Health, Wellness, Mindfulness, and Movement

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About the Presenter

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DISCLOSURES

No potential conflicts related to this presentation
Health, Wellness, Mindfulness, and Movement

- Brief Intro
- Health? Well-being?
- Optimal Health?
- Approaches to Health Promotion
- Discussion
My Emory Journey...
Unique perspective on Health: From molecules/genes to Populations
Focus on Health and Well-being

“To thine own self be true…….”

William Shakespeare
Health ??
Health & Well-being

- Physical
- Emotional / Spiritual
- Environmental
- Family / Community / Societal
- Organizational
Focus on CV Population Health: The Health/Disease Continuum
JACC 2015;66:960-7
“We cannot be a strong nation unless we are a healthy nation…”

Franklin D. Roosevelt

Dedication of NIH Campus

Bethesda, MD

October, 1940
Our 2020 Impact Goal

“By 2020, to improve the cardiovascular health of all Americans by 20% while reducing deaths from cardiovascular diseases and stroke by 20%.”
<table>
<thead>
<tr>
<th>Metric</th>
<th>Poor Health</th>
<th>Intermediate Health</th>
<th>Optimal Health</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Smoking</strong> - Adults</td>
<td>Yes</td>
<td>Former, &lt;12 months</td>
<td>Never or Quit ≥12 months</td>
</tr>
<tr>
<td>Children 12-19 yo</td>
<td>In Prior 30 Days</td>
<td>Ever, Experimenting</td>
<td>Never</td>
</tr>
<tr>
<td><strong>Body Mass Index</strong> - Adults</td>
<td>≥30</td>
<td>25-29.9</td>
<td>&lt;25</td>
</tr>
<tr>
<td>Children 8-19 yo</td>
<td>&gt;95th %ile</td>
<td>85th - 95th %ile</td>
<td>&lt;85th %ile</td>
</tr>
<tr>
<td><strong>Physical Activity</strong> - Adults</td>
<td>None</td>
<td>1-149 mins/wk moderate or 1-59 mins/wk vigorous</td>
<td>150+ mins/week moderate or 60+ mins/wk vigorous</td>
</tr>
<tr>
<td>Children 12-19 yo</td>
<td>None</td>
<td>1-149 mins/wk moderate or 1-59 mins/wk vigorous</td>
<td>150+ mins/week moderate or 60+ mins/wk vigorous</td>
</tr>
<tr>
<td><strong>Healthy Diet Score</strong> - Adults</td>
<td>0-1 Factors</td>
<td>2-4 Factors</td>
<td>5-8 Factors</td>
</tr>
<tr>
<td>Children 5-19</td>
<td>0-1 Factors</td>
<td>2-4 Factors</td>
<td>5-8 Factors</td>
</tr>
<tr>
<td><strong>Total Cholesterol</strong> - Adults</td>
<td>≥240</td>
<td>200-239 or treated to goal</td>
<td>&lt;200</td>
</tr>
<tr>
<td>Children 8-19 yo</td>
<td>≥200</td>
<td>170-199</td>
<td>&lt;170</td>
</tr>
<tr>
<td><strong>Blood Pressure</strong> - Adults</td>
<td>SBP ≥140 or DBP ≥90</td>
<td>SBP 120-139 or DBP 80-89 or treated to goal</td>
<td>&lt;120/&lt;80</td>
</tr>
<tr>
<td>Children 8 - 19 yo</td>
<td>&gt;95th %ile</td>
<td>90th - 95th %ile or SBP ≥120 or DBP ≥80</td>
<td>&lt;90th %ile</td>
</tr>
<tr>
<td><strong>Fasting Glucose</strong> - Adults</td>
<td>≥126</td>
<td>100-125, or DM treated to goal</td>
<td>&lt;100</td>
</tr>
<tr>
<td>Children 12 - 19 yo</td>
<td>≥126</td>
<td>100-125</td>
<td>&lt;100</td>
</tr>
</tbody>
</table>
Status of CV Health Across America

- 2009 BRFSS, > 350K, self report

- 3.3% with ideal CV health (A);
  - 1.2% Oklahoma
  - 6.9% DC

- 9.9% with poor CV health (B: 0-2 metrics)

- Large disparities by age, gender, education, ethnicity

Fang J, et al. J Am Heart Assoc 2012;DOI.1161
PREVALENCE OF METABOLIC SYNDROME / LIFETIME RISK FOR DIABETES IN U.S.

- NHANES III - metabolic syndrome
  - 24% men; 23.4% women
  - 42% > age 60
- Lifetime risk of diabetes (if born in 2000)
  - 32.8% men, 38.5% women
- Underscores need to control obesity epidemic / improve physical activity

» Narayan, et al JAMA 2003;290:1884
INTERHEART study

• Predicts 2/3rds of MIs worldwide
  – Cigarette smoking
  – LDL/HDL ratio
• HTN
• DM
• Abdominal obesity
• Stress /depression
• Lack of daily fruits/vegetables
• Lack of daily exercise

Yusuf S., Lancet Sept. ‘04
Social Determinants of Health: Geomapping—“Hot spots”

- Health varies at a very LOCAL level
- National Health Index
  - Profile of Diabetes
Social Determinants of Health: Zip Code vs. Genetic Code?

- Health varies at a very LOCAL level

- Life expectancy in Atlanta
Socio-economic determinants of vascular disease (Food Deserts)- Presence of “L & MIC” in HIC
Mohamed Kelli, H. et al. ACC 2016

• Food desert: Locations with low food access and low income (USDA).
• 23.5 million U.S. residents live in food deserts.
• 1421 subjects residing in the Atlanta (MetaHealth, Pred Health studies)

Food deserts in the Atlanta metropolitan area (USDA map)
# Health Risks Cost to Organizations?

<table>
<thead>
<tr>
<th>Risk Factor Employee</th>
<th>Additional Cost Per High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>$1,429/yr</td>
</tr>
<tr>
<td>Inactivity</td>
<td>$495/yr</td>
</tr>
<tr>
<td>Weight</td>
<td>$271/yr</td>
</tr>
<tr>
<td>High Stress</td>
<td>$586/yr</td>
</tr>
<tr>
<td>Hypertension</td>
<td>$148/yr</td>
</tr>
</tbody>
</table>

Health Enhancement Research Organization 2000, 2002
Center for Health Promotion. The Dollar (and sense) Benefits for Having a Smoke-Free Workplace. Lansing, Michigan
Michigan Tobacco Control Program 2000
Organizational Costs

• Direct HC-related
• Absenteeism
• “Presenteeism”
  –underperformance
Approaches to Health Promotion
Problem with “Diets”

- Semantic confusion
  - “Diet” from Latin *diaeta*…..a way of life

- Fad Diets (U.S. News & WR)
  - >95% who lose wt gain it back
  - restriction/complexity predict failure

USDA Nutrition Guidelines – June 2011

• 7 Key Messages
  1. Enjoy food but eat less
  2. Avoid oversized portions
  3. Half plate fruits/vegs
  4. Water over sugary drinks
  5. Fat free /low-fat milk
  6. Compare sodium in foods
  7. > half grains whole
Risks of sedentary behavior

• Physical activity Guidelines
  – 30 min 5X/ wk (150 min)
  – 10,080 min/ wk

• How many hours a day are we sitting…?
Pedometer-Determined Physical Activity in Healthy Adults

- < 5000 steps/day: 'sedentary lifestyle index'
- 5000-7499 steps/day: 'low active'
- 7500-9999: 'somewhat active'
- > or =10000 steps/day: 'active'
- > 12500 steps/day: 'highly active'

Work-Related Physical Activity among Cardiovascular Specialists

Abd T, Kobylivker A, Perry A,. Miller III J, Sperling L. Clin Cardiol 2012 35,2,78-82

Introduction: Current recommendations by the American Heart association, the American College of Sports Medicine, and the US Surgeon General are a minimum 30 minutes of moderate physical activity on 5 days each week. This goal has been equilibrated with 10000 steps per day. This study examines work-related physical activity (PA) among cardiovascular (CV) specialists.

Methods: All participants were from an academic tertiary center (N=28)
- 8 cardiothoracic (CT) surgeons
- 5 procedural cardiologists
- 7 general cardiologists
- 8 cardiac anesthesiologists

Demographic information
- age
- blood pressure
- waist circumference
- resting heart rate
- body-mass index
- past medical and social history

Subjects were asked to wear a spring levered pedometer on their hip for two weeks while at work and to record the total number of steps as well as number of hours worked each day.

Results: The average daily steps walked during work were 6540, 6039, 5910 and 5553 for general cardiologists, CT surgeons, procedural cardiologists and Cardiac anesthesiologists, respectively. There were no statistically significant differences in the average number of steps taken per day among the groups. However, CT surgeons worked 12.4 hours/day compared to 9.3 hours/day by the cardiac anesthesiologists (p=0.03). There were no significant differences in the demographic characteristics among any of the groups.

Conclusions: Work-related PA of CV specialists do not meet the recommended guidelines. Given their busy work schedule, obtaining the recommended PA might be a challenge for them. Cardiovascular specialists must engage in additional, out-of-hours exercise in order to achieve the adequate amount of daily required physical activity.
Physical Inactivity: A Call to Arms (Japan)

10,000 Steps Daily

30 minutes most days
Establish Local Cultures of Health

- Students / fellows/ residents
- Staff and our team-based approach to care
- Former HeartWise Program
- Mr. Nic
- Wayland Moore
Population Health measures

• Impact of moving bell curve toward better health vs. individual & episodic HC
Making the healthy choice the easy choice.....

The Built Environment
Stepathlon CV Health Study

- International, low-cost, mass-participation m-health intervention
- Annual 100-day event 2012-2014
- 69K subjects; 92% LMIC
- Work-site based teams
  - E-messages
  - Team milestones- “race around the world…”
  - Interactive online chat

“In order to carry a positive action we must develop a positive vision”

Dalai Lama
Mindfulness

- Mindfulness & presence
- CBCT
- Peace is Every Step
- Silence (in the Age of Noise)
  - Erling Kagge
Cultivating Joy, Resilience & Grit
(4 Key Psychological Assets)

• Interest- follow your heart
• Practice- with the goal of improvement
• Purpose- intention to contribute to well-being of others
• Hope-efforts will lead to improvement

Thomas Lee, Press Ganey Associates
Promoting and Maintaining the Health & Well-being of an Organization

• Understanding that human capital is valuable (ROI)
• Priority, commitment, leadership
• Cultural change (norms, walking the talk)
• Focus on teams, systems, and environmental engineering
Things don’t happen........

Things do not happen.

Things are made to happen.

#JFK

@FocusedAction

“Some people want it to happen, some wish it would happen, others make it happen.”

-Michael Jordan
It’s not a sprint......
When health is absent
Wisdom cannot reveal itself,
Art cannot become manifest
Strength cannot fight,
Wealth becomes useless
and intelligence cannot be applied.

Herophilus, 325 BC
Physician to Alexander the Great