Mindfulness: Promoting Total Worker Health & Safety by Being in the Moment

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University of California (UC)

- 10 campuses, 5 medical centers, 3 national labs
- > 233,000 students and > 190,000 employees
UC Office of the President (UCOP)

- Systemwide Headquarters
  - Manages fiscal & business operations
  - Supports academic & research missions
UCOP Office of Risk Services

• Implements Enterprise Risk Management
  – Includes UC Systemwide Centers of Excellence

Cheryl Lloyd
Chief Risk Officer

Ken Smith
Executive Director, EH&S
Safety Issue: Inattention/Distraction

UC Irvine Campus
Employee Injuries: Root Cause Trends 2012-2014

- Subject Inattentive/Distracted: 31%
- Proper Procedures Ignored: 18%
- Insufficient Knowledge to Determine Cause: 14%
- Inadequate Tools or Equipment: 13%
- Inadequate Skills or Knowledge: 9%
- Lack of or Inadequate Job Procedures: 6%
- Management Lacks Resources/Funding: 7%
- Lack of Communication of Expectations: 2%
Is inattention/distraction a safety hazard at your organization?

If so, how are you addressing it?
Existing Safety Trainings
Solution: Mindfulness Training
(Attention Training)
Mindfulness
Jon Kabat-Zinn, Ph.D.
Mindfulness-Based Stress Reduction (MBSR)

**Formal Practices**
- Body Scan
- Yoga-based movement
- Mindful Breathing
- Mindful Walking

**Informal Practices**
- Mindful Eating
- Mindful Driving
- Mindful Working
- Mindful of Any Moment!
Mind Full, or Mindful?
MBSR Offered Worldwide
Workplace Applications
THE MINDFUL REVOLUTION

The science of finding focus in a stressed-out, multitasking culture

BY KATE PICKERT
Mindfulness Research Centers

- Columbia
- Duke
- Eisenhower Medical Center
- Harvard
- Oxford
- Kaiser Permanente
- Scripps
- Stanford
- U Mass Medical School
- UCLA
- UCSD
- Numerous Programs Worldwide
Growth in Mindfulness Research

Figure 1. An example of growth in the mindfulness research literature across 30 years, 1980 - 2010

Notes: Results obtained from a search of the term "mindfulness" in the abstract and keywords of the ISI Web of Knowledge database on Feb. 5, 2011. The search was limited to publications with English language abstracts.
Summary of Research Findings

• **Physical Health**
  – Reduces stress, chronic pain, headaches, blood pressure, cholesterol
  – Improves immune function, sleep

• **Mental Health**
  – Reduces anxiety, depression, substance use
  – Helps OCD, eating disorders, emotion regulation

• **Healthy & Workplace Populations**
  – Reduces stress
  – Improves immune response, sleep, overall well-being
Happiness
Mindfulness Meditation Training Changes Brain Structure in Eight Weeks

ScienceDaily (Jan. 21, 2011) — Participating in an 8-week mindfulness meditation program appears to make measurable changes in brain regions associated with memory, sense of self, empathy and stress. In a study that will appear in the January 30 issue of Psychiatry Research: Neuroimaging, a team led by Massachusetts General Hospital (MGH) researchers report the results of their study, the first to document meditation-produced changes over time in the brain's grey matter.
Testing Performance

Decreased mind-wandering
Improved working memory capacity
Better performance on GRE reading comprehension

Mrazek, MD et al. (2013) Psychological Science, 24 (5), 776-781
Job Performance

Mind Fitness

Improving Operational Effectiveness and Building Warrior Resilience

By ELIZABETH A. STANLEY and AMISHI P. JHA
Driving Safety

• Mindfulness May Improve Driving Performance
  – Increases environmental awareness
  – Blocks out distractions
  – Helps to quickly identify hazards
  – Young adults lower in mindfulness texted more

Fedlman, G. et al. (2011) *Personality & Individual Differences*, 51 (7), 856-861
Cultivating Present Moment Awareness in the Workplace

University of California, Irvine Environmental Health & Safety (EH&S) is collaborating with the Susan Samueli Center for Integrative Medicine to research the impact of mindfulness on workplace health and safety. Sponsored by University of California Office of the President Risk Services, this project seeks to offer a complementary paradigm for creating safe and healthy workplaces across a variety of industries.

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• Adaptation of MBSR
  – Delivered by qualified mindfulness instructors

• 1-hour orientation session

• Formats (can be customized)
  – Original (22 hours)
    • 8 weekly 2-hour sessions + 6-hour retreat

  – Abbreviated (12 hours)
    • 10 weekly 1-hour sessions (one is a 3-hour retreat)
Informal Pilot
EH&S Staff & Facilities Managers

• Approximately 30 participants
• No active control group
• Abbreviated protocol (12 vs. 22 hours)
• Findings: Improved attention & reduced stress
Formal Pilot

- Sample
  - 50 Nurses
    - UC Irvine Medical Center
    - High injuries & errors
  - Compensation - 22 CEUs

- Random Assignment
  - Experimental
    - Mindfulness
  - Active Control
    - Health education
Mindful Handwashing
Results

• Mindfulness
  – Mindful Attention Awareness Scale

• Stress
  – Perceived Stress Scale

• Work Engagement
  – Utrecht Work Engagement Survey

• Burnout
  – Maslach Burnout Inventory
Attention Networks

- Superior parietal lobe
- Frontal eye field
- Anterior cingulate gyrus
- Posterior Area
- Temporoparietal junction
- Thalamus
- Pulvinar
- Superior colliculus

- Alerting
- Orienting
- Executive
Awaiting Results (Summer 2016)

- Work-Related Injuries
  - Occupational Health data

- Work-Related Errors
  - Self-Report

- Sick Days
  - HR data

- Job Retention
  - HR data

- Organizational Costs
  - Workers’ Compensation data & medical premiums
Participant Feedback