7.0% and ≤9.0%	59 (29)	99 (35)	135 (34)
>9.0%	31 (15)	44 (16)	106 (26)
LDL-C[‡]			
<100	121 (59)	149 (53)	180 (44)
≥100 and ≤130	56 (27)	86 (30)	128 (32)
>130	28 (14)	47 (17)	96 (24)

* From a study of physicians' empathy and patients' outcomes, Jefferson Medical College.

[†] $\chi^2_{(4)} = 22.04, P < .001.$

[‡] $\chi^2_{(4)} = 15.55, P < .001.$

Healing Touch With Guided Imagery for PTSD in Returning Active Duty Military: A Randomized Controlled Trial

Shamini Jain, PhD†; CDR George F. McMahon, NC USN‡; LCDR Patricia Hasen, NC USN‡;
CDR Madelyn P. Kozub, NC USN‡; Valencia Porter, MD, MPH||; Rauni King, RN, MIH, CHTP§;
Erminia M. Guarneri, MD§*

ABSTRACT Post-traumatic stress disorder (PTSD) remains a significant problem in returning military and warrants swift and effective treatment. We conducted a randomized controlled trial to determine whether a complementary medicine intervention (Healing Touch with Guided Imagery [HT+GI]) reduced PTSD symptoms as compared to treatment as usual (TAU) returning combat-exposed active duty military with significant PTSD symptoms. Active duty military ($n = 123$) were randomized to 6 sessions (within 3 weeks) of HT+GI vs. TAU. The primary outcome was PTSD symptoms; secondary outcomes were depression, quality of life, and hostility. Repeated measures analysis of covariance with intent-to-treat analyses revealed statistically and clinically significant reduction in PTSD symptoms ($p < 0.0005$, Cohen's $d = 0.85$) as well as depression ($p < 0.0005$, Cohen's $d = 0.70$) for HT+GI vs. TAU. HT+GI also showed significant improvements in mental quality of life ($p = 0.002$, Cohen's $d = 0.58$) and cynicism ($p = 0.001$, Cohen's $d = 0.49$) vs. TAU. Participation in a complementary medicine intervention resulted in a clinically significant reduction in PTSD and related symptoms in a returning, combat-exposed active duty military population. Further investigation of GT and biofield therapy approaches for mitigating PTSD in military populations is warranted.

Clinical & Statistical Significance

PCL-Military cutoff is 50

Changes of 10 to 20 points are clinically significant

Intervention group: a 14 point drop, which is clinically & statistically significant

BDI Score of 18 is significant for depression

Intervention group: baseline score of 26.1 dropped to 16.4, suggesting a meaningful reduction

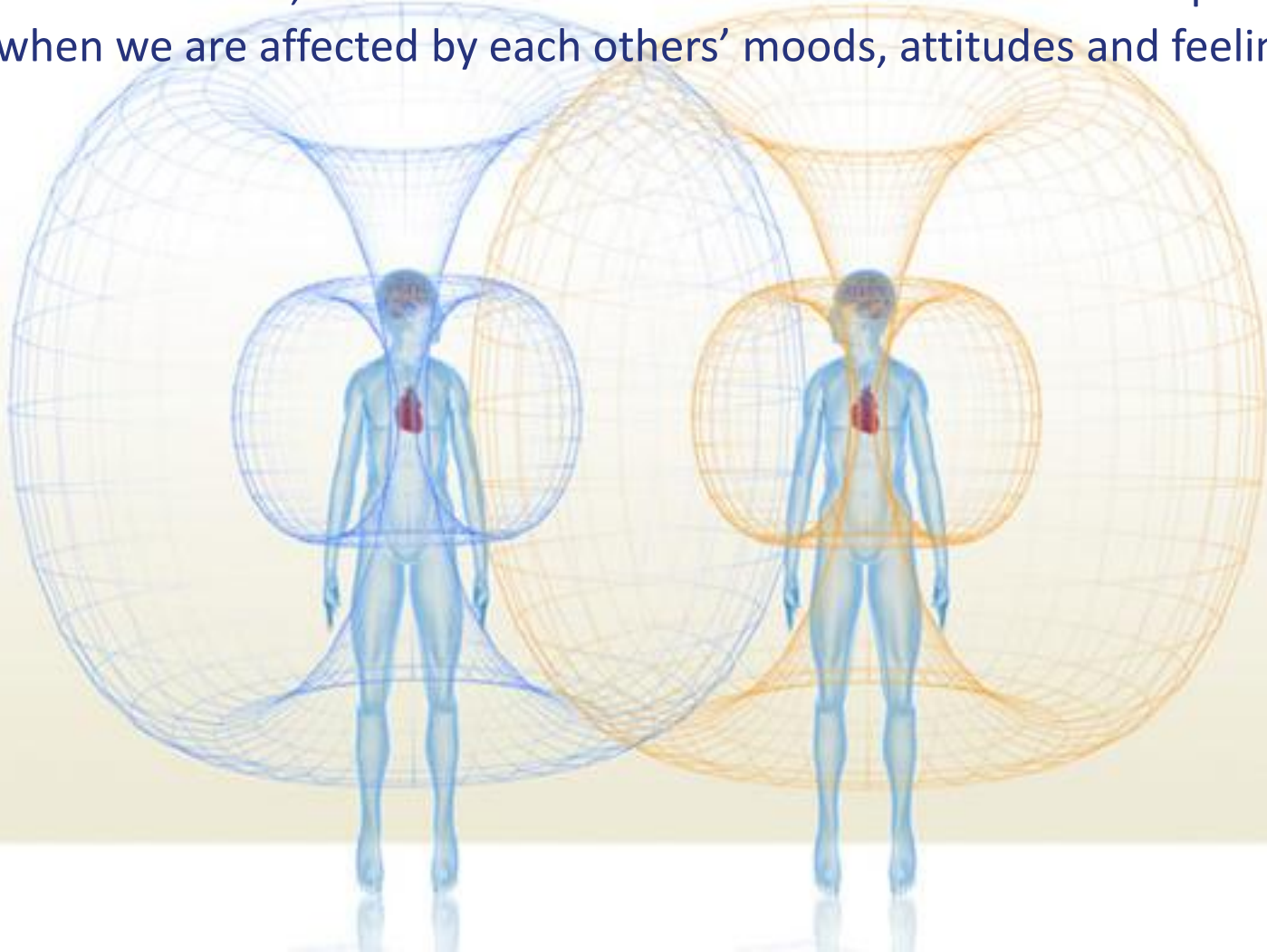
Cynicism

Decrease of 14 % in Cynicism in the Intervention Group is particularly noteworthy

What we bring to the world

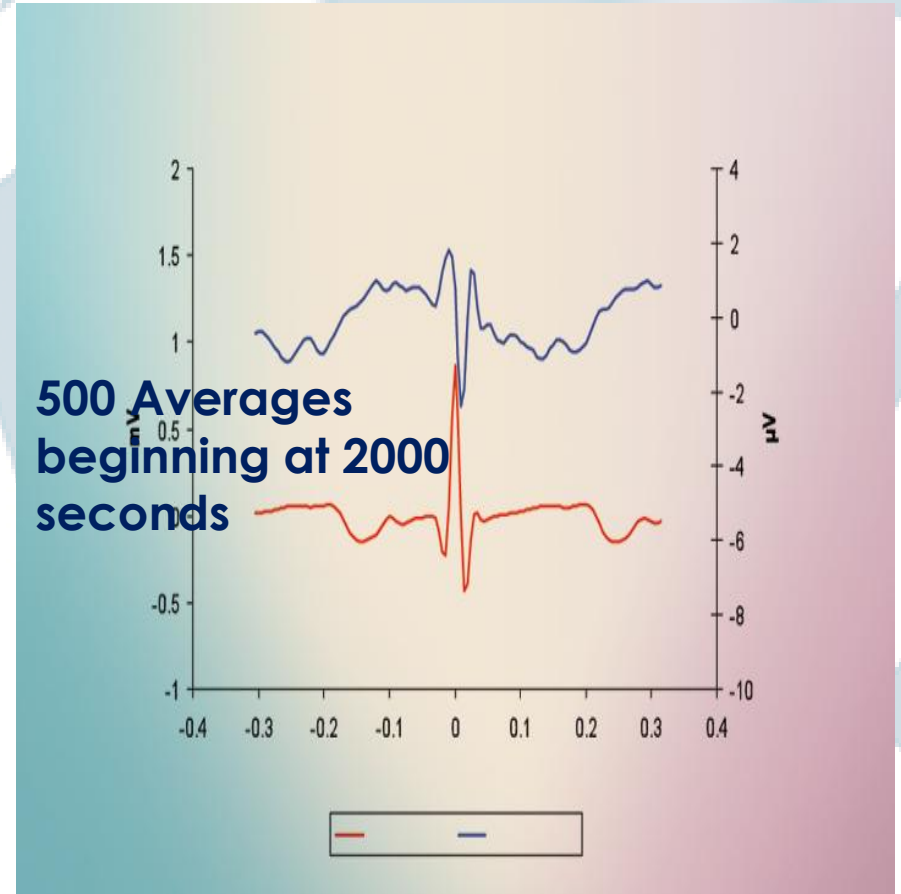
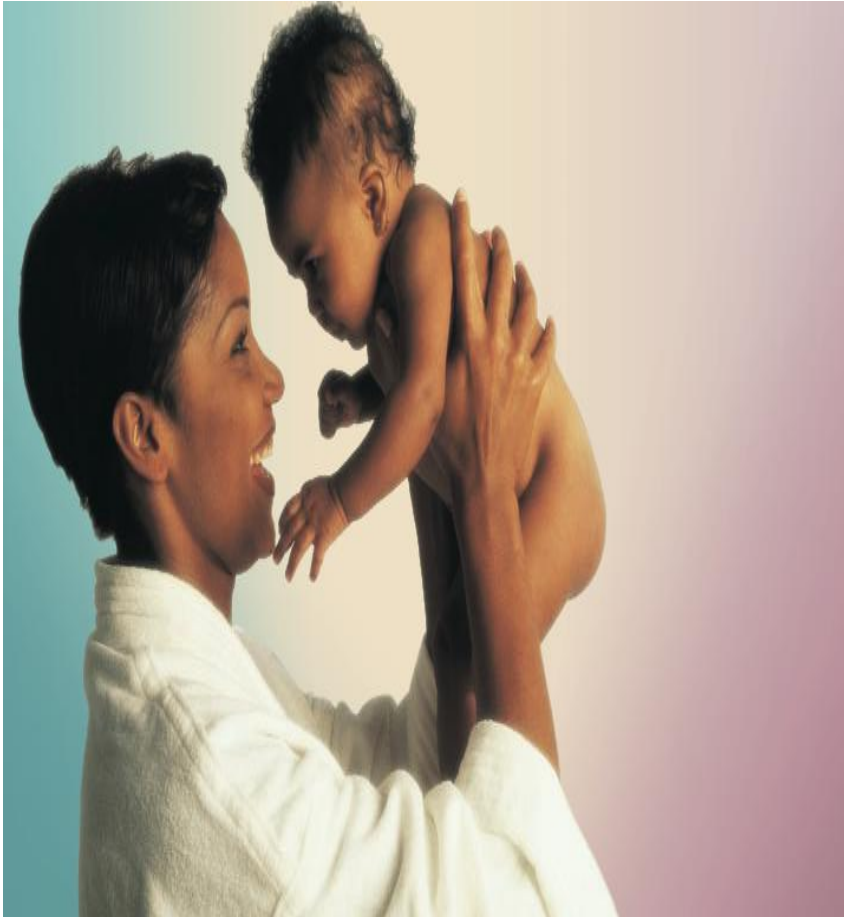


The heart radiates an electromagnetic field that energetically affects those in our environment, whether we are conscious of it or not. We experience this when we are affected by each others' moods, attitudes and feelings.



Mother and Baby

Baby's Heartbeat Detected in Mother's Brainwaves

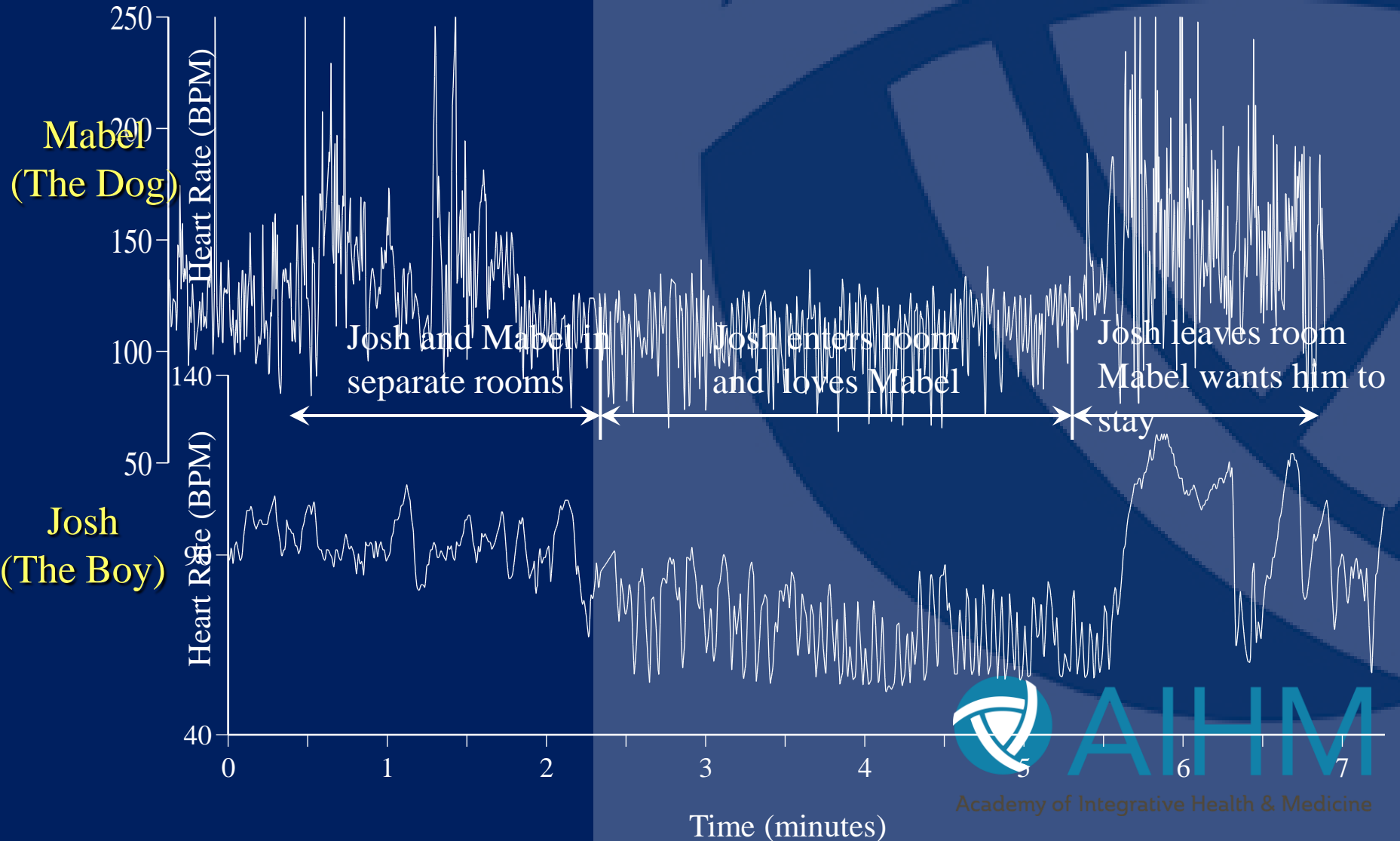




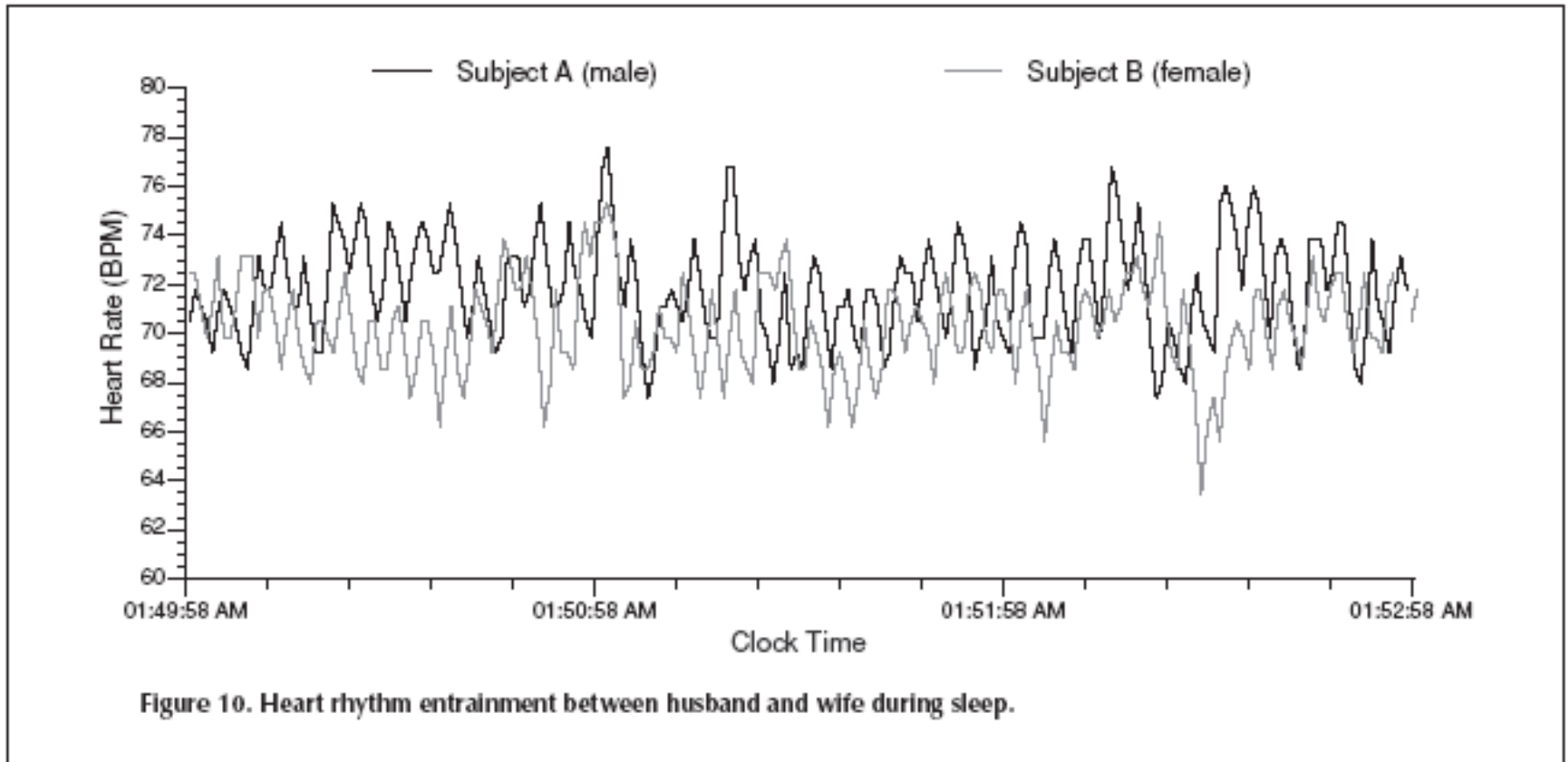
Josh and Mabel
heart rhythm entrainment

A Boy and His Dog

(Heart Rhythms)

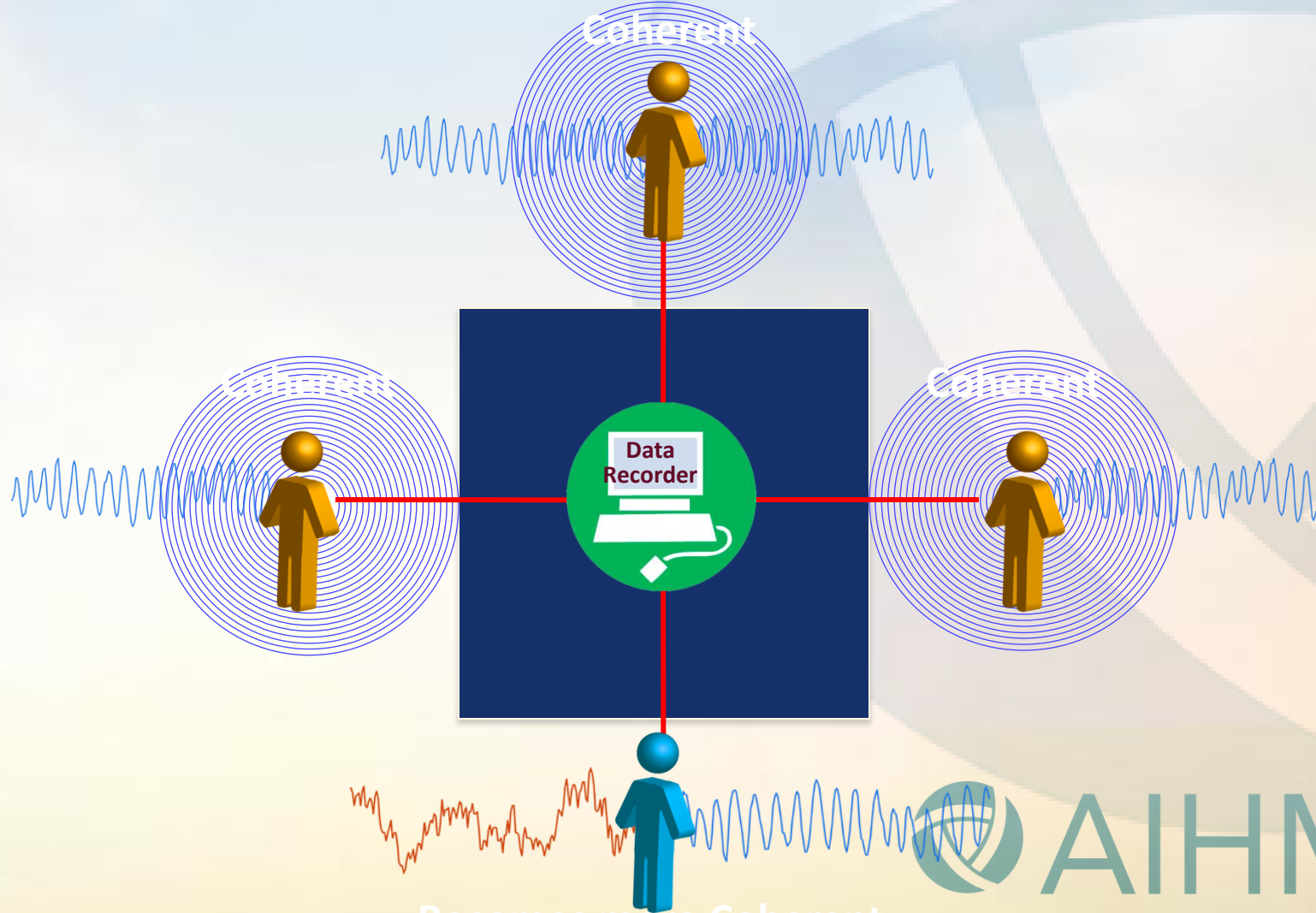


Entrainment During Sleep



From - The Energetic Heart: Bioelectromagnetic Interactions Within and Between People, Rollin McCraty, Ph.D.

Impact of a Coherent Field Environment



Becomes more Coherent



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The Minnesota Twin Family Study (MTFS) T.J. Bouchard

Both married to women named Betty and divorced from women named Linda.

One named his first son James Alan while the other named his first son James Allan.

Both named their pet dog "Toy."

Each vacation in Florida in the same three-block-long beach area.



A Dog That Seems To Know When His Owner is Coming Home

Journal of Scientific Explo. 14, 233-255 (2000)
Rupert Sheldrake and Pamela Smart



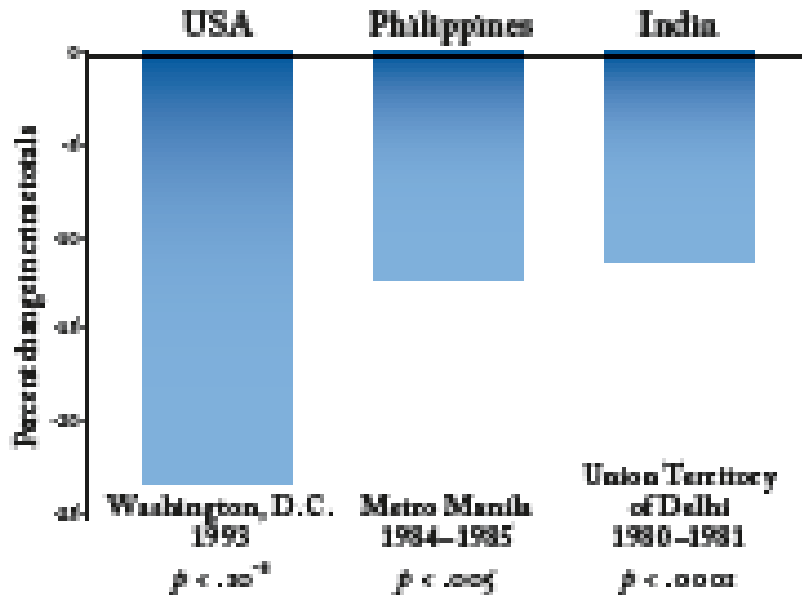
100 videotaped experiments. His owner, Pam Smart (P.S.) traveled at least 7 km away from home while the place where the dog usually waited for her was filmed.

The time-coded videotapes were scored blind.

At randomly selected times, Jaytee was at the window 4% of the time during the main period of her absence and 55% of the time when she was returning ($p < .0001$).

Decreased Crime in National Capital Districts

THROUGH GROUP PRACTICE OF THE
TRANSCENDENTAL MEDITATION AND TM-SIDHI PROGRAMS



References: Hagelin JS, Rainforth MV, Orme-Johnson DW, Cavanaugh KL, Alexander CN, Shatkin SF, et al. Effects of group practice of the Transcendental Meditation program on preventing violent crime in Washington D.C.: Results of the National Demonstration Project, June-July, 1993. *Social Indicators Research*. 1999; 47(2):153-201.

Dillbeck MC, Cavanaugh KL, Glenn T, Orme-Johnson DW, Mittlefehldt V. Consciousness as a Field: The Transcendental Meditation and TM-Sidhi Program and Changes in Social Indicators. *The Journal of Mind and Behavior*. 1987;8(1):67-104.



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“It really boils down to this: that all life is interrelated. We are all caught in an inescapable network of mutuality, tired into a single garment of destiny. Whatever affects one destiny, affects all indirectly.”

— [Martin Luther King Jr.](#)





























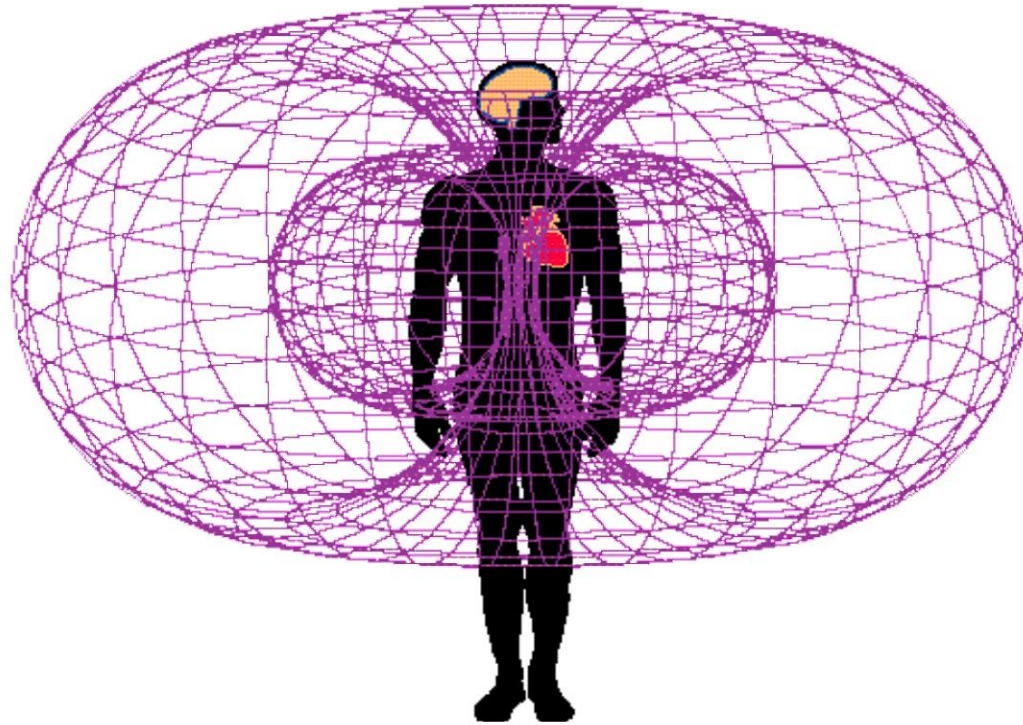
“I have found that the greatest degree of inner tranquility comes from the development of love and compassion. The more we care for the happiness of others, the greater our own sense of well-being becomes.”


- His Holiness the Dalai Lama

“The economy should not be a mechanism for accumulating goods, but rather the proper administration of our common home. It is an economy where human beings in harmony with nature, structure the entire system of production and distribution in such a way that the the abilities and needs of each individual find suitable expression in social life”

Pope Francis, July 9, 2015

Love Heals



An aerial photograph of a beach with turquoise water and a black text box containing website URLs. The text box is centered and contains three lines of text: 'MimiGuarneriMD.com' in white, 'www.PacificPearlLajolla.com' in blue with a red underline, and 'www.AIHM.org' in white. The background shows the ocean waves and the sandy beach with some tracks in the sand.

MimiGuarneriMD.com
www.PacificPearlLajolla.com
www.AIHM.org