

Mindfulness-Based Approaches to Eating and Weight Loss

Carl Fulwiler MD PhD

Director, Systems and Psychosocial Advances Research Center

Department of Psychiatry

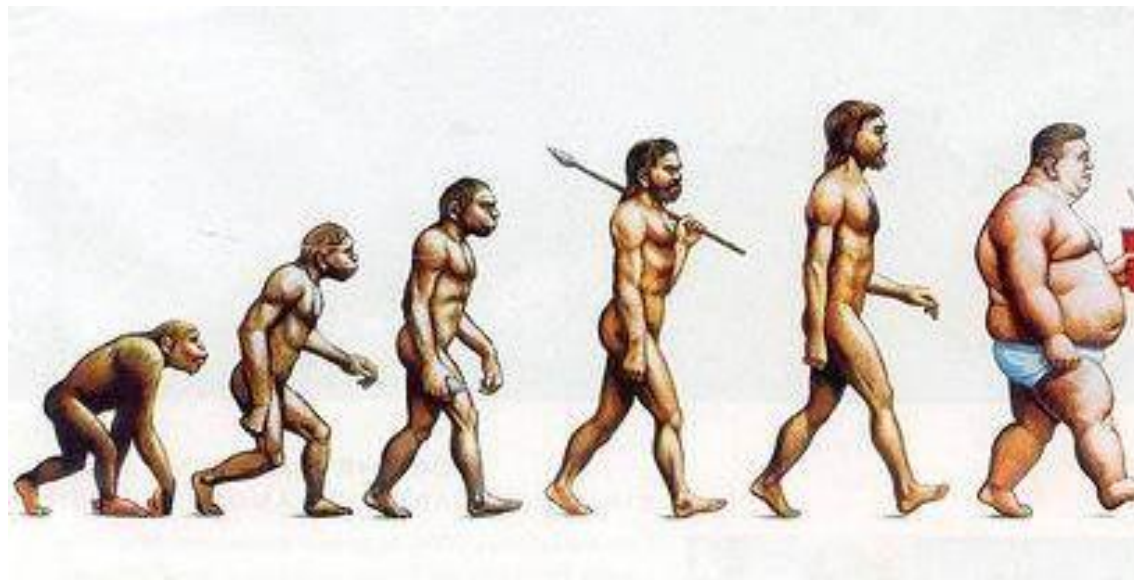
University of Massachusetts Medical School

SPARC webinar series

June 9, 2015

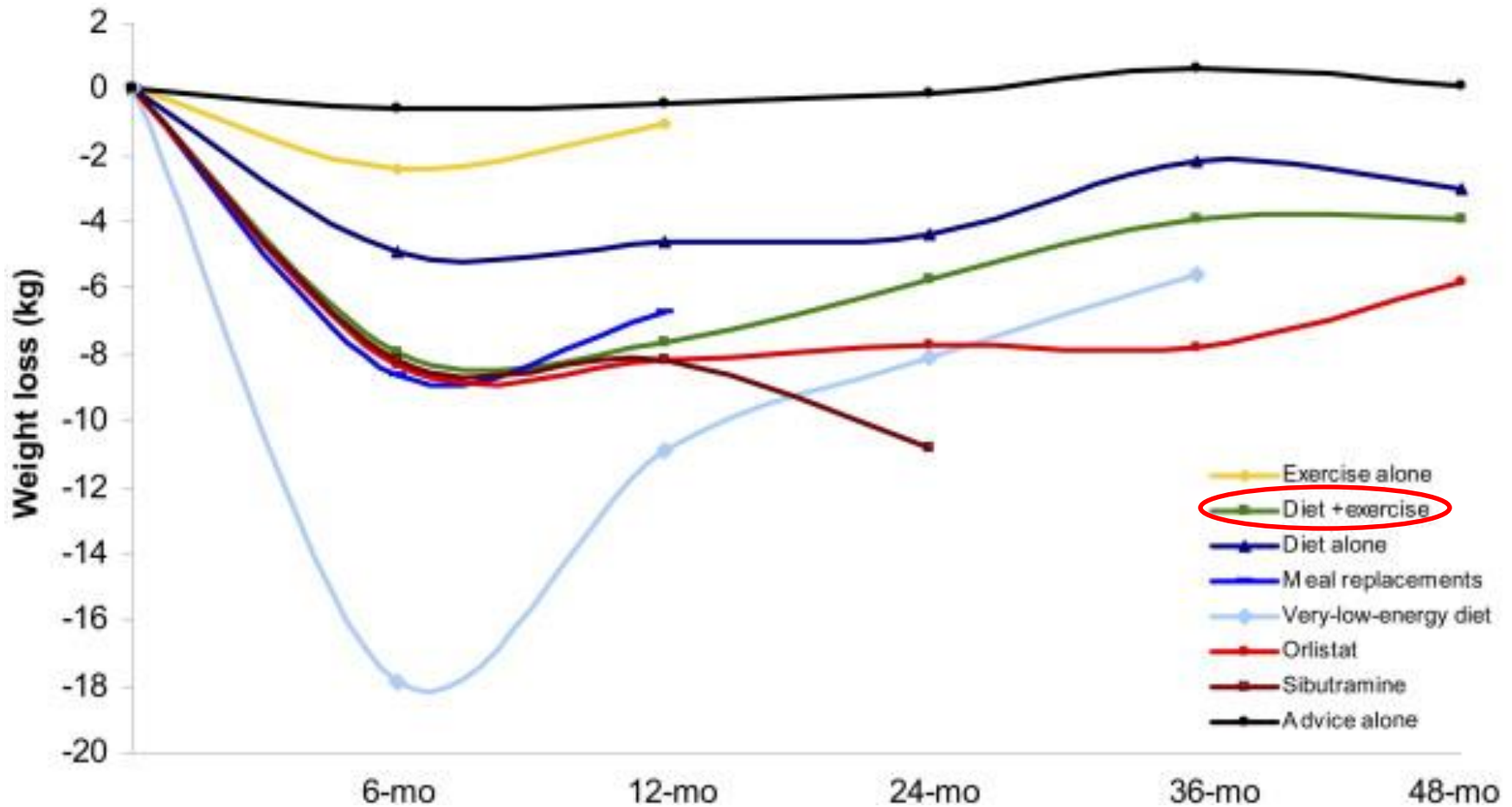
68.5% of U.S. adults are overweight or obese

Ogden, CL et al. 2014 JAMA 311: 806-14



Existing interventions yield modest results ...

... and most weight is regained





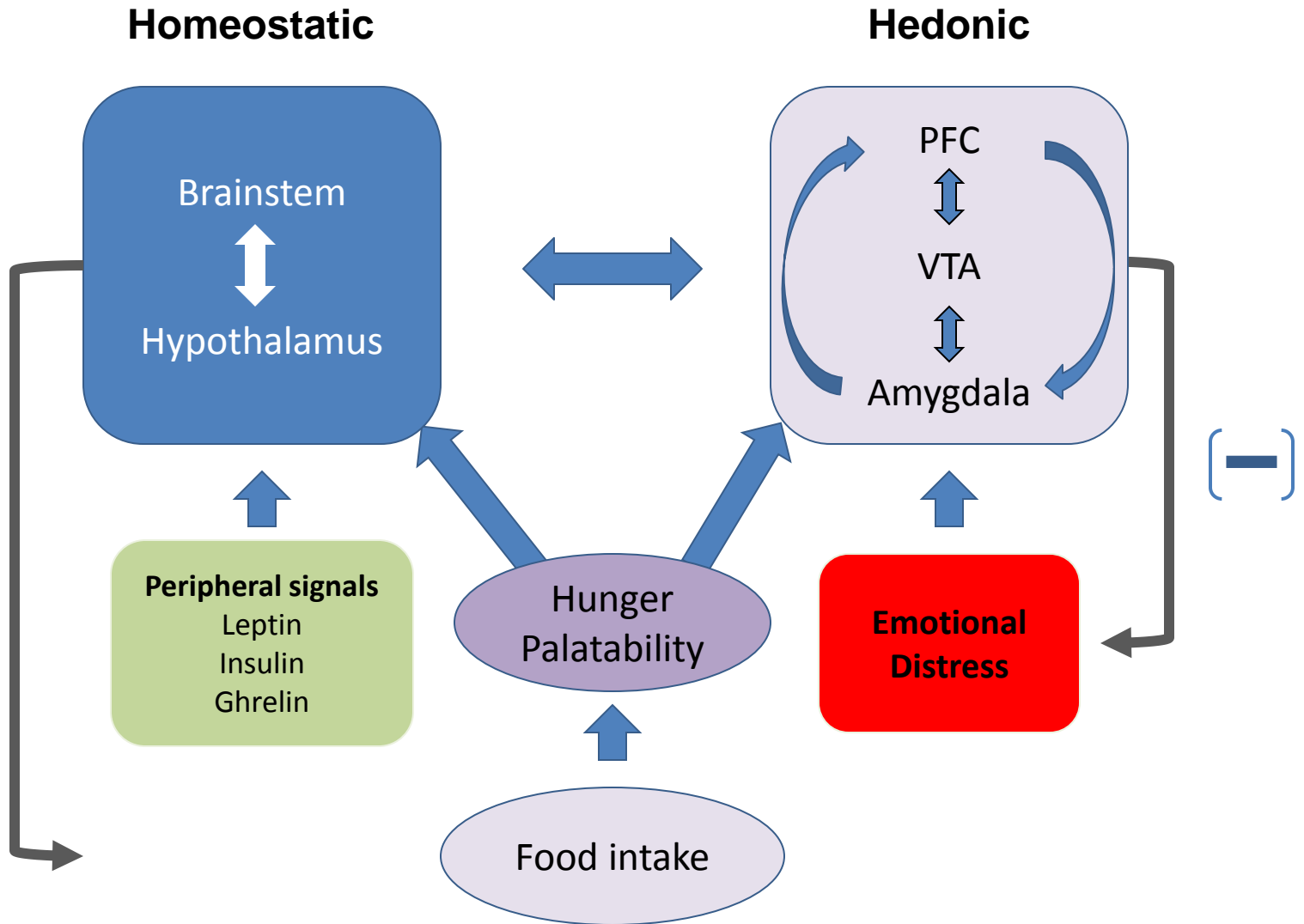
"This is going to be a two-cupcake Friday."

Stress eating

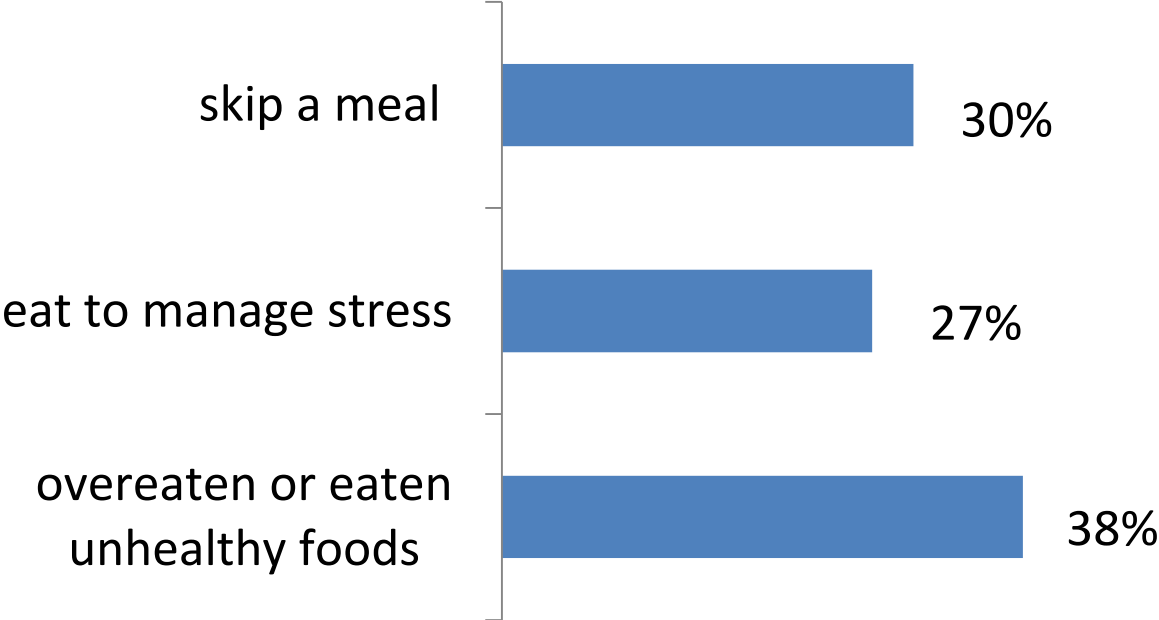


"What do you eat for anxiety?"

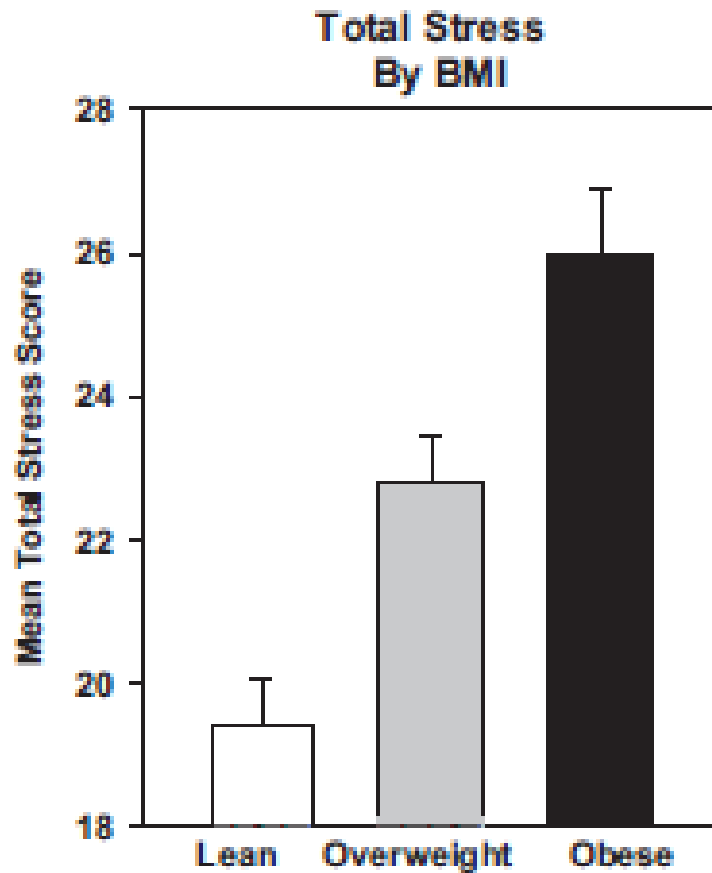
Emotional eating



Many adults report engaging in unhealthy eating as a result of stress

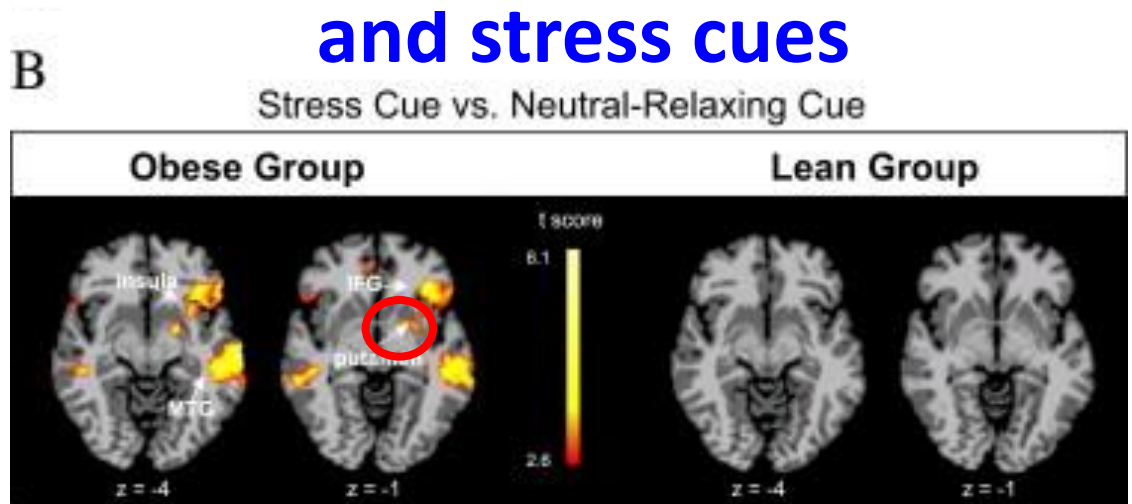
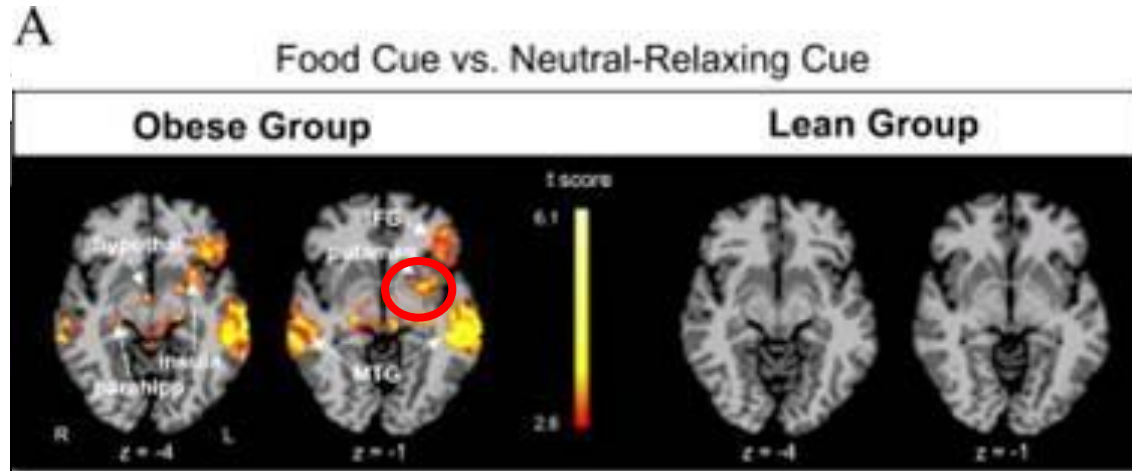


Lifetime stressful events and chronic stressors are associated with higher BMI



**Community sample
(N= 588)**

Obese subjects show increased reactivity to food cues



Emotional eating

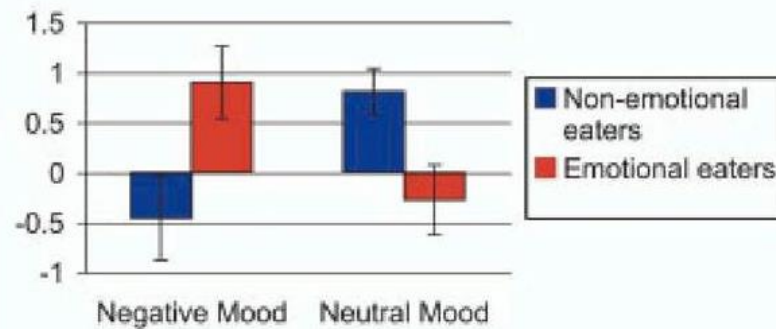
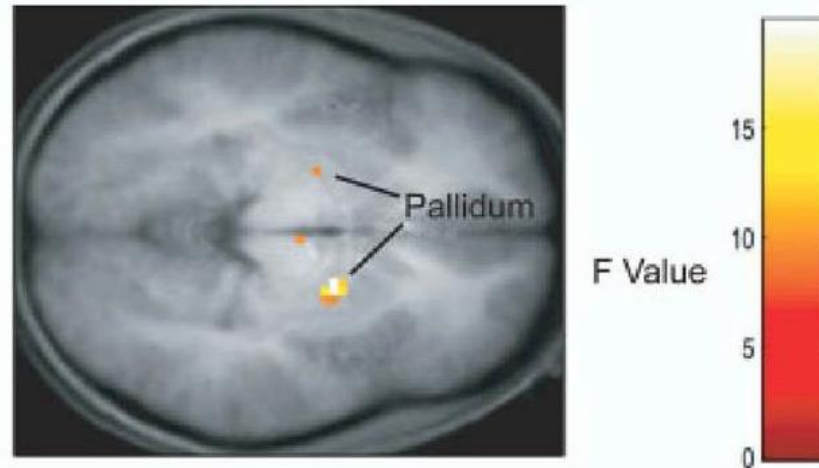
- **Associated with chronic exposure to high levels of stress ¹**
- **Better predictor of weight gain than lifestyle factors and other eating behaviors ²**
- **Predicts less weight loss and less weight loss maintenance in weight loss studies ³**

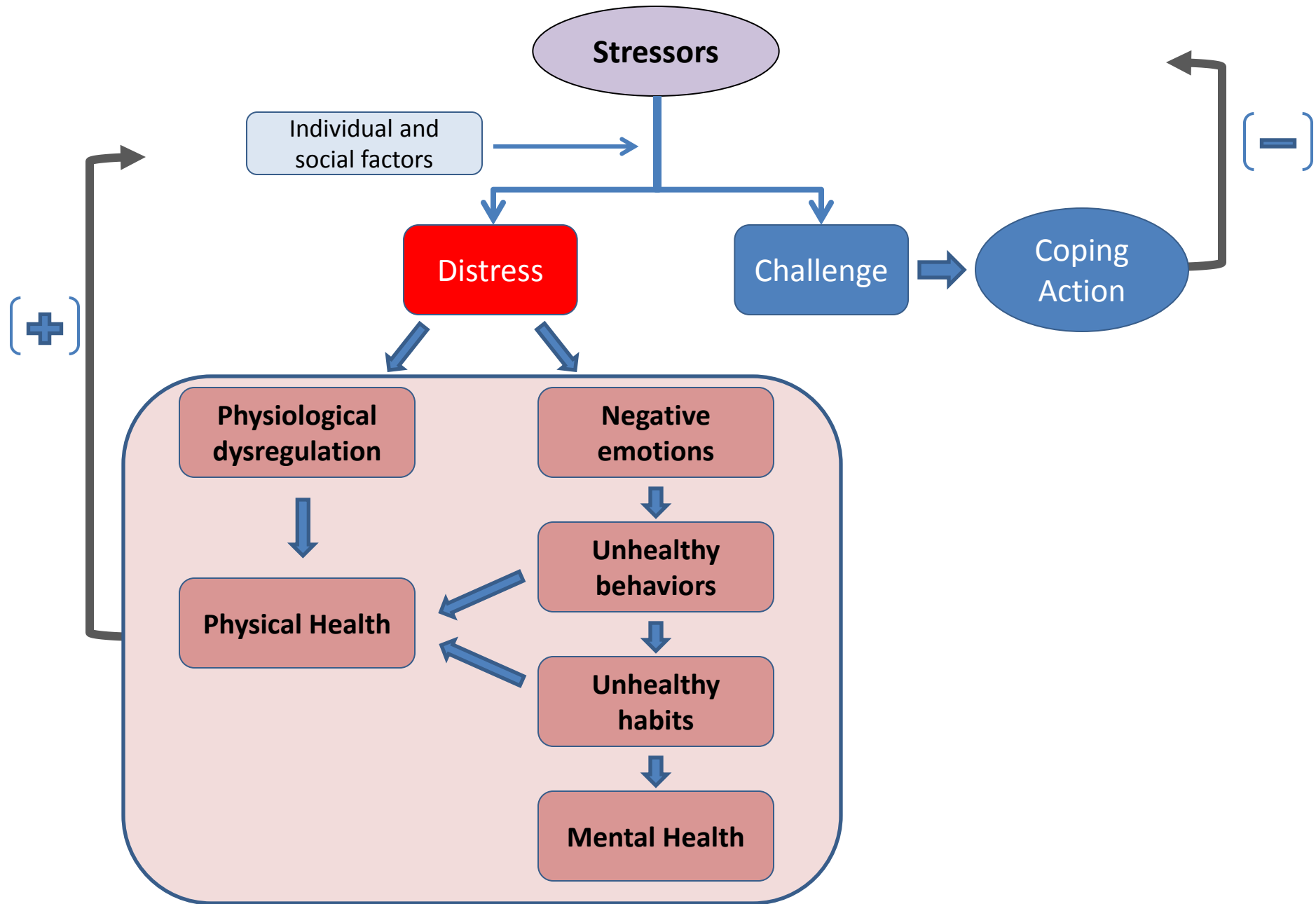
1. Tomiyama AJ 2011 Psychoneuroendocrinology 36:1513-1519

2. Koenders & van Strien 2011 J Occup Environ Med 53:1287-1293

3. Niemeier HM 2007 Obesity 15:2485-2494

Comfort food activates brain reward center in emotional eaters during negative mood state





Mindfulness



smartloving.org

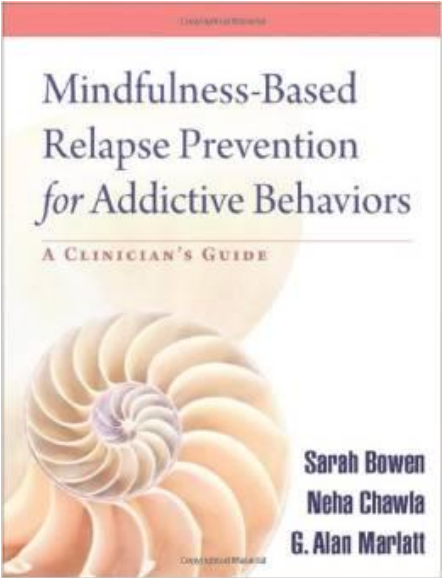
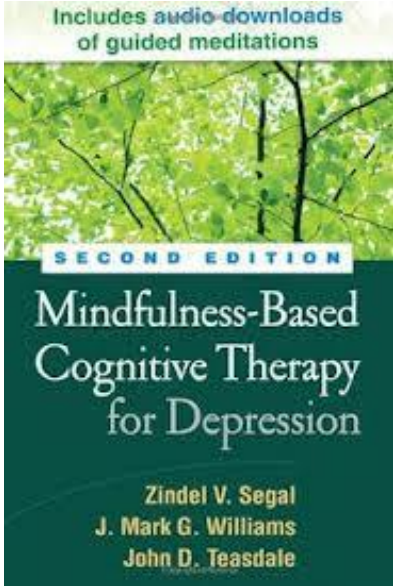
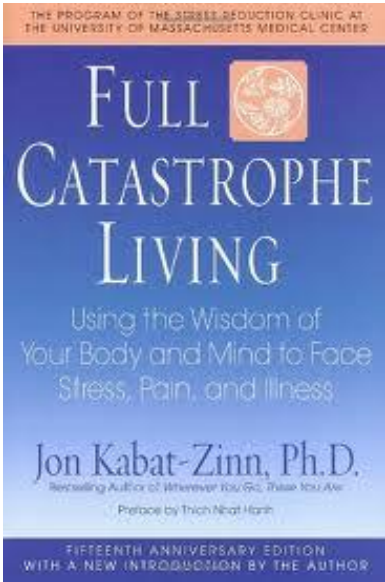




A definition of Mindfulness

**The awareness that emerges from paying attention
on purpose and non-judgmentally
to things as they are**

Mindfulness – based interventions



Components of Mindfulness-Based Interventions



Classroom format



**Teaching formal
meditation practices**

Homework:

- **Daily practice
30-45 min.**
- **Informal
practices**



Mindfulness is effective for emotional distress

- **Anxiety (d = .38)**
- **Depression (d = .30)**
- **Chronic pain (d = .33)**
- **Stress reactivity¹**
- **Anxiety and depression²**
- **Depression³ and substance abuse⁴ relapse**



Goyal M, et al.. 2014
JAMA Intern Med 174:357-368

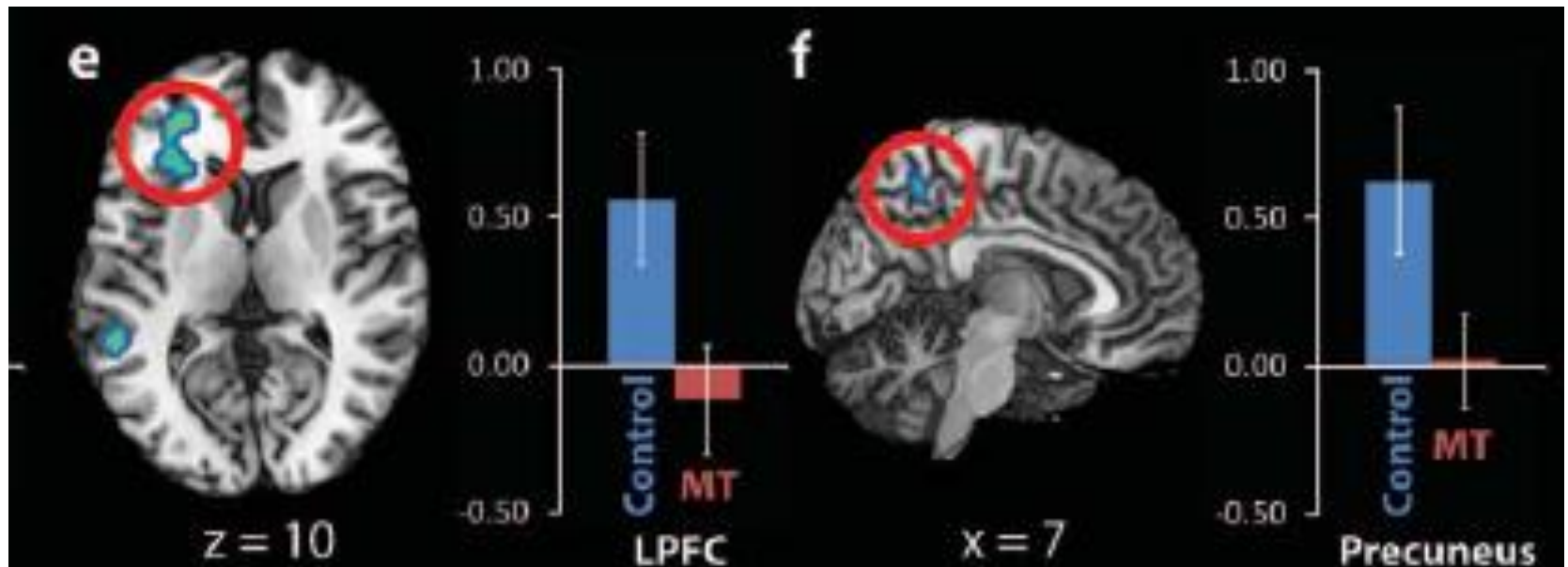
1. Grossman P, et al. 2004 J Psychosomatic Research 57:35–43

2. Khoury B, et al. 2013. Clin Psychol Rev 33:763–71

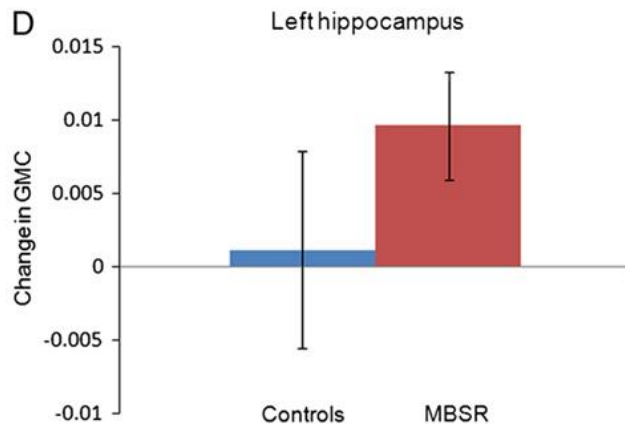
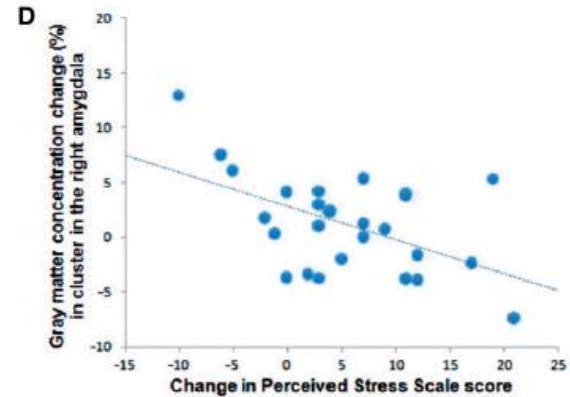
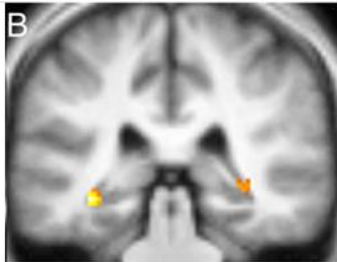
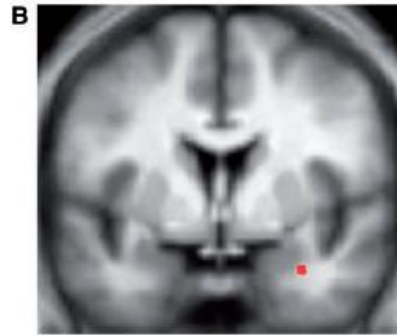
3. Segal Z, et al. 2010 Arch Gen Psychiatry 67:1256-64

4. Bowen,S, et al. 2014 JAMA Psychiatry 71:547-556

Mindfulness training reduces emotional reactivity



8-week MBSR training reduces amygdala volume¹...



... and increases hippocampus volume²

A role for mindfulness in health behaviors

- **Mindfulness helps us to accept things as they are, including difficult emotions**
- **By becoming more aware we can be less reactive and better able to make healthy choices in line with our goals and values**
- **We become more aware of thoughts and emotions, habits of mind we've developed in relation to food, and how they trigger unhealthy behaviors**
- **Prevention of relapse to unhealthy behaviors**

Interventions for eating and weight loss

Mindfulness-based

- **Mindfulness-Based Stress Reduction (MBSR)**
- **Adaptations of MBSR and MBCT that incorporate behavioral and psychoeducational components**
- **Mindful eating**

Incorporate brief mindfulness skills training

- **Traditional behavioral interventions**
- **Acceptance-based interventions**

MBSR

Mindless eating



Mindful eating

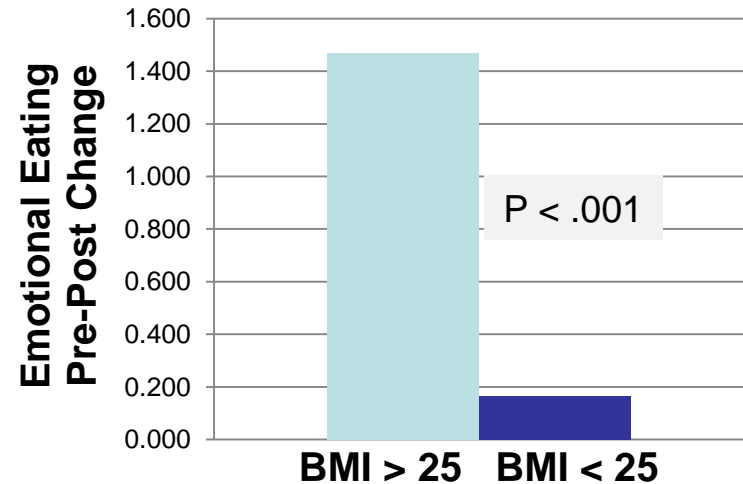
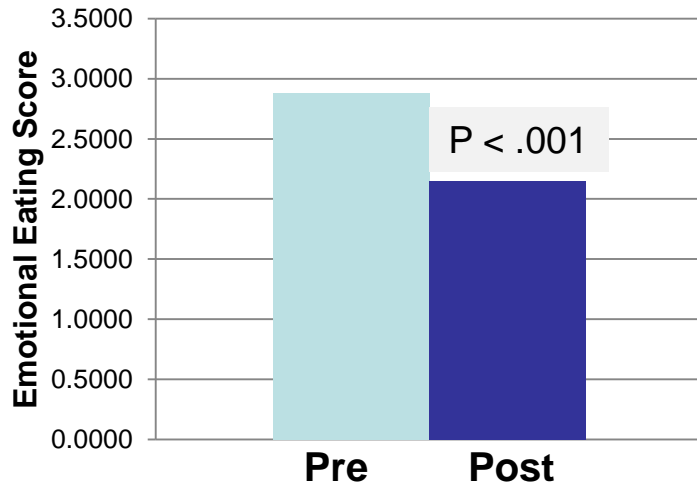


MBSR reduces emotional eating

N = 333 consecutive participants in UMass MBSR program

Emotional eating questions:

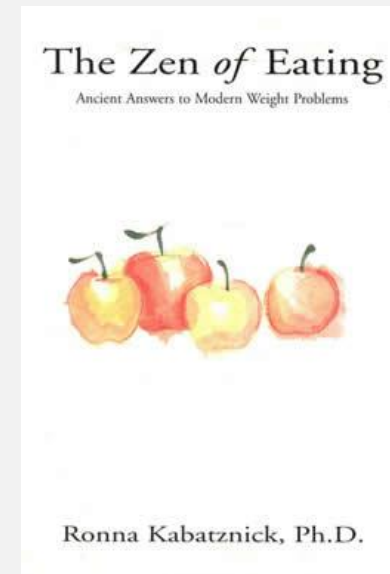
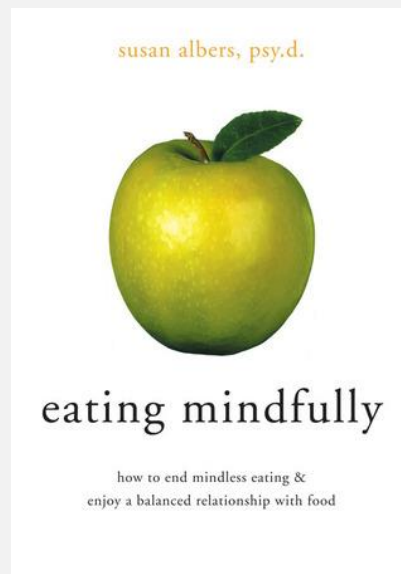
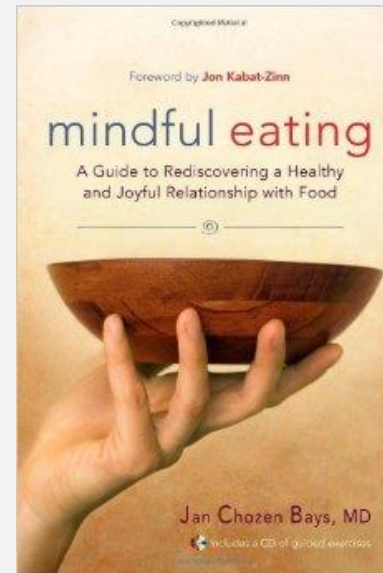
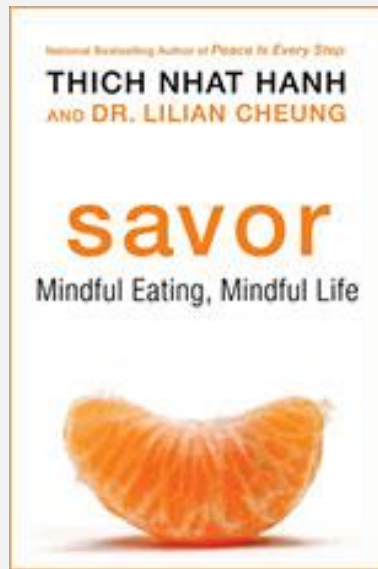
- When I feel anxious I find myself eating
- When I feel blue I often overeat
- When I feel lonely I console myself by eating



Adaptations of MBSR/MBCT

- **Focus on mindfulness training in each session**
- **Incorporate elements of mindful eating**
- **Additional educational components:**
 - **Nutrition or energy balance education**
 - **Exercise**
 - **Behavioral goal setting and problem-solving**

Mindful eating



Mindful eating

Eating slowly

Fullness

Gratitude



Savoring

Hunger

Self-acceptance

Awareness of thoughts and feelings

Systematic reviews – mindfulness-based interventions for eating behaviors

- **MBI's are effective for emotional eating and binge eating**
- **Largest effect size for binge eating**
- **Not superior to cognitive-behavioral interventions in short term**

1. O'Reilly GA, et al. 2014 Obesity Reviews 15: 453–461
2. Katterman SN, et al. 2014 Eating Behaviors 15: 197–204

Systematic reviews – mindfulness interventions for weight loss

- **MBSR alone has not been shown to be effective***
- **Mindfulness appears to be effective when nutrition and energy balance and/or behavioral components are included**

1. Katterman SN, et al. 2014 Eating Behaviors 15: 197–204
2. Olson and Emery 2015 Psychosom Med.77:59-67

Summary

- **Mindfulness-based interventions are effective for emotional eating and binge eating**
- **For weight loss, combining mindfulness training with behavioral strategies holds most promise**
- **Directions for future research**
 - **Longer follow-up**
 - **Effectiveness compared to cognitive-behavioral approaches**
 - **Diverse populations**
 - **Weight loss maintenance?**

Thank You!

Questions?

