Managing the Stress-Eating Relationship
Lisa M. Groesz, PhD

What is eating you?

Objectives
• Show evidence-based implications of the role of stress
• Learn several strategies to apply this information clinically to aid weight control

Agenda
• Role of psychologists in primary health care
• Implications of stress
• Assessment of stress and other psychosocial factors related to obesity
• Clinical strategies: 60 second tools
### Why am I here today?

- Behavioral Medicine
  - Psychologists address psychosocial issues related to chronic health conditions
- I will provide tools, incorporating a psychological perspective, that can be used in a time-limited setting

### What is Stress?

- Objectively stressful situations (stressors)
- Mental Filter
  - Perceived stress / threat
  - Physiological stress responses (cortisol)

### Why look at stress?

- Stress reactivity is important in the short term but causes impairment in long term
- People report greater frequency and severity of stress than ever before (APA, 2007)
- Chronic stress is related to psychological, immunological, and health problems such as high blood pressure
- Chronic stress is related to dysregulated eating

### When stressed do you eat:

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Role of highly palatable food

Stress and drive to eat
- Subordination in monkeys is considered a chronic psychosocial stressor
- Subordinate female monkeys found to consume significantly more food in the laboratory than dominate monkeys (Hagan et al., 2003; Wilson et al., 2008)

Stress and drive to eat
- Greater vulnerability to stress and increased intake of high sugar high fat food
- Chronic strain and disinhibition; finding mirrored in laboratory paradigm
- High sugar foods and the limbic system
  - Dopaminergic effect, nucleus accumbens

Model of Stress Eating
"Stress, Eating, and the Reward System"
Adam & Epel, 2009
Stress Hormone Related to Abdominal Fat (Björntorp et al., 1986)

Accumulation
Cortisol
Insulin

Mobilization
Growth hormone
Sex hormones

Assessment
- Gather height and weight data
- Tracking BMI can help increase your success!
- Stress: “How stressed do you feel in your life right now?”
- “How frequently do you feel stressed?” 10 pt scales
- Stress-eating: “Do you tend to overeat when stressed?”
- Determine other triggers for unhealthy eating
- Determine access to unhealthy foods
- Determine level of physical activity
- Support of family

Management of stress
- Normalization
  - Check in without judgment
  - Mention that other people are similarly stressed
- Tools (in handout with web link):
  - Mindfulness
  - Walking, yoga, meditation
  - Deep breathing
  - Chunking projects
  - Esteemable acts
  - List self nurturing activities

Management of stress-eating
- Empower patients
- Underscore positive behaviors
- Normalization
  - It makes sense, when this stressed, that you are turning to something
- Alternative strategies
  - What are other things that could help?
- Pause, look at emotional vs. physical hunger
  - Slow intake
  - Mindful eating (Tapper et al., 2009)
  - Drink water
Other food triggers

- Hunger
- Spread meals throughout day
- Depression and/or anxiety, impairment
- Therapy referral

Family system

- Look at the individual in context of the whole family system
- With children, parents need to be on board
- With adults, partners need to be on board

60-second tools, recap

- Collect height and weight data
- Assess patient’s level of stress
  - Assess support of family
  - Normalize
- Assess triggers for unhealthy eating
  - Emotional versus physical hunger
- Stress management hand out
- Generate alternative strategies
  - Empower patient
- Refer patient to therapy as necessary

Take home points

- People report greater perceived stress than ever before
- Stress is related to dysregulated eating, weight gain and other health conditions
- There are things you can do in your clinic to help manage the stress-eating relationship
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Managing the stress-eating relationship

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Slides, Handouts, Bibliography
Handouts
Stress Management Strategies

Instant Stress Buster

1. **CHECKING IN (AWARENESS OF SELF and hunger)**
   Bring yourself into the present moment. If possible, close your eyes. Notice your breathing and how your body feels. Notice your posture, and any tension in your face, or shoulders, or anywhere in your body.
   Then ask: “What is my experience right now ... my thoughts ... my feelings ... my bodily sensations?”
   How hungry am I on 1-10 scale? How full?

2. **BREATH**
   Then, gently redirect your full attention to your breathing, to each inbreath, and to each outbreath as they follow, one after the other.
   *(You can stay with awareness, or if you feel tension, you might choose to induce the relaxation response)*.

3. **RELAXATION**
   Take several deep, relaxing breaths, letting the air flow all the way into your lower belly, then back out again. Notice any areas of tension or discomfort, and gently release the tension....
   Notice your breath as it flows naturally like the waves of the ocean, in and out, slowly and fully.
   With each outbreath, you may feel a deeper sense of peacefulness. You might picture the ocean and sunset, or the word, “Calm.”

**Other strategies that can replace the use of food to modulate stress**

Yoga, meditation, walking
List self-nurturing activities such as bubble baths and massages and movies
Engage in activities that you know you do well
Be of service, volunteer
Distraction, deep breathing: take 10 minutes to breathe deeply or leave the stressful situation

**Relevant websites**

The center for mindful eating, Jean Kristeller, PhD: http://www.tcme.org/
Identify triggers of unhealthy eating

Many people report wanting to change how and what they eat. What are triggers that increase the likelihood that you will eat in unhealthy ways? For example, stress and boredom are common triggers reported by people.

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TRUE HUNGER vs. FALSE ALARMS

- **True Hunger** occurs when blood sugar is low, and calories are likely being burned. Slight or moderate hunger thus indicates it is appropriate time to eat, and is a good signal that weight loss is occurring. However, most of us do not rely on our true hunger signals to tell us when to eat. Stress, emotions, seeing or smelling food, wanting pleasure, and dysregulated eating patterns can blunt or numb the experience of true physical hunger.

- **Emotional Hunger** is eating in response to emotions. Emotions travel the same pathways in the brain as do hunger signals. These ‘wires’ cross for a reason: When we are stressed, we mobilize energy, to prepare us to run from danger, and so our brain releases the stress hormone cortisol, which tells us to scavenge and store calories to cope with danger. However, now that our modern stresses are psychological, we don’t typically use it up the energy (unless we take a walk when we are stressed). Nevertheless, our brain still tells us we need to replenish calories that it thinks we have burned or will need to burn. Thus, stress can induce a feeling of hunger! Stress or emotions thus create a ‘false alarm’ – a drive to eat when we don’t need calories.

- **Hedonic Hunger** is when we eat because it’s pleasurable. Stress and excess insulin can enhance the pleasure value of food, making it seem irresistible, and that can prolong eating. However, if we pay attention, we might notice that the pleasure response is typically fleeting – occurring mainly at the beginning of eating. We can enhance the pleasure response by noticing it, and thus will need less food and feel satiety earlier.

Noticing the different triggers and emotions that cause ‘false alarms’ can allow you to understand why you might feel hunger when not physically hungry. You can label this ‘false alarm,’ ‘emotional hunger,’ ‘hedonic hunger’ or whatever fits your experience.

*Mindfulness can help us distinguish between true hunger, emotional eating, and hedonic eating. It can also enhance food pleasure with less need for overeating.*

Psychological stress (mainly the thoughts that we can’t cope with all the demands on us, and feelings of anxiety), can affect our lives in invisible ways. It can affect our sleep, relationships, and health. One of the biggest ways stress affects us is through altering our eating and weight. Therefore, the SHINE program focuses on this invisible but vitally important factor. Once you know how stress affects you, you can be more aware of it. The SHINE program is based on the latest research on stress and weight, and is designed to help you manage stress better.

- Stress can trigger high levels of the stress hormone cortisol to be released from our adrenal gland, and insulin from our pancreas. Cortisol in turn stimulates appetite. Sometimes after a stressful event, we may feel ravenous! That is our cortisol speaking, not our true caloric need.

- High cortisol and insulin make us seek ‘highly palatable’ food-- very sweet or salty high fat food. In turn, research has shown that palatable food calms the stress response system, lowering cortisol. However, there are healthier ways to lower cortisol, which you will learn about.

- High cortisol and insulin cause our calories to be stored in the intra-abdominal cavity (causing the ‘apple’ shape or belly fat). In turn, belly fat is more harmful to health than fat elsewhere. For example, it releases inflammatory factors into the blood. But belly fat that is also the easiest to lose, and losing just 2 inches from the waist can dramatically reduce risk of heart disease. SHINE is designed to reduce cortisol and insulin through stress reduction and healthier eating patterns, and to reduce abdominal fat, over a period of six months.


