INTERVENTIONS

Articles testing the applied science and implementation of mindfulness-based interventions


Mason, A. E., Epel, E. S., Aschbacher, K.,...Bacchetti, P. (2016). Reduced reward-driven eating accounts for the impact of a mindfulness-based diet and exercise intervention on weight loss: Data from the SHINE randomized controlled trial. Appetite. [link]


Hebert, K. (2015). The feeling of mindfulness: How sensory processing styles influence...
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Editor-in-Chief
David S. Black, PhD, MPH

Highlights by
Seth Segall, PhD

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mindful awareness of daily experiences. American Journal of Occupational Therapy. [link]

Jones, S. M., Bodie, G. D., Hughes, S. D. (2016). The impact of mindfulness on empathy, active listening, and perceived provisions of emotional support. Communication Research. [link]


Rowe, A. C., Shepstone, L., Carnelley, K. B., Millings, A. (2016). Attachment security and self-compassion priming increase the likelihood that first-time engagers in mindfulness meditation will continue with mindfulness training. Mindfulness. [link]


METHODS

Articles developing empirical procedures to advance the measurement and methodology of mindfulness


preference for medication do equally well in mindfulness-based cognitive therapy for recurrent depression as those preferring mindfulness. *Journal of Affective Disorders.* [link]


May, R. W., Bamber, M., Seibert, G., ...Fincham, F. D. (2016). *Understanding the physiology of mindfulness: Aortic hemodynamics and heart rate variability.* *Stress.* [link]


**REVIEWS**

*Articles reviewing content areas of mindfulness or conducting meta-analyses of published research*


**TRIALS**

*Research studies newly funded by the National Institutes of Health (FEB 2015)*

Sepulveda Research Corporation (S. Taylor, PI). *The cost effectiveness of complementary and alternative treatments to reduce pain.* Veterans Affairs project #1R01HX001704-01. [link]
**Highlights**

*A summary of select studies from the issue, providing a snapshot of some of the latest research*

**Adults who lose weight in diet-and-exercise lifestyle change programs usually regain weight after the program. This is often blamed on the ready availability of good tasting high calorie food along with stress and individual tendencies toward reward-driven eating. Reward-driven eating is eating that meets emotional rather than nutritional needs; it’s often accompanied by food cravings and preoccupations, poor control of eating despite motivation to lose weight, and insensitivity to sensations of fullness.**

**Mason et al. [Appetite]** investigated the degree to which reward-driven eating and stress impacted weight loss in 158 obese participants (82% female, 59% White, average age = 47, average BMI = 35) who were randomly assigned to one of two diet and exercise interventions — one of which included mindfulness training and the other of which included progressive muscle relaxation and cognitive-behavioral skill training.

Both interventions met in groups for 17 sessions spaced over the course of 6 months. Both interventions used the same diet-and-exercise regimen: participants reduced their daily intake by 500 calories, engaged in structured aerobic and anaerobic exercise, and increased their daily general activity.

The mindfulness intervention taught sitting, walking, and lovingkindness meditation and mindful yoga, and promoted awareness of hunger, fullness, taste, food cravings, and eating triggers. The comparison intervention taught progressive muscle relaxation and cognitive-behavioral skills as well as provided additional didactic instruction on nutrition and exercise.

Participants were weighed and assessed on self-reported reward-driven eating and perceived stress at baseline and 6, 12, and 18 months after baseline.

The mindfulness group lost approximately 4.4 pounds more than the comparison group, but that difference didn’t reach statistical significance. The mindfulness group experienced a significantly greater decrease in reward-driven eating than the comparison group, a decrease that was significantly associated with weight loss at 12 months but not at 18 months. This loss of association between changes in reward-driven eating and weight loss at 18 months wasn’t due to either weight regain or increases in reward-driven eating, suggesting that some new, unidentified variables became more important in maintaining weight loss between 12 and 18 months.

Changes in perceived stress didn’t impact weight loss, perhaps because the beginning stress level of this sample was already below the national average.

Findings from this study show that a mindfulness-based diet-and-exercise intervention reduced reward-driven eating more than a diet-and-exercise intervention with progressive muscle relaxation and cognitive-behavioral skills. Mindfulness may add value to weight loss programs by helping clients cope with food cravings, regulate emotions, and attend to bodily sensations that indicate genuine hunger and satiety.
Heart disease is the largest cause of death among men and women in the United States. Lifestyle changes in smoking, diet, and exercise can help lower heart disease risk. Further, mindfulness has proposed stress-reducing effects and thus may have its own role to play in heart health. In two separate studies, May et al. [Stress] examined the association between trait mindfulness and markers of cardiovascular health and state mindfulness and fluctuations in heart rhythm and blood pressure, which are modulated by the sympathetic nervous system. The sympathetic nervous system is the part of the nervous system responsible for the "fight-or-flight" stress response.

The studies employed two samples of predominantly female, Caucasian undergraduate students. All participants were assessed for self-reported trait mindfulness using the Mindful Attention Awareness Scale. In the first study, 185 participants had their cardiovascular functioning assessed by a computer-assisted method of estimating central blood pressure from peripheral arterial activity. The researchers used an estimate of central blood pressure because it is a better indicator of cardiovascular risk than the usual peripheral blood pressure measures obtained using a blood pressure cuff. This method also provided estimates of how hard the heart was working, how much oxygen it consumed, and how much blood it received through the cardiac arteries.

The first study found that while trait mindfulness wasn’t associated with blood pressure and heart rate, it was significantly associated with improved hemodynamic functioning in terms of decreased cardiac oxygen consumption and left ventricular workload. Simply put, the heart didn’t have to work as hard for those with higher levels of trait mindfulness.

In the second study, 124 participants were randomly assigned to either a mindfulness or a control intervention. In the mindfulness intervention, participants followed a 15-minute audiotaped guided mindfulness meditation focusing on the breath and bodily sensations in an effort to induce a state of mindfulness. Control participants were told to be silent and still for 15 minutes and relax. Blood pressure variability and heart rate variability (fluctuations in the interval between heartbeats) were measured before and after the interventions. These are measures that are affected by sympathetic nervous system activity.

The second study found that the guided mindfulness meditation significantly lowered diastolic blood pressure (Cohen’s $d = .39$). It also decreased low-frequency oscillations in systolic ($d = .47$) and diastolic ($d = .50$) blood pressure, and low-frequency fluctuations in heart rate ($d = 1.95$). The term "low-frequency" refers to fluctuations of 0.04 to 0.15 oscillations per second. These results support the hypothesis that mindfulness decreases the effects of sympathetic nervous system activity on the heart: mindfulness decreased vagal tone, vasomotor tone, vascular resistance, and ventricular workload, resulting in an overall improvement in cardiovascular efficiency.

Taken together, these studies suggest that trait and state mindfulness both have roles to play in improving heart health by increasing the efficiency and reducing the workload of the cardiovascular system. Mindfulness-based interventions may be of potential benefit to patients with congestive heart failure and chronic hypertension, diseases with symptoms that are aggravated by sympathetic nervous system activity. This potential benefit is only speculative, as all of the participants in this study were young and healthy. The studies are limited by the restricted sex, ethnicity, age, and health range of its participants, the brevity of its mindfulness training, and the fact that cardiovascular activity was observed over only a short period of time.
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**Events & Conferences**

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**INFO:** Go to: http://www.huntingtonmeditation.com or contact Dr. Richard Schaub at drrichardschaub@gmail.com

**Research & Education**

**Seeking Mindfulness Practitioners for Survey**

We are seeking mindfulness practitioners to complete online survey for mindfulness research. Please consider participating if you are currently taking or have ever completed a mindfulness meditation course, such as Mindfulness-Based Stress Reduction. The purpose of this study is to help develop a new survey for mindfulness research. If you decide to take part in this study, you will be asked to complete survey questions online now and again in two weeks. If you are interested in participating, please copy or click on the link provided below:

**INFO:**
Survey link: https://redcap.vanderbilt.edu/surveys/?s=YM87WL844Y

**Books & Media**

**NEW! The Science of Happiness**

Drawing on the latest scientific research on happiness, resilience, willpower, compassion, and mindfulness, Stanford researcher Emma Seppala demonstrates that being happy is the most productive thing we can do for our personal and professional success, and shares practical strategies for increasing happiness in our daily lives. Her new book, THE HAPPINESS TRACK, is out now.

**INFO:** Learn more: http://www.emmaseppala.com/book/

**New Edited Mindfulness Volume**

Mindfulness and Buddhist-Derived Approaches in Mental Health and Addiction: Edited by Edo Shonin, William Van Gordon and Mark D Griffiths, the volume provides a timely synthesis and discussion of recent developments in mindfulness research and practice within mental health and addiction domains.

**INFO:**
http://www.springer.com/in/book/97833192222547

**Employment & Volunteer**

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