COPE WEBINAR SERIES FOR HEALTH PROFESSIONALS

January 23, 2019

Are there different types of lapses from dietary prescriptions?: Implications for outcome in behavioral obesity treatments

Moderator: Lisa Diewald MS, RD, LDN
Program Manager
MacDonald Center for Obesity Prevention and Education

Nursing Education   Continuing Education Programming   Research

---

FINDING SLIDES FOR TODAY'S WEBINAR

www.villanova.edu/COPE
Click on Stephanie Goldstein,PhD
webinar description page

VILLANOVA UNIVERSITY
M. LOUISE FITZPATRICK COLLEGE OF NURSING
MacDonald
CENTER FOR OBESITY
PREVENTION AND EDUCATION

DID YOU USE YOUR PHONE TO ACCESS THE WEBINAR?

If you are calling in today rather than using your computer to log on, and need CE credit, please email cope@villanova.edu and provide your name so we can send your certificate.

OBJECTIVES

- Understand the definition of dietary lapses and how they contribute to weight loss outcomes

- Use extant research to identify strategies for improving behavioral obesity treatment with various patient populations

CE DETAILS

VILLANOVA UNIVERSITY
COLLEGE OF NURSING
MacDonald
CENTER FOR OBESITY
PREVENTION AND EDUCATION

- Villanova University College of Nursing is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center Commission on Accreditation

- Villanova University College of Nursing Continuing Education/COPE is a Continuing Professional Education (CPE) Accredited Provider with the Commission on Dietetic Registration

CE CREDITS

- This webinar awards 1 contact hour for nurses and 1 CPEU for dietitians

- Suggested CDR Learning Need Codes: 5379, 6000, 6020, 9020

- Level 2

- CDR Performance Indicators: 8.3.4, 8.3.6, 8.3.7, 9.1.3

ARE THERE DIFFERENT TYPES OF LAPSES FROM DIETARY PRESCRIPTIONS?
IMPLICATIONS FOR OUTCOMES IN BEHAVIORAL OBESITY TREATMENTS

Stephanie Goldstein, PhD
Clinical Psychology Postdoctoral Fellow
Weight Control & Diabetes Research Center
Warren Alpert Medical School of Brown University

DISCLOSURE

Neither the planners or presenter have any conflicts of interest to disclose.

Accredited status does not imply endorsement by Villanova University, COPE or the American Nurses Credentialing Center of any commercial products or medical/nutrition advice displayed in conjunction with an activity.

Are there different types of lapses from dietary prescriptions?: Implications for outcomes in behavioral obesity treatments

Stephanie Goldstein, PhD
Clinical Psychology Postdoctoral Fellow

Weight Control & Diabetes Research Center
Warren Alpert Medical School of Brown University
Department of Psychiatry and Human Behavior
The Miriam Hospital

BROWN

Goal: Understand Lapses
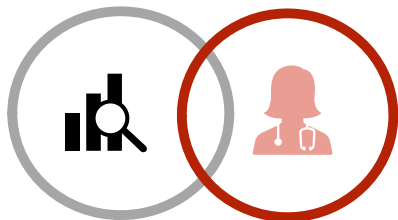
Outline

- Behavioral Obesity Treatment and Lapses
- Defining Lapses and Studying Them
- Insights for Clinical Practice
- Future Intervention Tools Using Technology

Flegal et al., 2016

22.1

32.5

7.7

37.7

- Overweight
- Obesity
- Extreme Obesity
- Normal/Underweight

Prevalence of Overweight and Obesity

Behavioral Obesity Treatments Work...

- Targets
  - Decreased caloric intake
  - Increased physical activity

- Expected outcomes
  - 7-10% of starting weight
  - Enough to confer significant health benefits

Olson et al., 2017

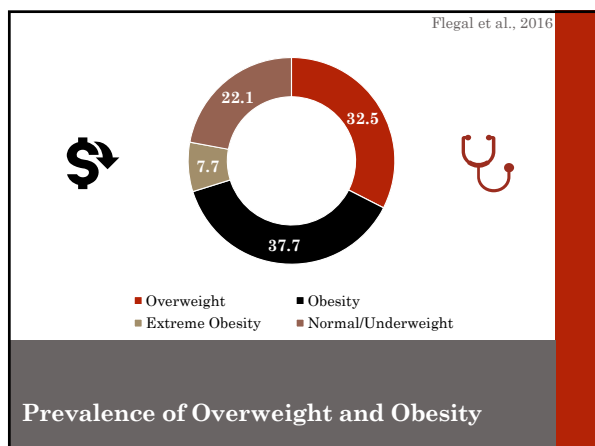## ...but can be difficult to follow

- Weight loss failure and weight regain is largely attributable to an inability to maintain healthy eating and exercise.

- Slips, especially with regards to diet, are common
  - Well-known protocols like Look AHEAD and DPP normalize
  - Recovery from slips is uncommon

Wing & Phelan, 2005; Elfhag et al., 2005; Phelan et al. 2003; Schumacher et al., 2013

Dietary Lapses

4-5x

Common

Impact Weight Loss

Lead to More Lapses

Forman et al., 2017

Dietary Lapse: Definitions

	"An incident where you felt that you broke your diet (e.g., overate, ate a forbidden food)"
	Episodes of overeating or unplanned meals/snacks
	"Any instance in which you exceed your calorie goal for a meal/snack"

Schlundt et al., 1989; Goldstein et al., 2018; Carels et al., 2001

Dietary Lapse: Definitions

- "Eating or drinking likely to cause weight gain, and/or put weight loss/maintenance at risk"
  - In other words, if you ate/drink in this way consistently for a period of time, would you fail to lose weight or gain weight?

Forman et al., 2017

Forman et al., 2017; Goldstein et al., 2018

Dietary Lapse Types

Unplanned Time

Forbidden Food

Eating Larger Portion

Planned Lapse

10

Discussing Dietary Lapses with Patients

- *"If I ate/drank regularly in this way, would it get in the way of me losing weight/maintaining weight loss?"*
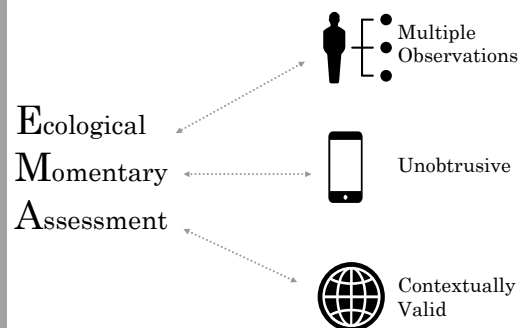

- Provide examples
- Personalize
- Use nonjudgmental tone

How can we study lapses?

- Lab-based research
  - Pros: Direct observation, control over environment
  - Cons: Demand characteristic

- Questionnaires/Interviews
  - Pros: Ease, large samples
  - Cons: Demand characteristic, retrospective recall

- Small weight gains
  - Pro: Objective measurement
  - Cons: Miss important information about behavior that contributed to small weight gain

How can we study lapses?
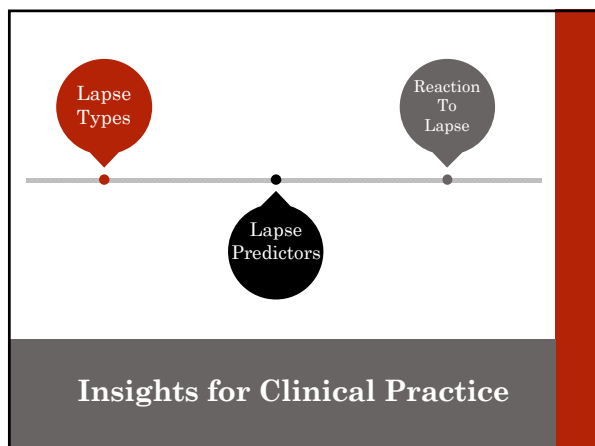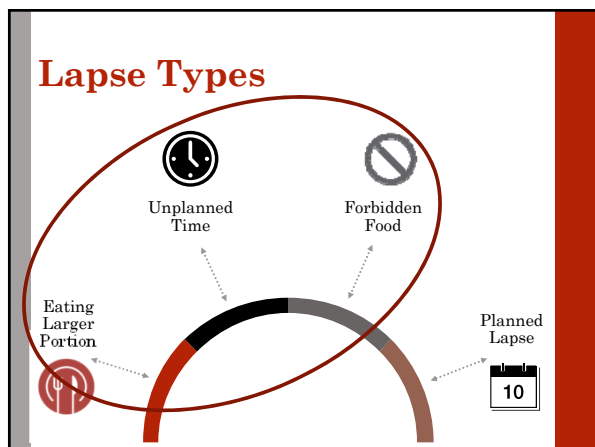
Multiple Observations

Ecological

Momentary

Assessment

Unobtrusive

Contextually Valid

Shiffman et al., 2008

Insights for Clinical Practice

Lapse Types

Reaction To Lapse

Lapse Predictors

Lapse Types

Unplanned Time

Forbidden Food

Eating Larger Portion

Planned Lapse

10

Lapse Types: Research
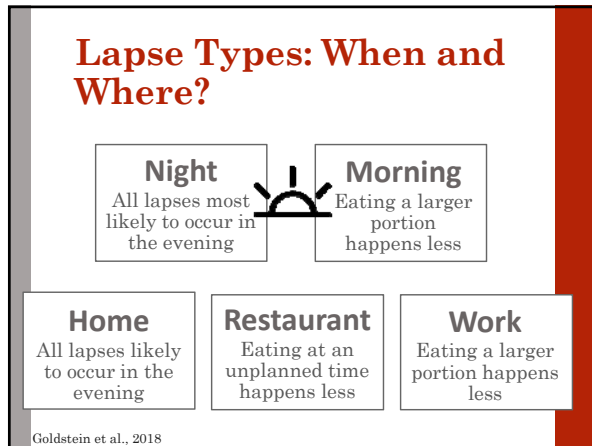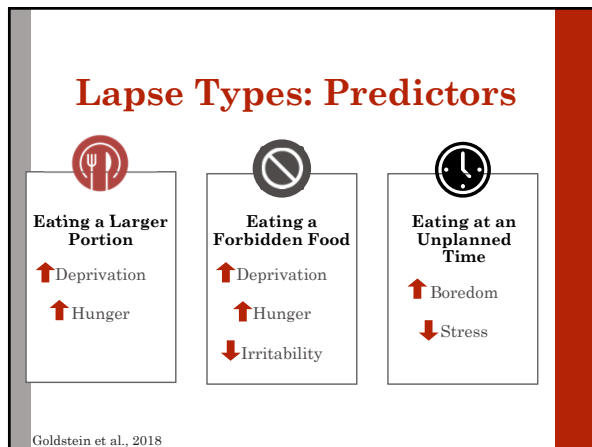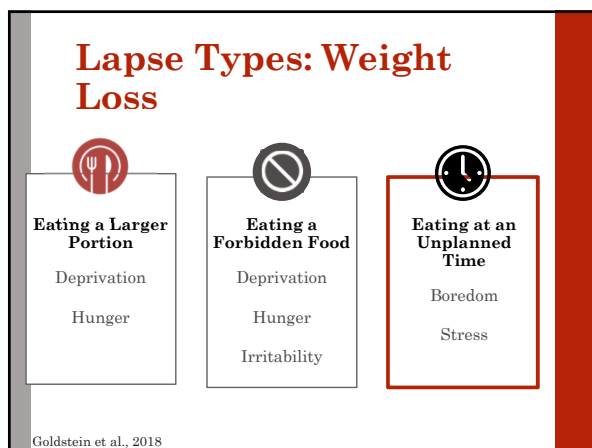
- Lapse definition: Eating or drinking likely to cause weight gain, and/or put weight loss/maintenance at risk
  - Types: Eating larger portion, eating at an unplanned time, and eating a forbidden food.

- **Aims:**
  1. Characterize lapse types
  2. Evaluate predictors of lapse types
  3. Evaluate association between lapse types and weight change later in treatment.

Goldstein et al., 2018

Lapse Types: When and Where?

Night
All lapses most likely to occur in the evening

Morning
Eating a larger portion happens less

Home
All lapses likely to occur in the evening

Restaurant
Eating at an unplanned time happens less

Work
Eating a larger portion happens less

Goldstein et al., 2018

Lapse Types: Predictors

Eating a Larger Portion
⬆ Deprivation
⬆ Hunger

Eating a Forbidden Food
⬆ Deprivation
⬆ Hunger
⬇ Irritability

Eating at an Unplanned Time
⬆ Boredom
⬇ Stress

Goldstein et al., 2018

Lapse Types: Weight Loss

Eating a Larger Portion
Deprivation
Hunger

Eating a Forbidden Food
Deprivation
Hunger
Irritability

Eating at an Unplanned Time
Boredom
Stress

Goldstein et al., 2018

Lapse Types: Clinical

- Behavioral Chains and Strategies for Problem-Solving
  - Anticipating problems, removing barriers, encouraging facilitators

Forgot to pack a lunch → → → → Lapse

- How can you refine this technique?
  - Help patients identify and distinguish lapse types
  - Help patients be on the lookout for common patterns (evening lapses, lapses at home, lapsing from hunger)

Lapse Types

Unplanned Time

Forbidden Food

Eating Larger Portion

Planned Lapse
10

Lapse Types: Research

- Lapse definition: "Any instance in which you exceeded your goal for a meal/snack"
  - Types: Eating larger portion, eating at an unplanned time, eating a forbidden food, and *"I planned this lapse ahead of time"*
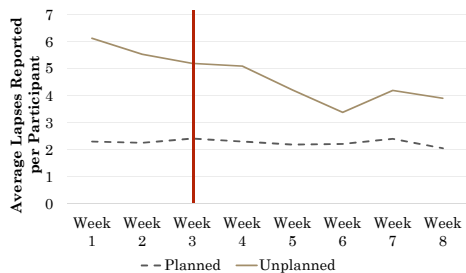
- **Aims**
  - Evaluate the preliminary effectiveness of a digital health *tool for* weight loss

Forman et al., 2018

Lapse Types: Research

Forman et al., 2018
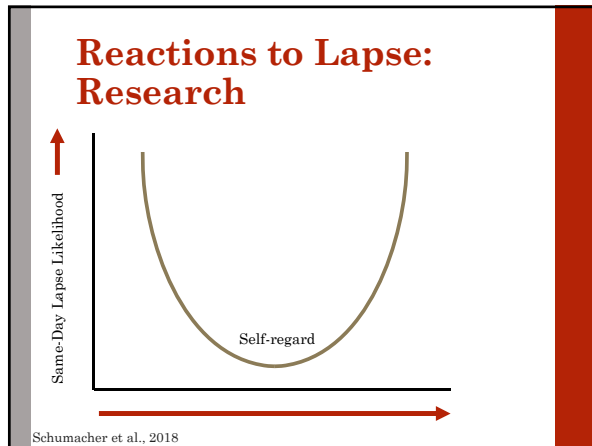

Lapse Types: Clinical

- Talk to your patients about the difference between a planned and an unplanned lapse.
  - If a lapse is truly planned, *it should not contribute negatively to weight control*
  - Planned implies mindful eating
  - It is possible, although typically more unlikely, for patients to "make up for" an unplanned lapse.
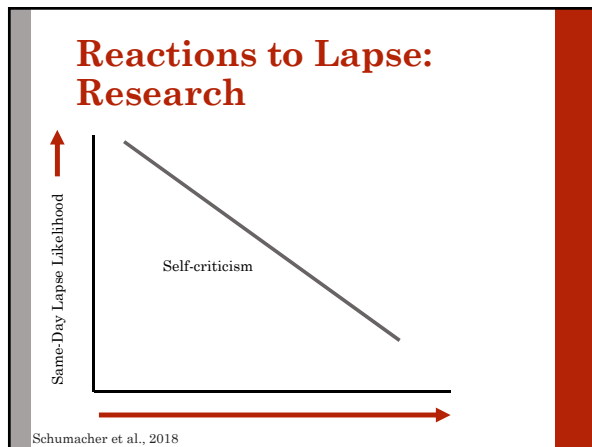

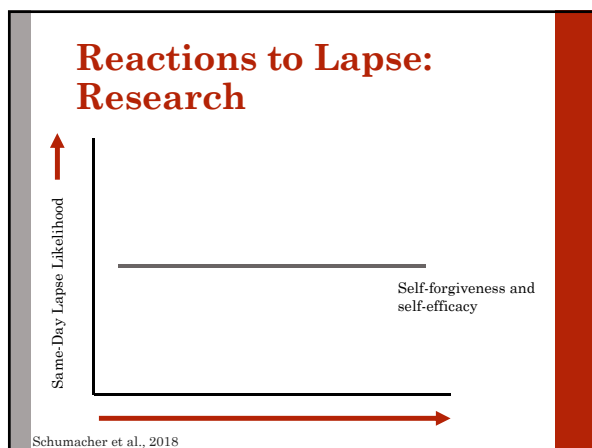## Reactions to Lapse: Research

- <u>Lapse definition:</u> Eating or drinking likely to cause weight gain, and/or put weight loss/maintenance at risk
  - <u>Types:</u> Eating larger portion, eating at an unplanned time, and eating a forbidden food.
  - *Self-attitudes (i.e., self-criticism, self-forgiveness, self-regard) and self-efficacy*

- **Aim:**
  - To examine whether self-attitudes and self-efficacy after dietary lapses relate to lapse frequency or predict risk for lapsing again on the same day

Schumacher et al., 2018

Reactions to Lapse: Research

Same-Day Lapse Likelihood

Self-regard

Schumacher et al., 2018

Reactions to Lapse: Research

Same-Day Lapse Likelihood

Self-criticism

Schumacher et al., 2018

Reactions to Lapse: Research

Same-Day Lapse Likelihood

Self-forgiveness and self-efficacy

Schumacher et al., 2018

## Reactions to Lapse: Clinical

- What we typically do: NORMALIZE
  - *"Lapses are a regular and expected occurrence in weight loss treatment"*

- How can you refine?
  - Help patients become critical in a way that is helpful and generates positive action.
  - Generate self-regard that is appropriately positive.

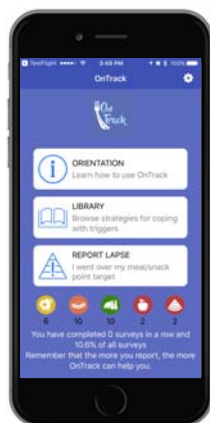## Summary: Ideas for Treatment Tools

- Regular tracking of lapses and related triggers
  - Use technology to assist

- Set reminders or prompts for moments that you anticipate to be difficult.

- Timing: Start early!

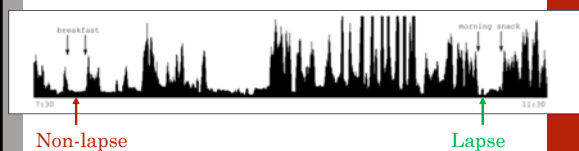## Future of Clinical Intervention Tools for Lapse
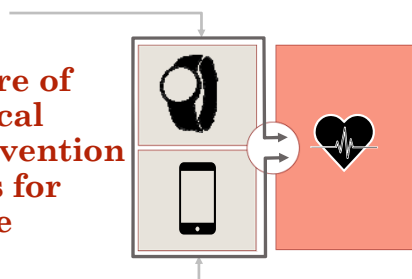
Forman et al., 2018

OnTrack: A smartphone app for weight loss

Grant num: F32HL143954

Passive Sensing

- Detect patterns of wrist motion and uses machine learning to infer when someone is eating and how much they are consuming
- NHLBI-funded project to study if we can examine lapses using this tool

breakfast — morning snack

7:30 — 11:30

Non-lapse — Lapse

Conclusions

Definitions

Research

Reflection

Clinical

Novel Approaches

References

- Carels, R. A., Hoffman, J., Collins, A., Raber, A. C., Cacciapaglia, H., & O'Brien, W. H. (2001). Ecological momentary assessment of temptation and lapse in dieting. *Eating Behaviors*, *2*(4), 307-321.

- Elfhag, Kristina, and Stephan Rössner. "Who succeeds in maintaining weight loss? A conceptual review of factors associated with weight loss maintenance and weight regain." *Obesity reviews* 6.1 (2005): 67-85.

- Goldstein, S. P., Dochat, C., Schumacher, L. M., Manasse, S. M., Crosby, R. D., Thomas, J. G., ... & Forman, E. M. (2018). Using ecological momentary assessment to better understand dietary lapse types. *Appetite*, *129*, 198-206.

- Goldstein, S. P., Zhang, F., Thomas, J. G., Butryn, M. L., Herbert, J. D., & Forman, E. M. (2018). Application of Machine Learning to Predict Dietary Lapses During Weight Loss. *Journal of diabetes science and technology*, 1932296818775757.

- Forman, E. M., Goldstein, S. P., Zhang, F., Evans, B. C., Manasse, S. M., Butryn, M. L., ... & Foster, G. D. (2018). OnTrack: development and feasibility of a smartphone app designed to predict and prevent dietary lapses. *Translational behavioral medicine*.

- Forman, E. M., Schumacher, L. M., Crosby, R., Manasse, S. M., Goldstein, S. P., Butryn, M. L., ... & Graham Thomas, J. (2017). Ecological momentary assessment of dietary lapses across behavioral weight loss treatment: characteristics, predictors, and relationships with weight change. *Annals of Behavioral Medicine*, *51*(5), 741-753.

- Flegal, K. M., Kruszon-Moran, D., Carroll, M. D., Fryar, C. D., & Ogden, C. L. (2016). Trends in obesity among adults in the United States, 2005 to 2014. *Jama*, *315*(21), 2284-2291.

References

- Olson, K. (2017). Behavioral approaches to the treatment of obesity. *Rhode Island Medical Journal*, *100*(3), 21.

- Phelan, S., Hill, J. O., Lang, W., Dibello, J. R., & Wing, R. R. (2003). Recovery from relapse among successful weight maintainers. *The American journal of clinical nutrition*, *78*(6), 1079-1084.

- Schlundt, D. G., Sbrocco, T., & Bell, C. (1989). Identification of high-risk situations in a behavioral weight loss program: application of the relapse prevention model. *International Journal of Obesity*, *13*(2), 223-234.

- Schumacher, L. M., Gaspar, M., Remmert, J. E., Zhang, F., Forman, E. M., & Butryn, M. L. (2016). Small weight gains during obesity treatment: normative or cause for concern?. *Obesity science & practice*, *2*(4), 366-375.

- Schumacher, L. M., Martin, G. J., Goldstein, S. P., Manasse, S. M., Crosby, R. D., Butryn, M. L., ... & Forman, E. M. (2018). Ecological momentary assessment of self-attitudes in response to dietary lapses. *Health Psychology*, *37*(2), 148.

- Shiffman, S., Stone, A. A., & Hufford, M. R. (2008). Ecological momentary assessment. *Annu. Rev. Clin. Psychol.*, *4*, 1-32.

- Wing, R. R., & Phelan, S. (2005). Long-term weight loss maintenance–. *The American journal of clinical nutrition*, *82*(1), 222S-225S.

TO RECEIVE YOUR CE CERTIFICATE

- Look for an email containing a link to an evaluation. The email will be sent to the email address that you used to register for the webinar.

- Complete the evaluation soon after receiving it. It will expire after 3 weeks.

- You will be emailed a certificate within 2-3 business days.

- Remember: If you used your phone to call in, and want CE credit for attending, please send an email with your name to cope@villanova.edu so you receive your certificate.

VILLANOVA UNIVERSITY
M. LOUISE FITZPATRICK COLLEGE OF NURSING

MacDonald
CENTER FOR OBESITY
PREVENTION AND EDUCATION

Upcoming FREE Continuing Education Webinar

Preventing Metabolic Adaptation During Weight Loss
Todd Miller, PhD, CSCS*D, TSAC-F, FNSCA
Stephanie Mull MS, RD, CSSD, CSCS
Wednesday, February 6, 2019
12:00PM - 1:00PM EST

Villanova.edu/cope

QUESTIONS & ANSWERS

VILLANOVA UNIVERSITY
M. LOUISE FITZPATRICK COLLEGE OF NURSING

MacDonald
CENTER FOR OBESITY
PREVENTION AND EDUCATION

Moderator: Lisa K. Diewald MS, RD, LDN
Email: cope@villanova.edu
Website: www.willanova.edu/COPE