

The Landscape of Integrative Health and Wellness in the United States



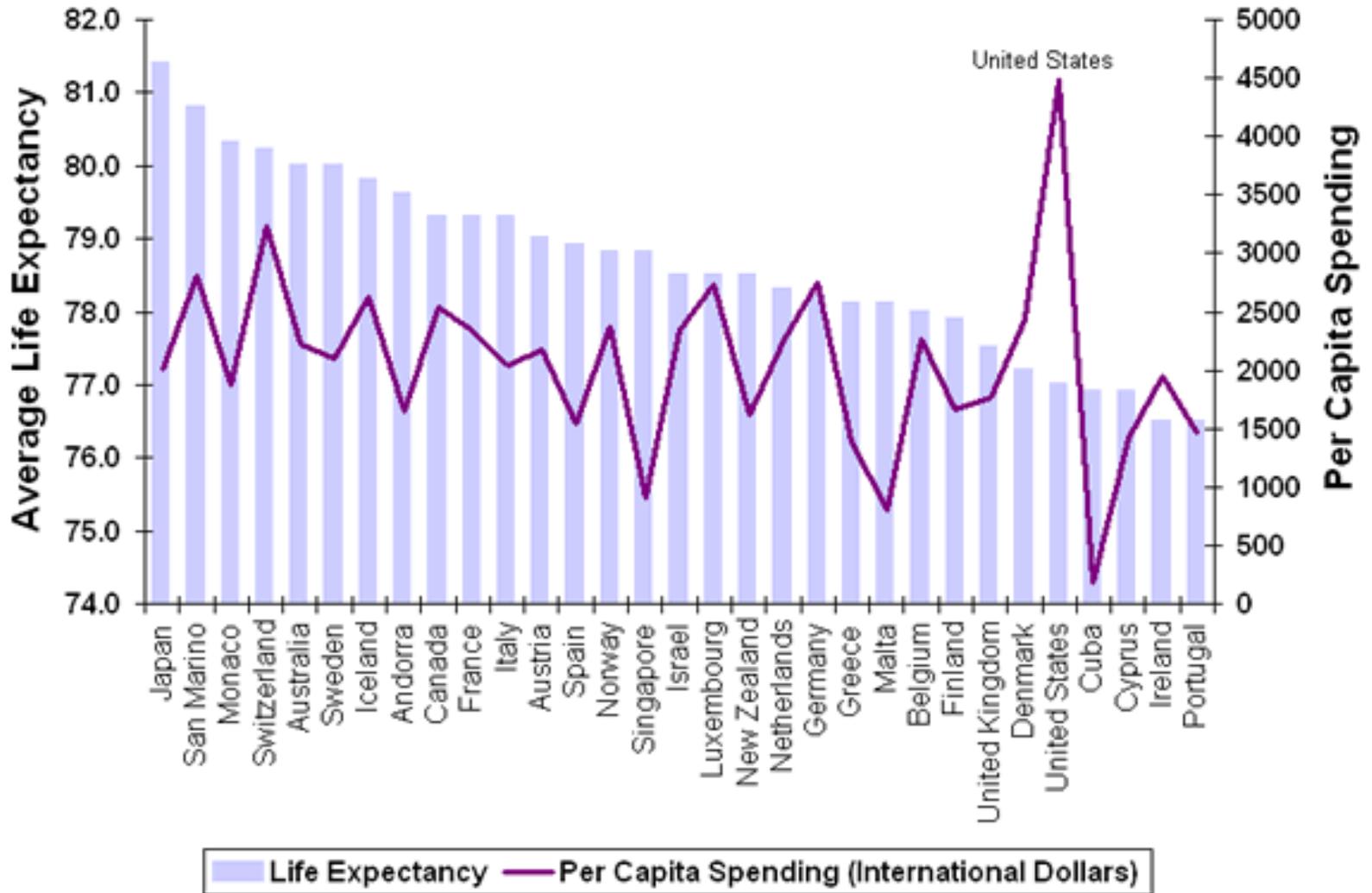
Margaret A. Chesney, PhD
Future Trends in Healthcare
November 16, 2016



Overview

- Consider the current context giving rise to interest in integrative medicine
- Review the growth of integrative medicine, and recent focus on health and wellness
- Present examples of the integrative medicine evidence base that highlight issues
- Discuss potential opportunities and future directions

The Cost of a Long Life



Data from 2000, UC Atlas of Global Inequality, 2014



Healthcare Trends - Prevalence

From 2000 – 2009 in the United States

- Heart disease: 25% increase
- Diabetes: 32% increase
- Stroke: 27% increase

*Data Trends and Maps Website <http://www.cdc.gov>,
Gaudet T, ICC-CIM, 2013*



Health Outcomes: Heart Disease

Cost of treatment:

- 1.3 million angioplasties, \$48,000 each = \$60B*
- 448,000 bypass, \$100,000 each = \$44B*

Outcomes:

- Angioplasties, stents – may not prolong life or prevent heart attacks in stable patients
- Bypass surgery prolongs life in only a fraction of patients

**AHA, **Boden, NEJM, 2007; Stergiopoulos, Arch.Int. Med, 2012*

IOM SUMMIT ON
INTEGRATIVE MEDICINE
AND THE HEALTH
OF THE PUBLIC

February 25 - 27, 2009



“The disease-driven approach to care has resulted in

- *spiraling costs as well as*
- *a fragmented health system that is*
- *reactive and episodic as well as*
- *inefficient and impersonal.”*

IOM Summit, 2009



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Integrative Medicine - 2014

*From a “disease-driven” to a “patient-driven”
approach to care*



“The field of integrative medicine and health ...

- Reaffirms the importance of the relationship between the practitioner and patient,
- Focuses on the whole person,
- Is informed by evidence, and
- Makes use of all therapeutic and lifestyle approaches, health care professionals and disciplines to achieve optimal health and healing.”

Complementary vs. Integrative Medicine?

- Earlier definition: “Integrative Medicine integrates the best evidence-based conventional and **complementary medicine**”

then in 2014...

- “Integrative medicine and health makes use of **all appropriate therapeutic and lifestyle approaches**, healthcare professionals and disciplines to achieve optimal health and healing.”

Integrative Health and Medicine is...

- *Patient Centered,*
- *Holistic, and*
- *Comprehensive*





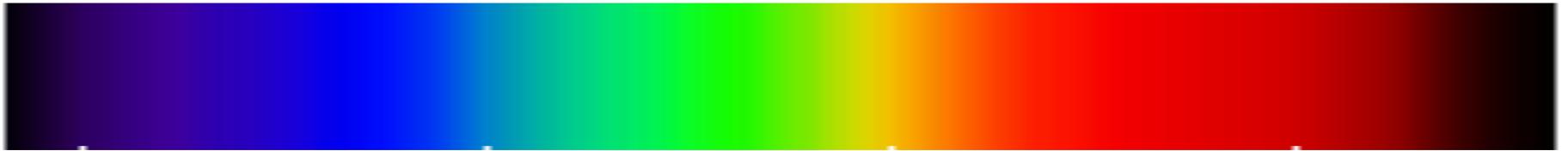
Integrative Medicine



Complementary
Medicine



Conventional
Medicine



Acupuncture

Stress Management

Surgery

Yoga/Tai Chi

Physical Activity

Medication

Meditation

Nutrition

Radiation

Massage

Weight Loss

Immunotherapy

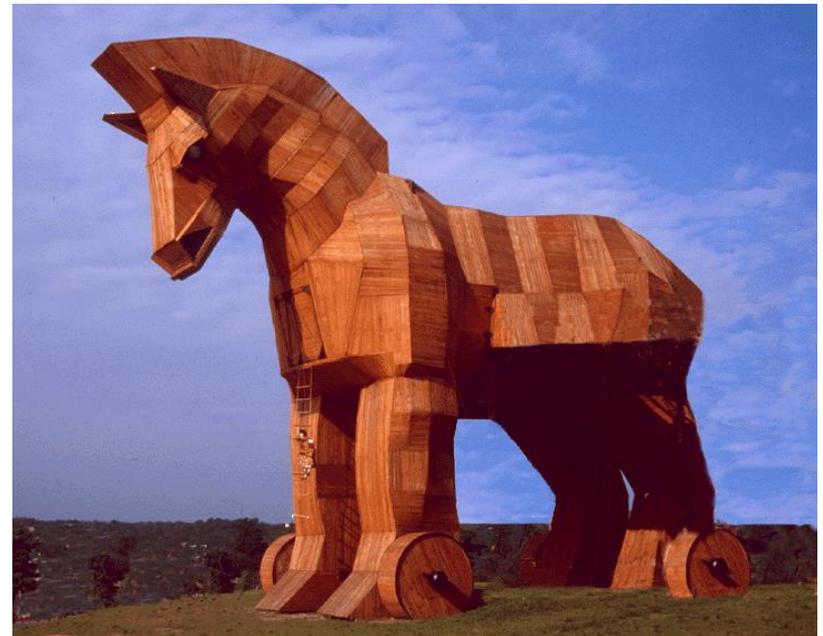
Biofeedback

What's in a Name: Integrative Medicine?

- “Integrative medicine and health makes use of **all appropriate therapeutic and lifestyle approaches**, healthcare professionals and disciplines to achieve optimal health and healing.”

Trojan Horse?

“CAM”?



Survey of Infectious Disease Physicians

Survey of 311 infectious disease physicians

	Believe “Mildly” to <u>“Very Effective”</u>
■ Artimisinin/malaria	80%
■ Omega 3/hyperlipidemia	78%
■ Cranberry for UTI	54%
	<u>Interest</u>
■ Interest in CAM*?	56%
■ Interest in Integrative Med.?	80%



**Complementary and Alternative Medicine*

(Shere-Wolf, Tilburt, Chesney, Evidence Based CAM, 2013)

1998: NIH National Center for Complementary and Integrative Health

- Natural Products

 - Dietary supplements



- Mind and Body

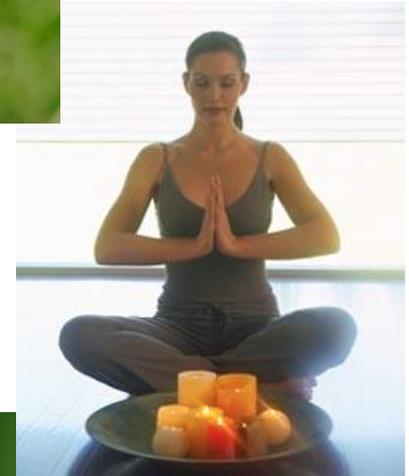
 - Deep Breathing

 - Relaxation/Meditation

 - Yoga/Tai Chi

 - Therapeutic Massage

 - Acupuncture



*Previously: OAM 1991-1998, Dr. Jonas, Dir. 1995-1998

NCCAM 1998-2014

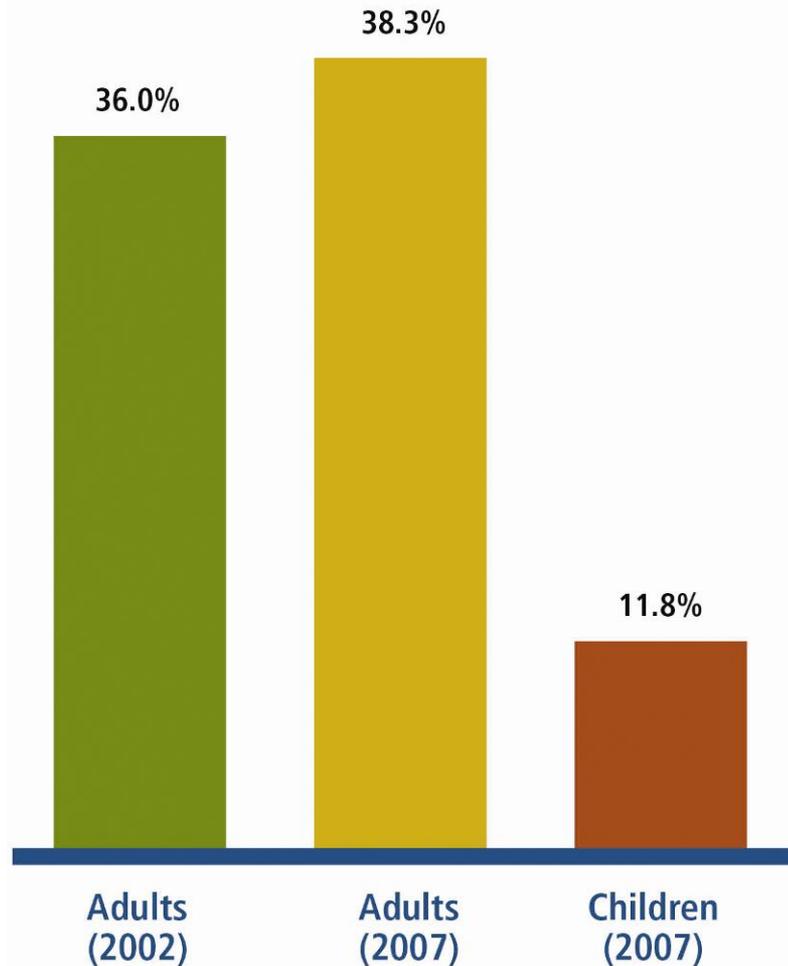


Complementary / Integrative Medicine Use Increasing

- National Health Interview Survey in 2002, 2007, & 2012
- National random sample
 - 2002: 31,044 adults
 - 2007: 23,393 adults & 9,417 children
 - 2012 : 34,525 adults & 10,218 children



CAM Use by U.S. Adults and Children



The 2007 Report Indicated

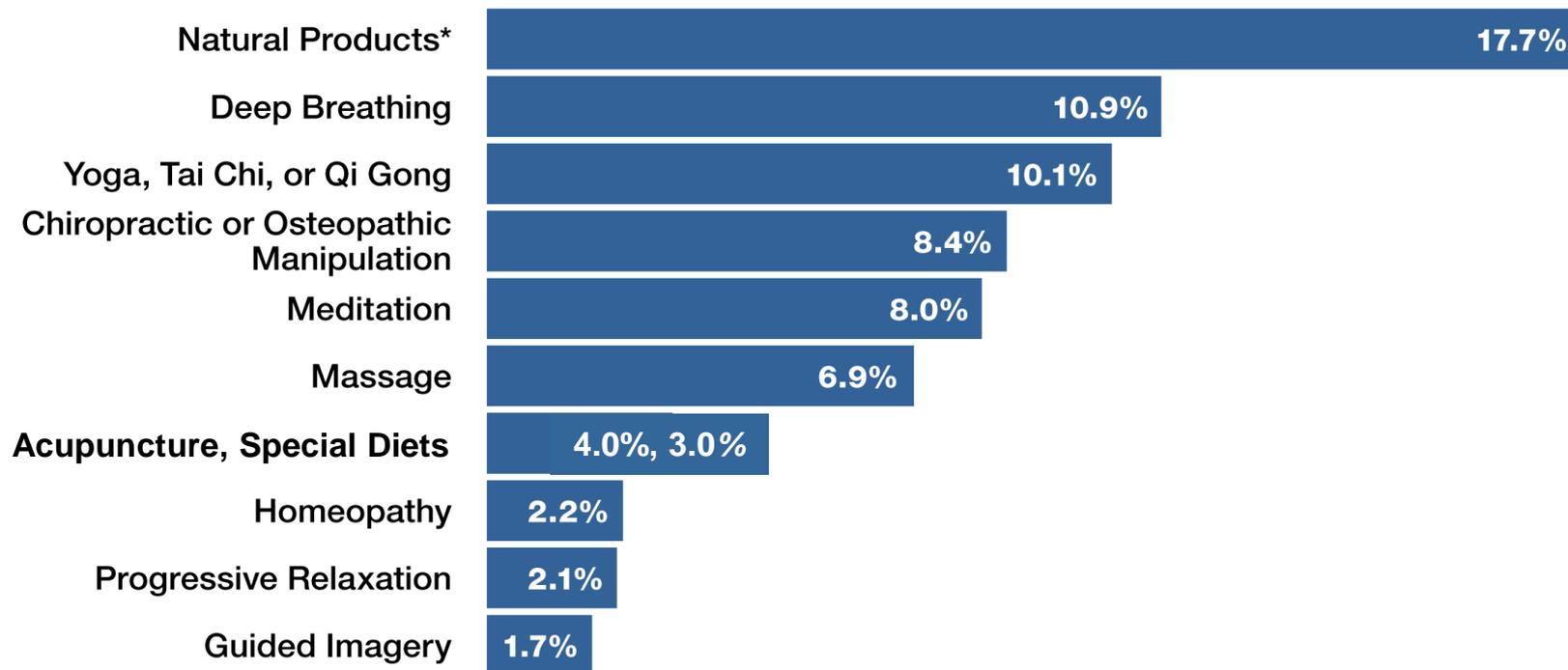
- Over 38% of adults using complementary medicine within the past 12 months
- Total estimated adults using complementary med.
 - *over 115 million*
 - *increase of 12 million in 5 years*
- Almost 12% of children given complementary medicine within the past 12 months

Source: Barnes PM, Bloom B, Nahin R. *CDC National Health Statistics Report #12. Complementary and Alternative Medicine Use Among Adults and Children: United States, 2007.* December 2008.

Use of Complementary Health Approaches in the U.S.

National Health Interview Survey (NHIS)

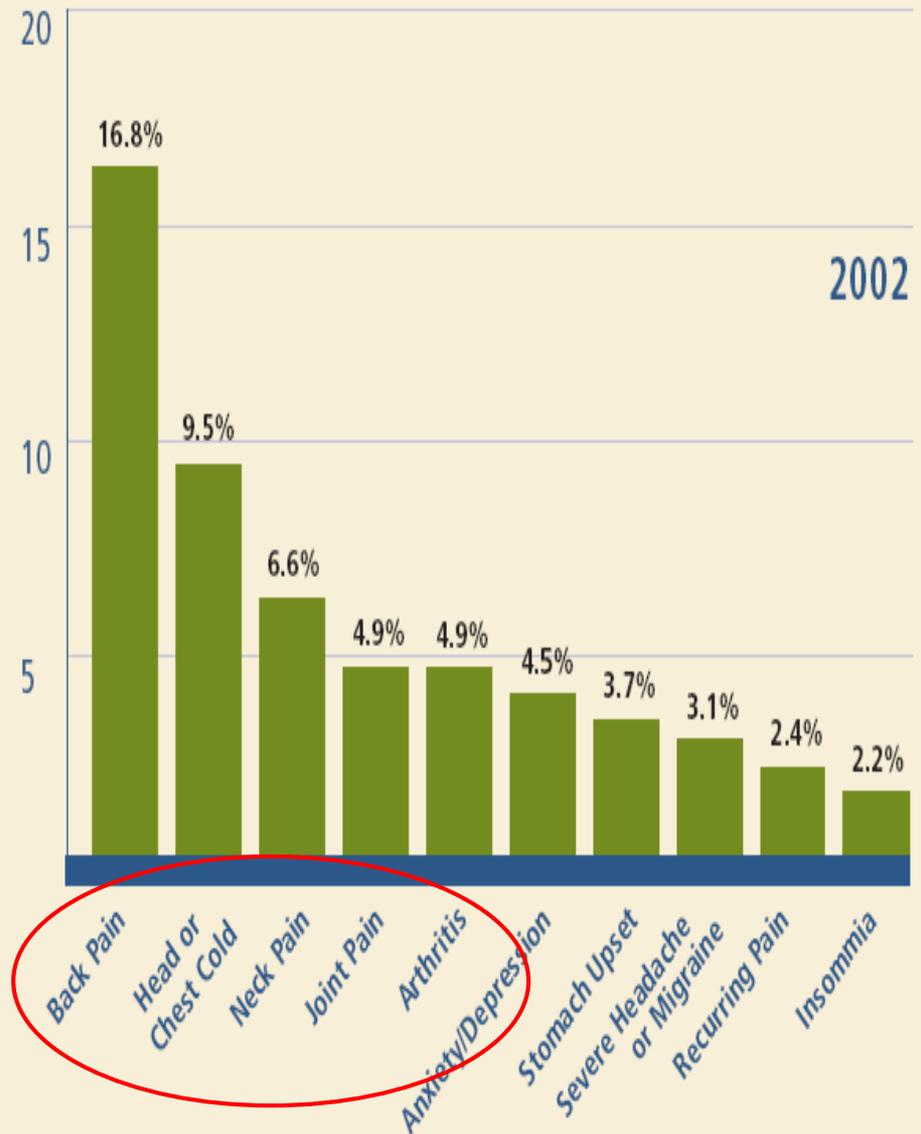
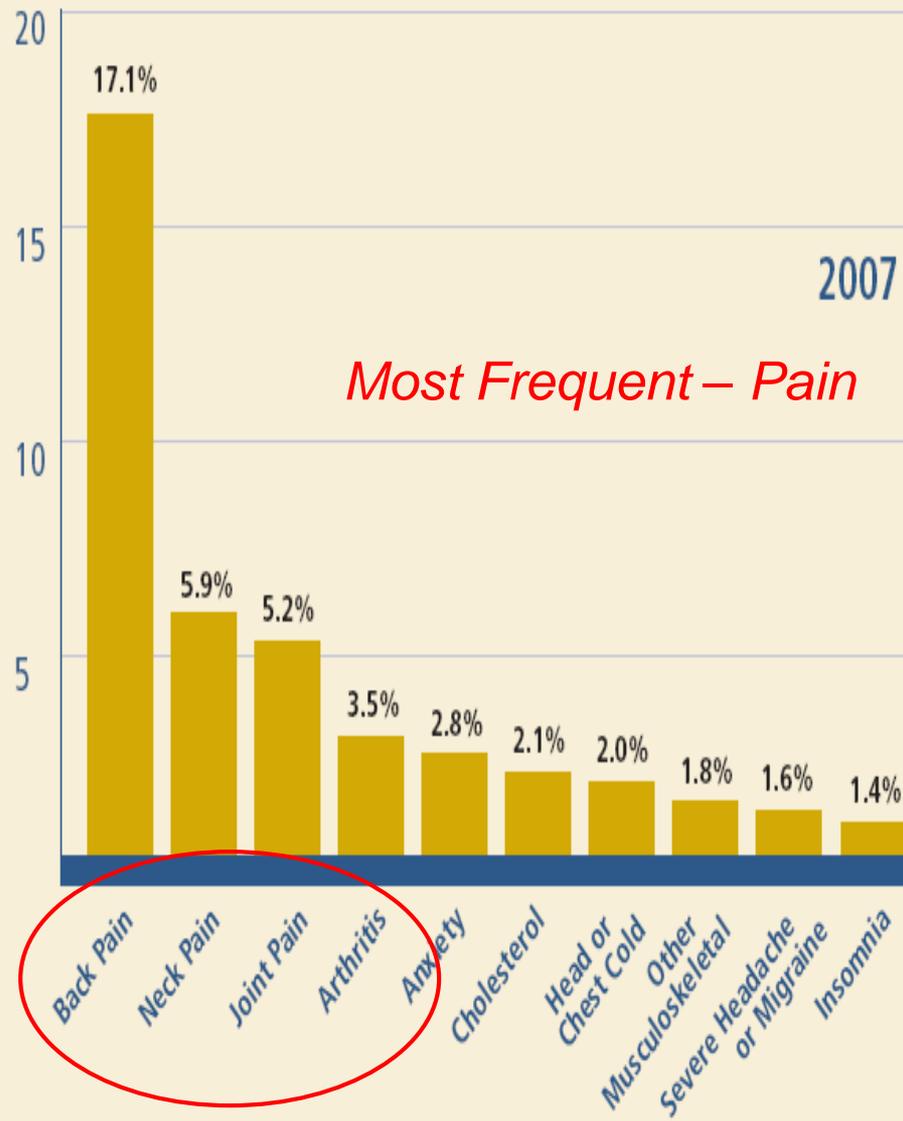
10 most common complementary health approaches among adults—2012



*Dietary supplements other than vitamins and minerals.

Source: Clarke TC, Black LI, Stussman BJ, Barnes PM, Nahin RL. Trends in the use of complementary health approaches among adults: United States, 2002-2012. National health statistics reports; no 79. Hyattsville, MD: National Center for Health Statistics. 2015.

Figure 4 Diseases/Conditions for Which CAM Is Most Frequently Used Among Adults



Integrative Medicine in US Hospitals

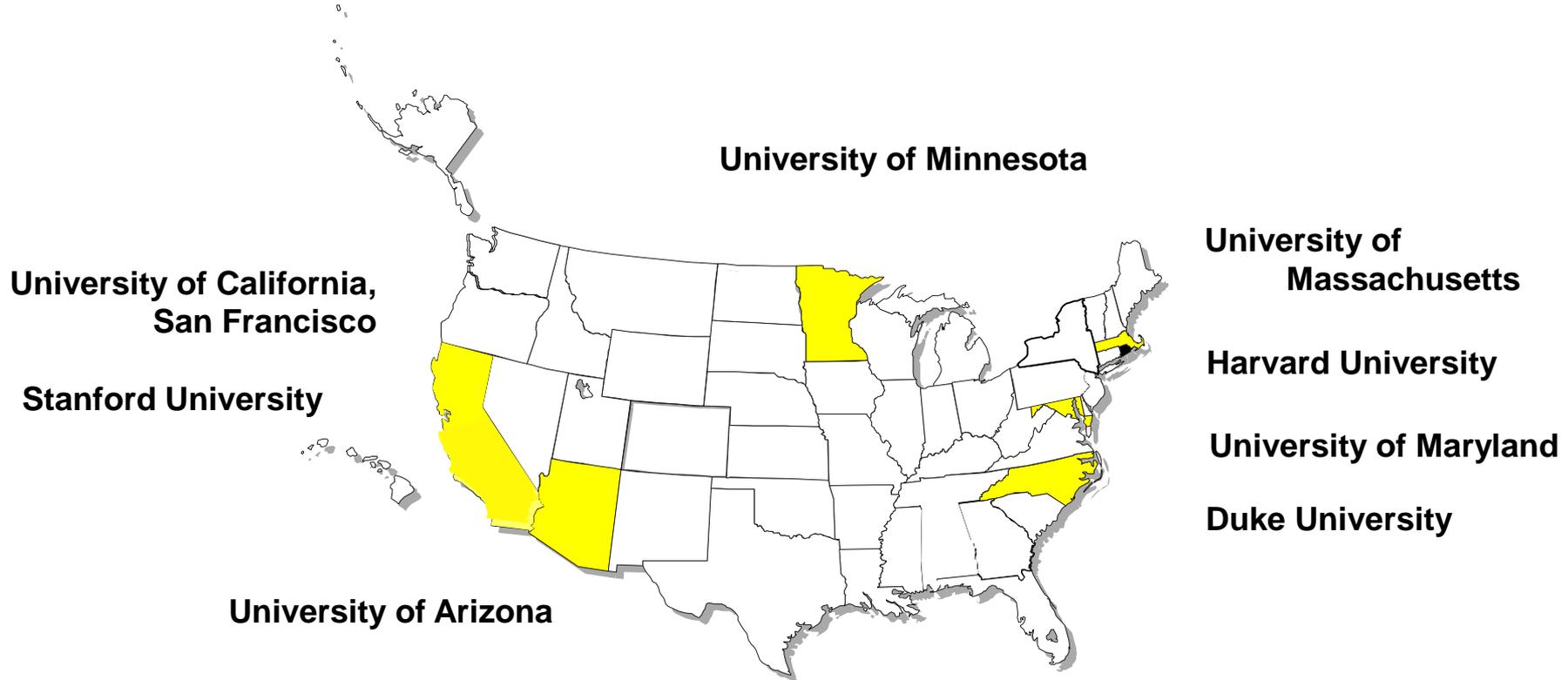
- Hospitals offering Integrative Medicine services
 - 8% in 1998
 - 17% in 2002
 - 27% in 2005
 - 37% in 2008
 - 42% in 2011
- Key reasons
 - **Patient demand** **85%**
 - Clinical evidence 74%





ACADEMIC CONSORTIUM
FOR **INTEGRATIVE**
MEDICINE & HEALTH

1999: Consortium Formed - 8 Centers



Albert Einstein/Yeshiva University

Allina Health Systems

Aurora Health Care

Beaumont Health System

Boston University

Central Maine Healthcare

Cleveland Clinic

Columbia University

Connor Integrative Health

Duke University

Emory University

Georgetown University

George Washington University

Harvard Medical School

Johns Hopkins University

Mayo Clinic

McMaster University, Ontario

MD Anderson

Medstar Health

Memorial Sloan Kettering

Meridian Health

Mount Sinai Medical Center

Northwestern University

Ohio State University

Oregon Health & Science University

Pennsylvania State, Hershey

Rutgers New Jersey Medical School

Scripps Health

Sutter Health

Stanford University

Temple University

Tecnológico de Monterrey, Mexico

Texas Tech University Medical Center

Thomas Jefferson University

Tufts University

Universidad Autónoma de Guadalajara

University of Alberta

University of Chicago

University of Cincinnati

University of Colorado

University of Connecticut

Univ. of Hawaii at Manoa

University of Kansas

University of Kentucky

University of Maryland

University of Massachusetts

University of Miami

University of Michigan

University of Minnesota

University of New Mexico

University of North Carolina

University of Pennsylvania

University of Pittsburgh

University of Saskatchewan

University of Southern Ca.

University of Texas, MB

University of Utah

University of Vermont

University of Washington

University of Wisconsin,

Vanderbilt University

Veterans Administration

Wake Forest University

Yale University



University of Arizona

University of Calgary

University of California, Irvine

University of California, Los Angeles

University of California, San Diego

University of California, San Francisco



Future Trends in Healthcare: An Integrative Approach to Health and Wellness

Meeting Homepage Sidebar:

“There is a misconception that terms such as ‘wellness,’ ‘mindfulness,’ ‘resilience’ and ‘lifestyle medicine’ are separate and distinct from the evolution of the integrative health and medicine movement.

“This half century movement gave rise to and nurtured these concepts which underlie the current transformation in healthcare.”

Dr. Len Wisneski



*Long before integrative medicine formed
the Consortium in 1999*

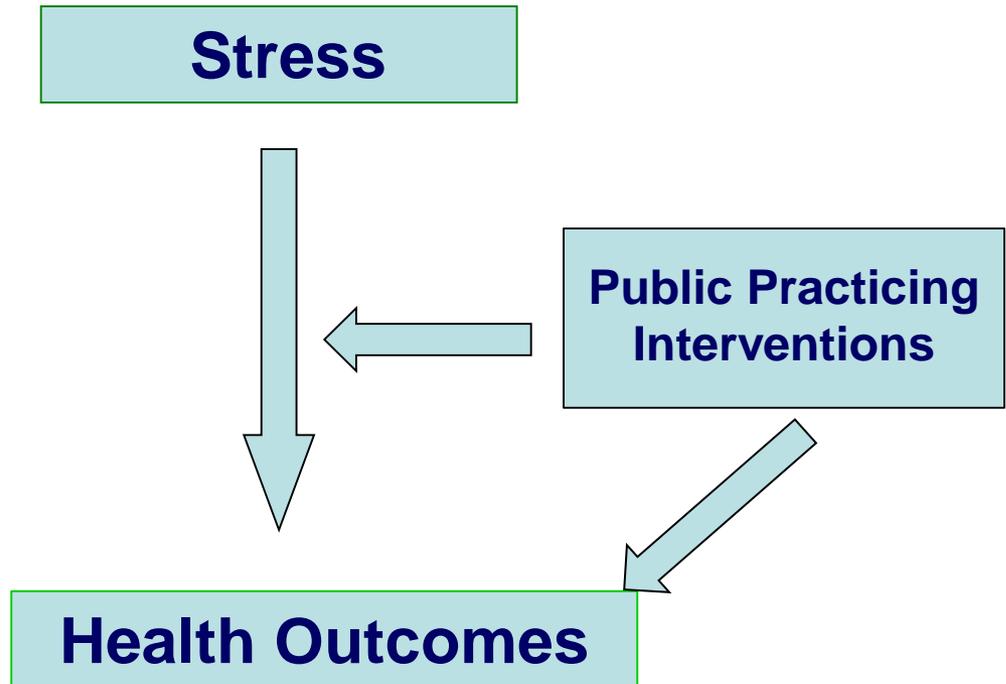
- Research had documented the interaction between mind and body, and particularly, stress and health
 - Stress → disease
(either directly or indirectly through risk factors, e.g., diet, smoking, alcohol)
 - Lifestyle → disease – e.g., cardiovascular disease, cancer
- 1939 American Psychosomatic Society – 60 yrs.
- 1954 American College of Preventive Medicine – 45 yrs.
- 1978 Society for Health Psychology – 21 yrs.
- 1979 Society of Behavioral Medicine – 20 yrs.

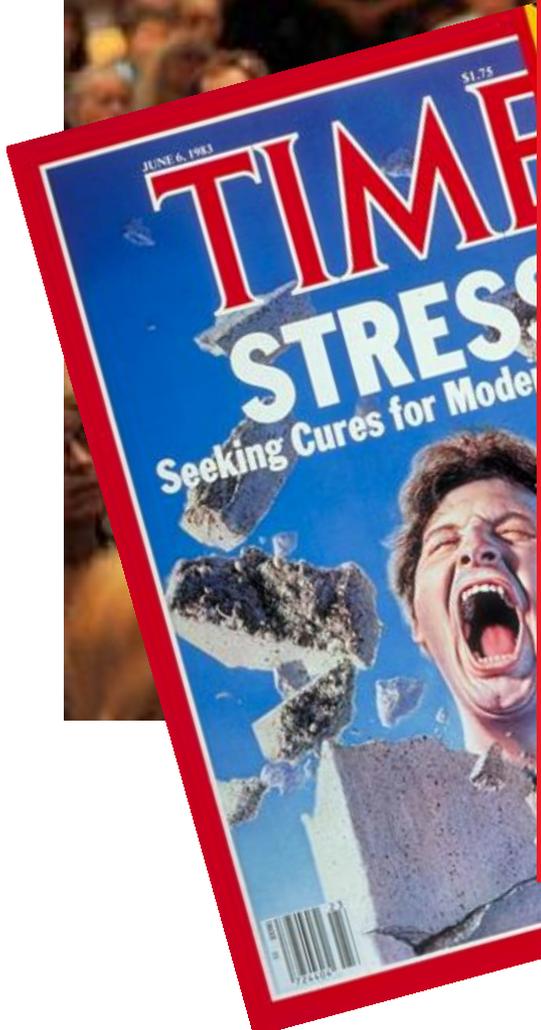
60/20+ yrs. → Public Awareness



The public heard the news about stress and took action

- Public created a “market”
- Pressed Congress for NCCIH in 1998





SEPTEMBER 12, 2011

INSIDE GADDAFI'S PALACE | **Whoa, cowboy: How Romney can beat Perry** BY JOE KLEIN | **Georgia seeks a new alliance against Russia** | **Why India needs an Arab Spring cleaning**

TIME

What to Eat Now

UNCOVERING THE MYTHS ABOUT FOOD BY DR. OZ

www.time.com AOL Keyword: TIME

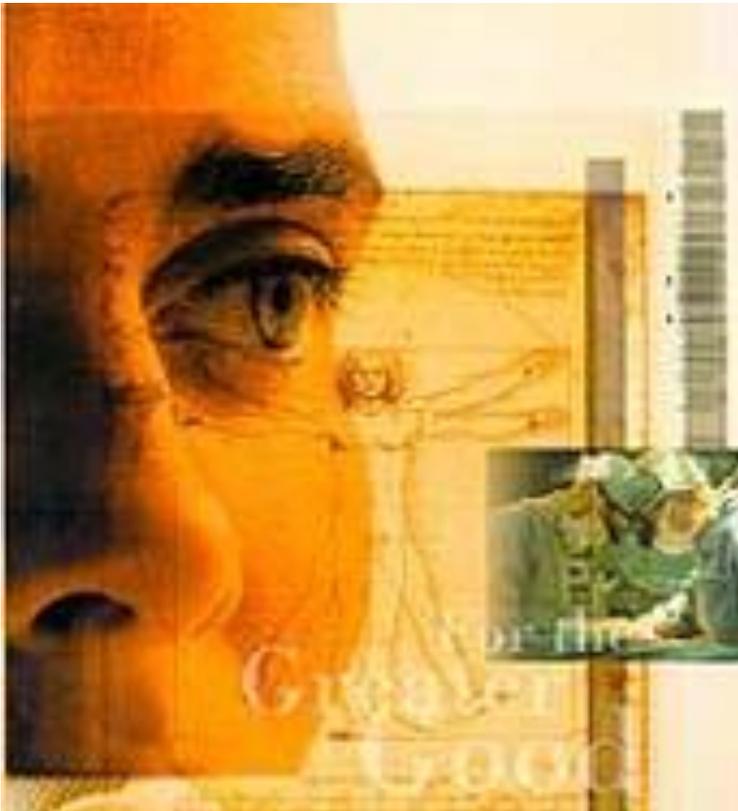




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Integrative Medicine and Health has an evidence base



- Safety
- Efficacy
- Mechanism

Highlight Issues



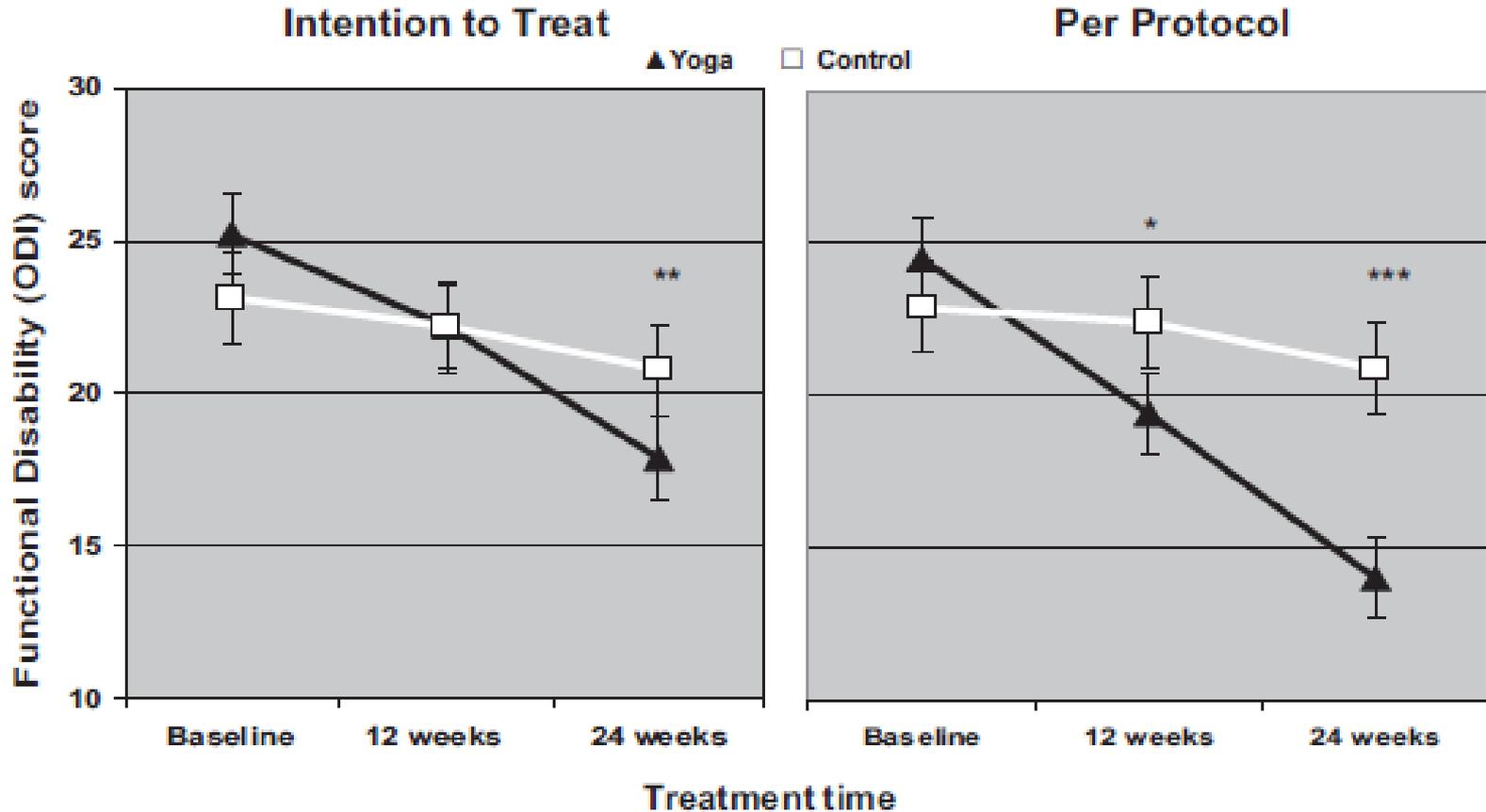
Iyengar Yoga for Chronic Low Back Pain (CLBP) - *NCCIH*

***CLBP 20-25% of all medical claims
\$34 billion in direct medical costs***

- 90 patients, CLBP randomized
 - Yoga - 24 weeks, 2 x week, 90 min. (N = 43)
 - Control - care as usual (N = 47)
- Outcomes
 - Oswestry Disability Index
 - Visual Analog Pain Scale

Issue: Control Group Selection

Iyengar Yoga for Chronic Low Back Pain - *NCCIH*



$P < 0.0125$

$P < 0.01$

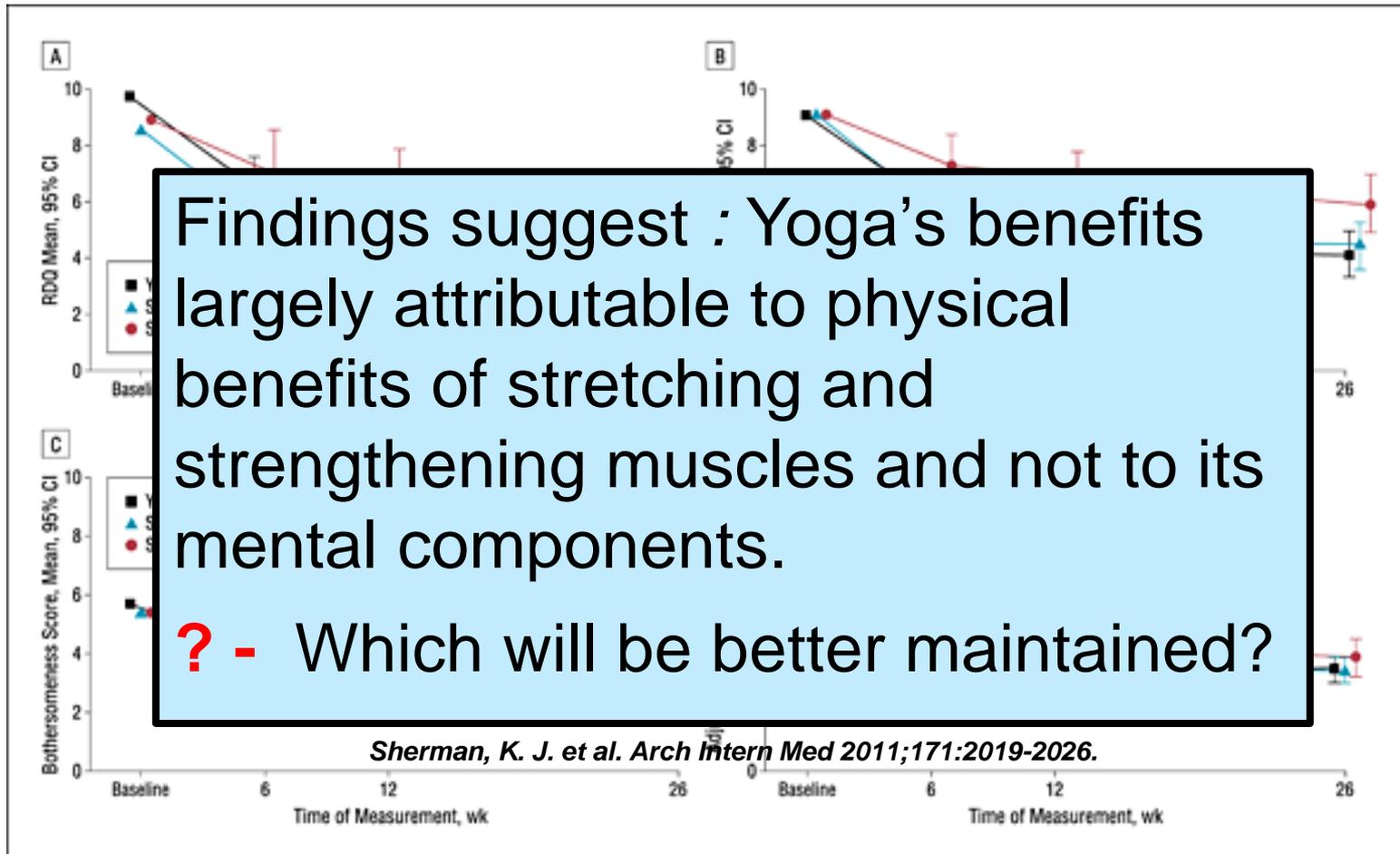
Williams, et al, *Spine*, 54, 2009

Chronic Low Back Pain Yoga vs Conventional Stretching - *NCCIH*



- 228 adults chronic low back pain
 - Randomized to 12-week program
 - Yoga class
 - Conventional stretching class
 - Self-help book
 - Outcome:
 - Roland disability index
 - Bothersomeness
- Added – Active Control Group*

Primary outcomes for yoga, stretching, and self-care at baseline, 6, 12, and 26 weeks



Larger Trial: Chronic Low Back Pain MBSR vs CBT vs Usual Care - *NCCIH*



- 342 adults chronic low back pain
- Randomized to
 - MBSR (8 weekly, 2-hr classes)
 - CBT (8 weekly, 2-hr classes)
 - Usual care control
- Outcome:
 - Roland Disability Index
 - Bothersomeness

*Issues: New Groups
New “Dose”*

Larger Trial: Chronic Low Back Pain MBSR vs CBT vs Usual Care - NCCIH

■ Participants

- Mean age 49.3
- 65.7% female
- Mean duration of pain 7.3 yrs



■ Adherence

- 53.7% attended 6 or more sessions
- ~~86% completed 26 wk follow-up~~
- 85% completed 52 wk follow-up

Issue:
Low adherence
...and this is just to sessions
What about home practice?

Larger Trial: Chronic Low Back Pain MBSR vs CBT vs Usual Care - *NCCIH*

Outcomes

<u>Group</u>	<u>MBSR</u>	<u>CBT</u>	<u>UC</u>
Roland RDQ	60.5%	57.7%	44.1%
Less Bothersome	43.6%	44.9%	26.6%



MBSR and CBT – equally helpful

Both MBSR and CBT were superior outcomes to Usual Care

- Interpretation:
These findings indicate that either MBSR or CBT are effective treatment options for chronic low back pain

Mechanisms of Action in Integrative Medicine



- The underlying mechanisms of action for effective integrative medicine approaches need to be defined
- The sympathetic nervous system has been the starting point for these studies
- The role of other systems such as the endocrine and immune system, and other biochemical pathways also need to be investigated
- For example, **the respiratory system** can have surprising effects on mechanisms involved in the development of salt-sensitive hypertension, which is involved in 50% of essential hypertension

Stress → Inhibited Breathing?

Stress

→ *Fight or Flight*

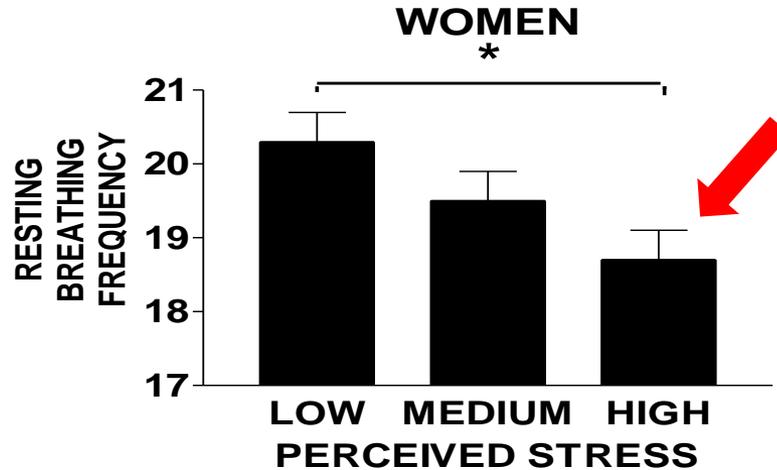
→ *“Freeze”*

Vigilance

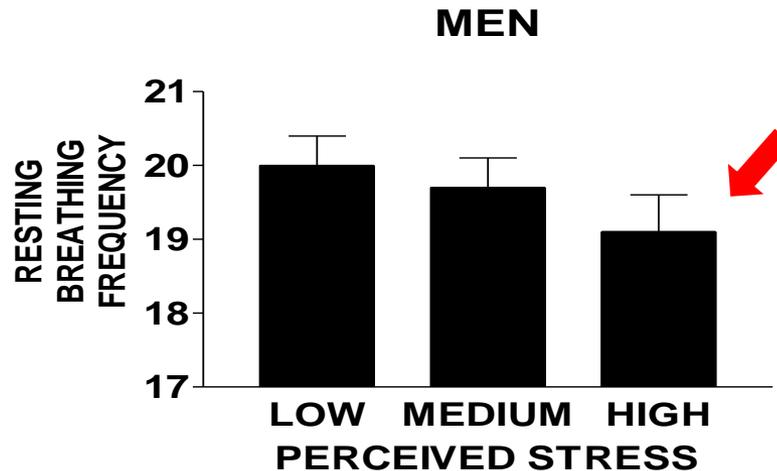


→ *Inhibited Breathing*

Psychological Stress and Inhibited Breathing



N = 278
Men &
Women

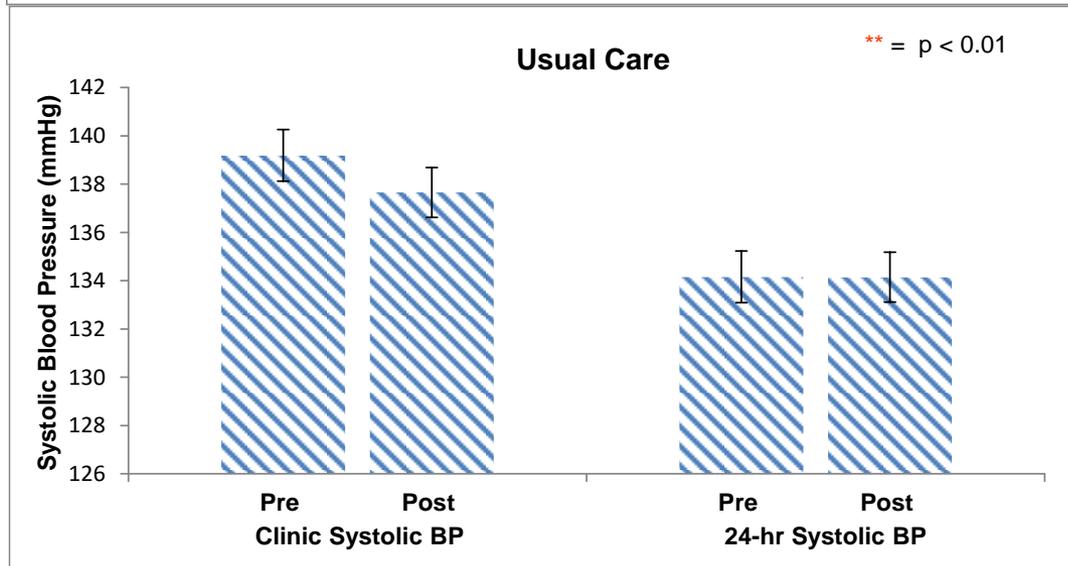
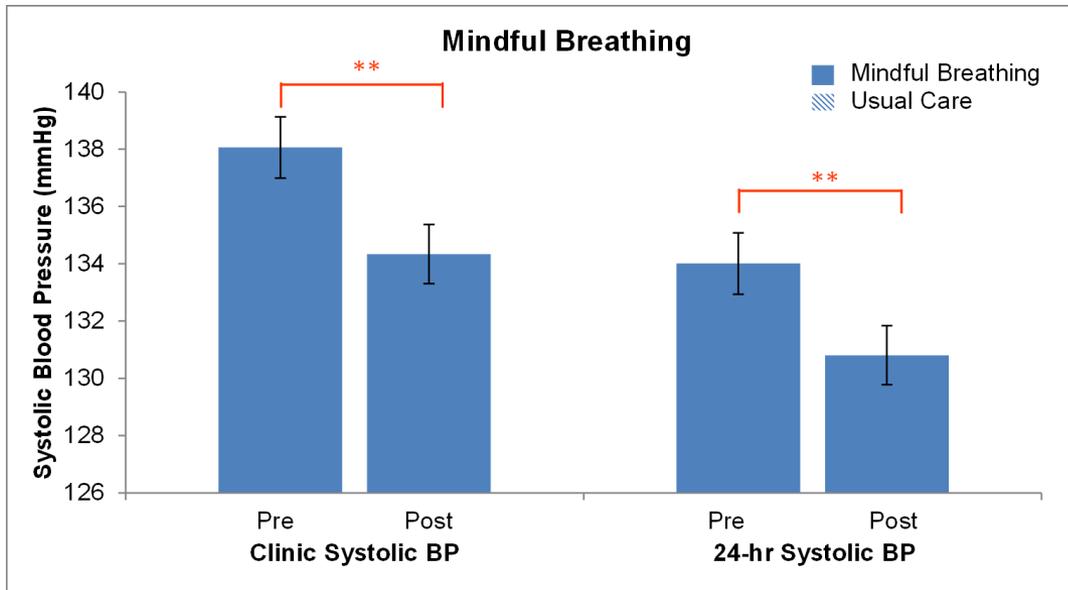


Mindful Breathing for Women with Pre-hypertension – *Project Inspire*

- 94 women with prehypertension (50-79)
(SBP 120-139; DBP 80-89)
- Randomized to 8 session program
 - Mindful Breathing N = 48
 - 8 weekly **videotaped** sessions – *controls for training differences*
 - Individually administered
 - Usual Care Control N = 46
- Outcomes:
 - Clinic BP
 - 24 hour BP



Mindful Breathing for Prehypertension



*Chesney, Reeves,
Anderson et al., ICIMH, 2016*



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Opportunities – Address Adherence in Integrative Medicine

Meditation Diary

Date _____ Time _____ AM / PM
Place _____
Duration of meditation _____
Number of persons in session _____
Nature of your thoughts during meditation:
a) physical b) mental c) vital d) psychic
Method of your meditation:
a) concentration b) contemplation c) natural
d) watching of thoughts e) other
Did you use a mantra? Yes / No
Did you experience thoughtfulness?
some / much / entirely / not at all
Did you have a vision? Yes / No
Did you experience drowsiness? Yes / No
Do you feel a pressure in any part of your
body now? Yes / No
How do you feel now? a) calm b) silence c) peace
d) bliss e) fine f) depressed
g) do not know exactly h) other
You may use this space to describe your experience
or problem of sadhana.

- Little attention has been paid to adherence to interventions – in clinical and research settings
 - Includes attending sessions, home practice of intervention, and maintenance over time – *vulnerability*
 - Adherence is important to achieving effectiveness
 - Adherence by study participants – *likely inflated (selected, paid)*
 - Adherence is measured by self-report diaries – *also inflated*
- Research Opportunity
 - Determine the extent of the challenge, investigate drop-outs
 - Identify correlates and develop supportive strategies
 - Implement approaches to engage, motivate individuals
 - Result: Strengthen intervention effectiveness



*When we think of
health care...*

Optimal Health

Resilience

*Reduced vulnerability
to daily stress*

*Treatments that
promote healing
prevent illness*

Health

“Neutral”

*Integrative
Medicine
interventions*

*The goal of
Integrative Medicine
go the distance,
to achieve optimal health*

Ill-health



Future Directions – Integrative Medicine ...Be Bold

- Must move beyond the clinic setting and one-to-one care to include *communities and neighborhoods*
- Cannot allow children to be exposed to adverse social conditions that we know have lasting health effects
- Must expand personalized medicine to zip code as well as genetic code. Patients' ability to personalize and implement treatment depends on their neighborhood
- Step outside our clinics and labs, and consider playing a role in our communities to address the social determinants health - persuade officials that improved lifespan and reduced costs depend on creating healthy communities



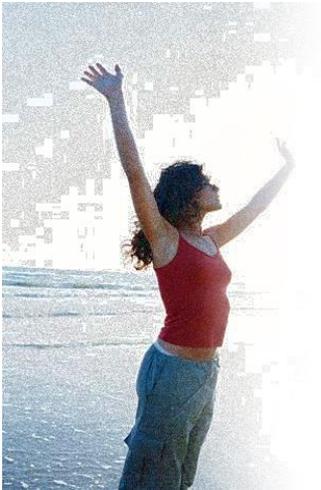
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The Goal of Integrative Medicine

To create healthier communities

- Where individuals, families, and groups
 - Have access to healthy choices that build resilience
 - Prevent disease
 - And enhance the quality of their lives



Acknowledgments

I wish to thank my many mentors and colleagues throughout the field of Integrative Health and Medicine, including those with the Academic Consortium for Integrative Medicine and Health, UCSF, and NIH for helping me stretch my boundaries.

