

# Improving Wellness: Techniques for Building Resiliency

Carrie Horwitch MD, FACP

# Disclosures

- Member of wellness committee at Virginia Mason
- Certified Laughter Leader from World Laughter Tour

# Objectives

- Discuss burnout and why this topic
- Discuss improving resiliency to improve health and reduce stress
- Discuss various types of mindful practices
- Experience various mindfulness practices: breathing, MBSR, laughter, gratitude

# Burnout

- Feeling emotional exhaustion,
- Depersonalization or cynicism
- Low sense of personal accomplishment
- Burnout can effect health of the caregiver as well as quality of care given
  - West et al . JAMA 2011;306:952-60
  - Drybye et al. JAMA 2010: 304:1173-80
  - Schwenk et al. JAMA 2010;304;1181-90

# What contributes to burnout?

- Time factors
- Lack of control of practice
- EHR's
- Challenge of work-life balance
- Lack of self-care

# Disturbing epidemiology

- Suicide rates of physicians
  - Male MD 2x that of US men
  - Women MD 3-4x that of gen population
- Burnout is common
  - Estimates 25-60% affected
- Decreased physician well being
  - Higher rates of depression
  - More use of alcohol
  - Decreased empathy
    - Schernhammer et al. Am J Psychiatry 2004;161:2295-2302

# Stress Reaction

- Acute
  - “fight or flight reaction
  - Increased pulse and blood pressure
  - Acute hyperarousal
- Chronic
  - Disregulation and maladaptive coping
  - Persistent elevated BP, pulse, sleep issues, lower immune function

# Resiliency

- Definition: capability of a strained body to recover its size and shape after deformation caused by compressive stress
- Psychological resilience: individuals ability to properly adapt to stress and adversity



# Mindfulness

- Jon Kabat-Zinn PhD definition: disciplined practice of moment to moment awareness or paying attention in a particular way
- Practice of learning how to slow down and nurture calmness and self acceptance
- Form of meditation

Source: Full-Catastrophe Living

# Mindfulness based stress reduction

- 8 week program designed by Dr Kabat-Zinn based on mindful practice
- Santarnecchi et al 2014: Neuroanatomical and psychological changes after MBSR, intervention/control 23 persons
  - MRI looking at anatomic changes with MBSR-higher activation insular lobe
    - May impact pain perception
- Amutio et al 2014: 1 yr study 42 MDs after MBSR
  - Heart rate control better in intervention group
  - More mindfulness-non-judging
  - More positive energy

# On the job mindfulness

- Gauthier et al. J Ped Nurs. 2014 on-line
- Feasibility of 5 min mindful meditation for ICU RNs
- N=38, brief MBSR intervention before shift, 1mo
- Measured: burnout symptoms (maslach burnout inventory), stress levels(nursing stress scale), mindfulness, self compassion, job satisfaction
- Results: decrease in stress (sig.), increase in mindfulness and self compassion (NS)
- Job satisfaction neg correlation with mindfulness, pos correlation with stress and burnout

# MBSR for PTSD in Veterans

- JAMA 2015: 314:456-465
- RCT comparing MBSR vs present-centered
- N=116 (58 each grp)
- MBSR-8 wk 2.5 hr grp and one day retreat-attend to present moment nonjudgmental/accepting
- PC: 9 weekly 1.5 hr grp session focus on current life problems
- Results: MBSR reduced PTSD checklist scores more than PC which was sustained for 2 mo, improvement in self reported severity of PTSD but no diff in loss of PTSD dx



# Pranayam

- Regulation and control of breathing
- Prana- life force that energizes mind, body and consciousness
- Ayam- to draw out or prolong
- Small studies have show some benefit for improving FVC, FEV, reducing chol, TG in times of stress, regulating heart rate in healthy volunteers

# Right and left nostril breath

- Right nostril breath for Energy-sun energy
  - Vigor
  - Concentration
  - Alertness
- Left nostril breath for Calmness-moon energy
  - Calmness
  - Empathy
  - Sensitivity





# Gratitude-positive psychology

- Martin Seligman early work on learned helplessness- perception of inescapability and its associative cognitive collapse
- Learned optimism: focus on strengths, building competence (not correcting weakness)
- TED talk: pleasant life, good life, meaningful life

[http://www.ted.com/talks/martin\\_seligman\\_on\\_the\\_state\\_of\\_psychology#t-4337](http://www.ted.com/talks/martin_seligman_on_the_state_of_psychology#t-4337)

# Optimism vs cynical hostility

## Incident CHD and mortality

- Women's Health Initiative: N=97,000+
- Optimism: life orientation test
- Cynical hostility: Cook Medley questionnaire
- AHR (adjusted hazard ratio) reduced in optimists
  - 16% incident MI
  - 30% CHD related mortality
  - 14% all cause mortality

Cynical hostility associated with higher AHR for all cause and cancer related mortality

- Tindle et al. Circulation 2009;120:656-662

# Positive psychology: Seligman

- Positive Emotion
- Engagement
- Relationships
- Meaning
- Achievement

# Gratitude exercise

- What am I grateful for in my life?
- What is going well in my life?
- What is working for me?

# Benefits of laughter

- Reduces cortisol (stress reliever)
- Eases muscle tension
- Favorable effect on arterial stiffness
- Increases immune function
- Improves ventilation/oxidative status
- Increases pain tolerance (endorphins)
- Burns calories

# Pioneers of Laughter Therapy and Research

- **Hans Selye:** studied General Adaptation Syndrome (stress syndrome) and body's response to distress and eustress. His work forged a new study of biological stress and its effects
- **Prof William F Fry:** “Father of Gelotologie”. psychiatrist who examined the physiologic effects of laughter. His work showed that most of the major physiologic systems of the body are stimulated by mirthful laughter, including heart rate, increase endorphins for pain relief, and improved immune function
- **Dr. Lee Berk:** suggested that humor and laughter can change one's physiology. His studies have confirmed that happiness is good for you.
- **Dr. Madan Kataria:** family physician from India who stated the first laughter club in 1995 using laughter exercises rather than humor. His work has led to thousands of laughter clubs around the world

# Modulation of neuroimmune parameters during mirthful laughter

- Berk et al. Altern Ther Health Med 2001
- Obj: determine efficacy of mirthful laughter to modulate neuroimmune parameters in normal subjects.
- Design: 5 separate studies based on multivariate measures
- N= 52 healthy men
- Intervention: viewing 1 hr of humor video.

# Berk et al

- Measure: blood draw 10 min before, 30 min into video, 30 min after and 12hr after intervention
- Outcome measures: natural killer cell activity, plasma Ig, functional phenotypic markers for leukocytes
- Results: increases found in natural killer cell activity, IgG, A and M with several effects lasting 12 hrs
- Conclusion: modulation of neuroimmune parameters following laughter may provide beneficial health effects and wellness



# Humor, Laughter and pain perception in children

eCAM 2009;6:271-6

- N=18 children age 7-16
- Humor video before, during, after pain task (cold H<sub>2</sub>O)
- Recorded humor indicators (smile/laugh/child rating)
- Greater pain tolerance while viewing video
- Suggests humorous distraction helps children tolerate pain better

# Laughter and vascular function

- Sugawara et al evaluated endothelial function and central artery compliance after watching comic movies vs documentary
- N-17 healthy adults watched 30 min of comedy
- Measured: brachial blood pressure and carotid artery compliance (with US)
- Result: carotid artery compliance increased after comedy and associated with baseline flow mediated dilation
- Effect lasted up to 24 hours

**LAUGHTER!**



**IS THE BEST  
MEDICINE.**

# What can you do?

- Identify a strategy that works for you
- Practice technique for minimum of 8 weeks
- Establish wellness champions at workplace
- ACP meetings-national
  - Mindfulness
  - Laughter and meditation

# Promote the Joy of Practice: What ACP is doing

To help ACP members experience more joy in their professional lives by

- (a) Advocating reducing the unintended consequences of administrative mandates and other complexities for both physicians and their patients.**
- (b) Providing information and developing tools and resources to decrease administrative complexities, increase practice efficiency, and decrease professional isolation**
- (c) Encouraging initiatives that increase satisfaction and fulfillment derived from clinical practice.**

# Mantra-OM (AUM)

Benefit of vibration on multiple body areas

<http://health.usnews.com/health-news/blogs/eat-run/2013/10/02/your-brain-on-om-the-science-of-mantra>

# Take Home Points

- Burnout is common in medicine-identify early
- Improving resiliency by stress reduction could have positive health benefits and reduce burnout
- Many options for “mindfulness”
- Other practices: exercise, tai chi, yoga ....
- Practice makes habit

Questions?  
[carrieho@comcast.net](mailto:carrieho@comcast.net)

