Promoting Population Health Equity through Primary Care-Based Weight Management Care

GRECC cyberseminar
March 8, 2022

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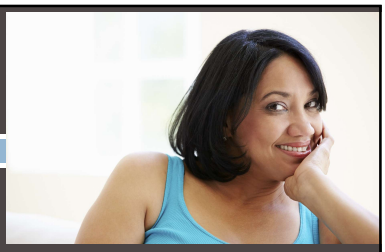
Note: The views expressed are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs or the United States government.

Objectives and Overview

- Characterize prevalence of and disparities in higher Body Mass Index (BMI)
- Explore determinants of higher BMI, from mental health conditions to social determinants of health
- Provide overview of primary care-based approaches to weight management, emphasizing behavioral approaches
- Describe preliminary work focused on addressing weight and PTSD symptoms among Veterans and its implications for broad weight management approaches

Setting the Stage



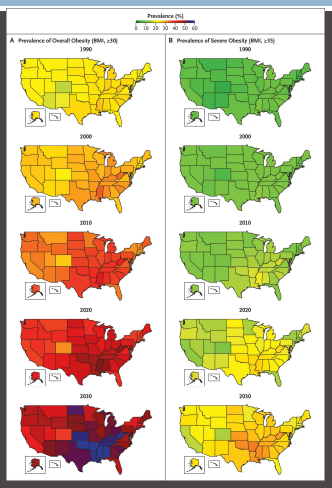
- Avoiding stigmatizing language
  - Body Mass Index (BMI) cutoffs/higher BMI
  - Person-first ("with obesity" vs. obese people)
- Equity and patient-centered lens
- My expertise and positionality and their limitations

Why Focus on Weight

- 42% of US adults have BMI ≥ 30 (2017 – 2018, CDC)
  - Prevalence is higher among Black and Hispanic people
  - Comparable rates & disparities in VA (Breland et al., JGIM, 2017)
- Higher BMI is associated with:
  - Cardiovascular disease
  - Diabetes
  - severe COVID
  - Reduced quality of life, functioning

High BMI prevalence Expected to Rise

- By 2030, nearly 50% of adults will have BMI ≥ 30
- > 50% in 29 states and not < 35% in any state
- BMI ≥35 likely to become the most common BMI category among women, non-Hispanic black adults, and low-income adults



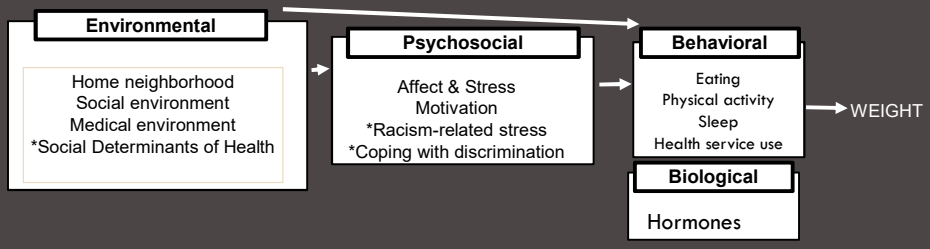
Estimated Prevalence of Overall Obesity and Severe Obesity in Each State, from 1990 through 2030. Ward et al. NEJM, 2019

Climate, COVID-19, Obesity Syndemic

Image omitted from handout because in press paper

Persad-Clem RA, Hoerster KD, Romano EFT, Huizar N, & Maier KJ (in press). Climate to COVID, Global to Local, Policies to People: A Biopsychosocial Ecological Framework for Syndemic Prevention and Response in Behavioral Medicine. *Translational Behavioral Medicine*.

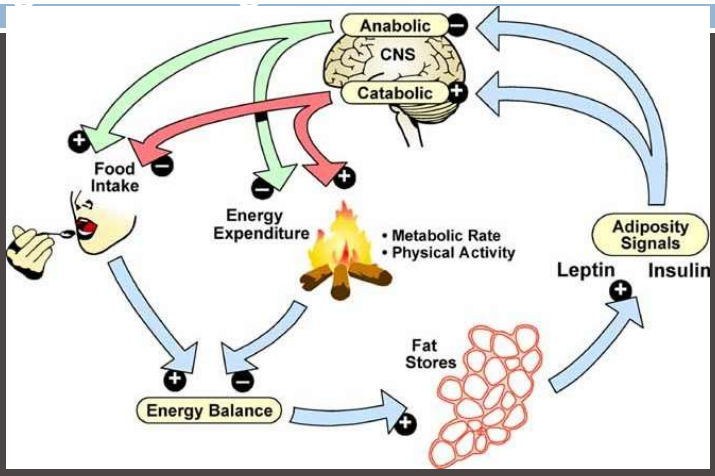
Contributors to BMI, Weight Loss Outcomes, and Disparities



Adapted from the NIH ADOPT Model

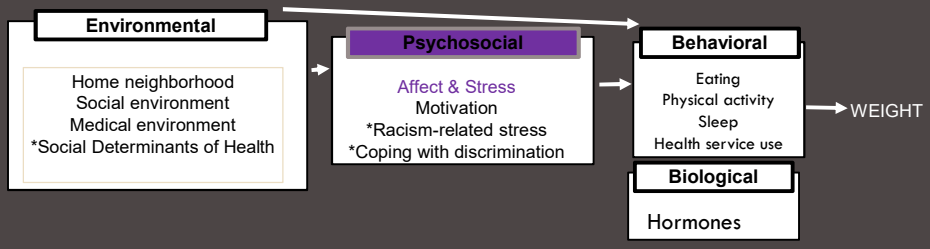
MacLean PS, Rothman AJ, Nicastro HL, *et al.* 2018. The Accumulating Data to Optimally Predict Obesity Treatment (ADOPT) Core Measures Project: Rationale and Approach. *Obesity* 26 Suppl 2, S6–S1

Contributors to BMI, in Context of Weight Management Care



Metabolic adaptation, energy constraint, and hunger signaling
Schwartz et el Nature 2000
Thanks to Dr. Scott Hagan for this slide

Contributors to BMI, Weight Loss Outcomes, and Disparities



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Why Focus on Weight

Many want to lose weight

For their health, appearance, desire to fit into clothes, pressure from loved ones, functioning, etc

"I am trying to lose weight"

	Men	Women
1950s	7%	14%
1980s	25%	40%
1990s	29%	44%
2000s	34%	48%
Late 2000s	40%	57%

97% of adults with BMI ≥ 30 have ever attempted diet

20% > 20 diet attempts

Sources: NCHS, NHANES, 2013–2016. Montani et al Obes Rev 2015

Thanks to Dr. Scott Hagan for this slide

First Line Treatment: Behavioral Weight Management

Table. Summary of Related USPSTF Recommendations

Risk Factors	Normal Weight (BMI 18.5 to <25)[a]	Overweight (BMI 25 to <30)[a]	Obese (BMI ≥30)[a]
No hypertension, dyslipidemia, or abnormal blood glucose levels	Individualize the decision to provide or refer to behavioral counseling	Individualize the decision to provide or refer to behavioral counseling	Provide or refer to intensive behavioral counseling
Hypertension, dyslipidemia, or both	Individualize the decision to provide or refer to behavioral counseling	Provide or refer to intensive behavioral counseling	Provide or refer to intensive behavioral counseling
Abnormal blood glucose levels or diabetes	Provide or refer to intensive behavioral counseling[b]	Provide or refer to intensive behavioral counseling	Provide or refer to intensive behavioral counseling

- Grade B: moderate confidence of moderate benefit

Intensive behavioral counseling: multicomponent (diet with behavioral approach & exercise) interventions with target > 5% weight loss

- Pragmatic Diabetes Prevention Programs
- At VA this is the MOVE program

Curry et al JAMA 2018

Thanks to Dr. Scott Hagan for this slide

Behavioral Weight Management Participation and Outcomes

- MOVE! is VA's national, free weight management program
- 16-week, evidence-based, typically group delivery and housed within Primary Care
- ~30% of those who participate intensively will lose ≥ 5%
- Reduces cardiovascular and metabolic risk
- Many participate but only 2-12% participate intensively due to various barriers to care

Maciejewski M et al, Systematic Review of Behavioral Weight Management Program MOVE! for Veterans, *AJPM,* 2018

TABLE 3—Annual Probability of Achieving a 5% Reduction in Body Weight by Initial BMI Category and Gender: United Kingdom, 2004–2014

Initial BMI Category	No. Participants	No. Person-Years During Follow-Up	No. Attaining 5% Reduction in Body Weight	Annual Probability of Attaining 5% Reduction in Body Weight
Men, kg/m^2				
30.0–34.9	27 966	135 394	11 869	1 in 12
35.0–39.9	27 490	118 266	13 805	1 in 9
40.0–44.9	14 767	57 099	8 100	1 in 8
≥ 45.0	6 481	20 900	4 177	1 in 5
Women, kg/m^2				
30.0–34.9	27 251	123 567	12 792	1 in 10
35.0–39.9	27 373	116 042	13 972	1 in 9
40.0–44.9	26 716	103 849	15 208	1 in 7
≥ 45.0	18 451	63 397	11 340	1 in 6

Note. BMI = body mass index.

78% regain this weight at 5 years

Fildes, Charlton et al. *AJPH,* 2015
Thanks to Dr. Scott Hagan for this slide

Virtual Care: Necessary, not Sufficient

- Likely ~as effective, and could help overcome barriers
- Pre-March 2020, 20% to 30% of MOVE! delivered via telehealth. By April 2020, 90% was.
- Compared with the same months in prior years, monthly MOVE! participation 20%-40% lower (end of 2020 and into January 2021)
- Asynchronous care holds promise. Patient-centered, menu of options.

Gray KE, Hoerster KD, Spohr S, Breland JY, Raffa S. (in press). National Veterans Health Administration MOVE! Weight Management Program Participation during the COVID-19 Pandemic. *Preventing Chronic Disease.*

Behavioral Weight Management and Stigma

Modified items (C-WBIS)

1. No matter how much I weigh, I can do just as much as everyone else
2. I am less attractive than other people because of my weight
3. I feel anxious about my weight because of what people might think of me
4. I wish I could change my weight a whole lot
5. whenever I think a lot about my weight, I feel depressed
6. I hate myself because of my weight
7. My weight strongly influences what I think of myself confidence and worth as a person
8. Because of my weight, I don't deserve having a lot of friends and fun
9. I am satisfied with my weight
10. Because of my weight, I don't feel like true self
11. Because of my weight, I don't understand why attractive peers would want to play with me.

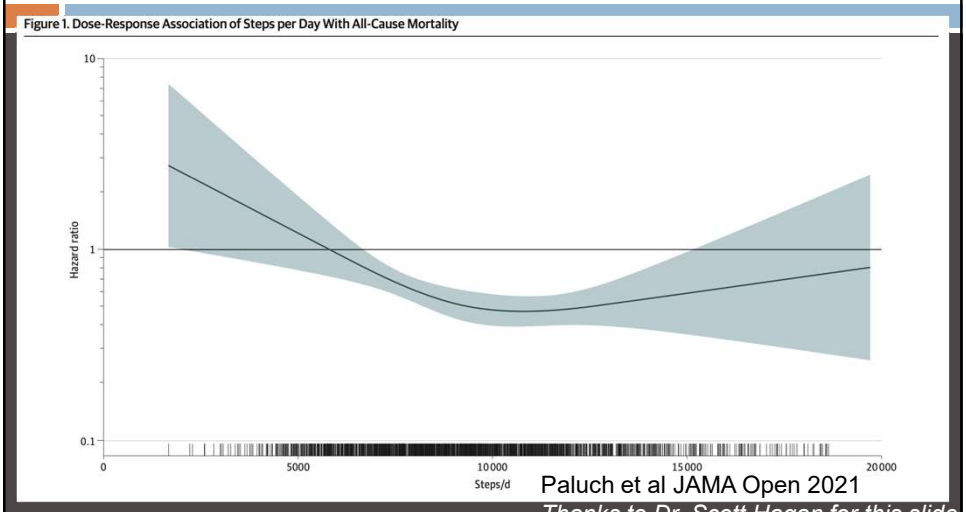
Half of adults with BMI ≥ 30 have very high weight bias internalization scores

Puhl et al. Obesity 2018
Thanks to Dr. Scott Hagan for this slide

Behavioral Weight Management and Stigma

- Can but Doesn't Have to Promote Stigma
  - Should be measured in RCTs
- emphasize physical activity, guideline-concordant food/beverage consumption lifestyles (regardless of weight change)
- Support realistic, whole-health goal setting
- Opportunity to connect and cope/celebrate successes together, improve mental health
- Change is ok but must also nurture body acceptance

Conclusions: Promoting Healthy Lifestyles Helps All



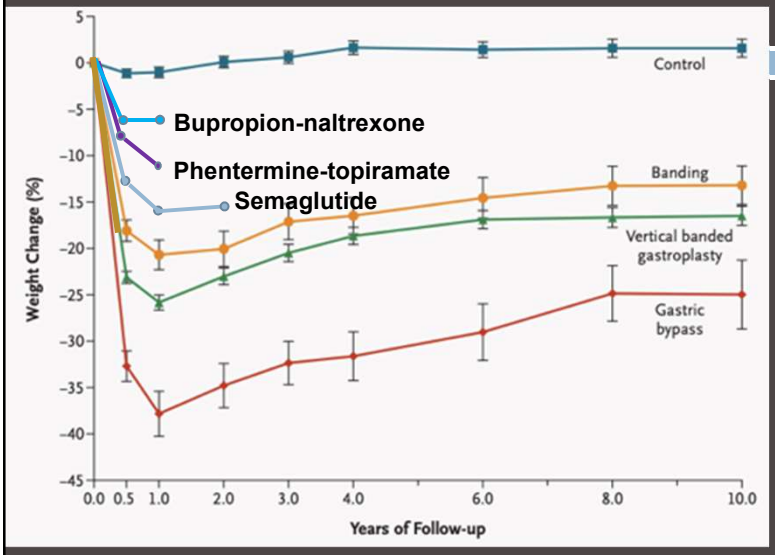
Paluch et al JAMA Open 2021

Thanks to Dr. Scott Hagan for this slide

Step Counts have a mortality dose response (up to 10,000 steps)

Behavioral Weight Management among Older Adults

- emphasize physical activity, guideline-concordant food/beverage consumption lifestyles (regardless of weight change)
  - Avoid low calorie diets
  - Emphasize strength training
- Support realistic, whole-health goal setting
- Opportunity to connect and cope/celebrate successes together, improve mental health
- Change is ok but must also nurture body acceptance



(Sjostrom, Lindroos et al. 2004)
Thanks to Dr. Scott Hagan for this slide

Prescribing Semaglutide @ VA

GI side effects are common

- Nausea peaks @ 4 months, then improves

Monthly dose titration, takes 4 months

Continued weight loss through first year

Must meet ALL these criteria (use vanf.app):

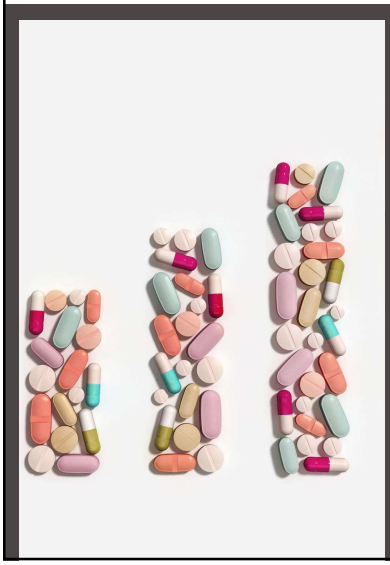
- Participating in a weight loss program
- BMI 27+ with comorbids or 30+
- Meds causing weight gain reviewed

And ONE of these:

- DMII already on semaglutide requiring additional weight loss
- BMI > 40, or 35-40 needing weight loss for surgery, or difficult to manage weight related condition (OSA, NASH, disabling OA)
- Inadequate response to 2 national formulary weight loss agents (phen-top, buproprion-nal, or orlistat)

Thanks to Dr. Scott Hagan for this slide

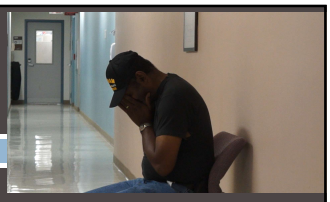
Alternatives to Behavioral Weight Management



- Semaglutide is the most effective weight loss medication (~15% weight loss)
- Metabolic surgery is the most effective weight loss treatment
- Both treatments are available through VA but are offered and utilized far less than behavioral approaches

Thanks to Dr. Scott Hagan for this slide

Focus on PTSD and BMI



- PTSD is associated with higher obesity and related diseases
- MOVE! less effective for Veterans with PTSD (Hoerster et al., *Psychiatric Services,* 2014)
- People with PTSD have unique barriers to activity and healthy diet, e.g., hyperarosal (Hall, Hoerster, Yancy, *Epidemiologic Reviews,* 2015)
- PTSD and depression increase risk for binge, emotional, and night eating
- Sleep disorders associated with poor eating and excess weight (St.-Onge, JCSM, 2013)
- Developed MOVE!+UP, a weight management program for Veterans with PTSD

Gratitude to the MOVE!+UP Team

- MOVE!+UP Research Team:
  - Juliana Bondzie
  - Moriah Brier
  - Scott Coggeshall
  - Laura Damschroder
  - Dakota Houseknecht
  - Rachel Hunter-Merrill
  - Gillian Monty
  - Karin Nelson
  - Brian Saelens
  - George Sayre
  - Tracy Simpson
  - **Nadiyah Sulayman**
  - **Lamont Tanksley**
  - Edwin Wong
- Partner: National Center for Health Promotion and Disease Prevention (NCP)
- Funding: VA Health Services Research & Development CDA, Merit, and Seattle R&D seed funding program

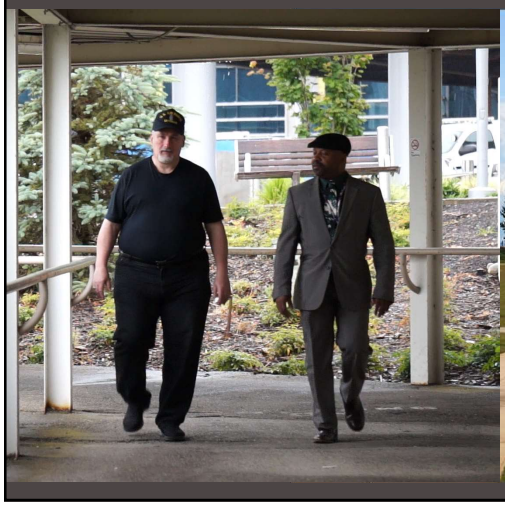
MOVE!+UP Origins

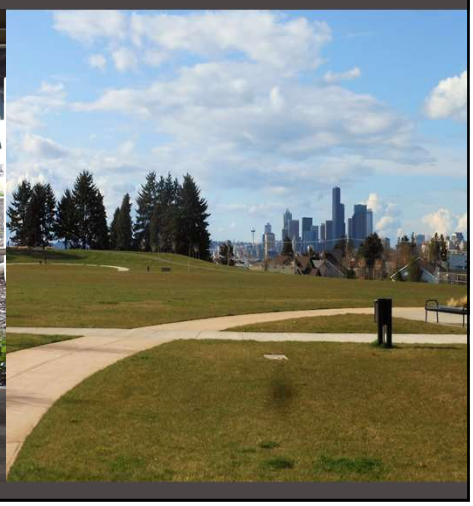
MOVE!+UP Overview

4-month Peer Led Weight Loss Program for Overweight Veterans with PTSD

Group Education: Weight Loss and CBT for PTSD

Community Walking





Brief Counseling Calls

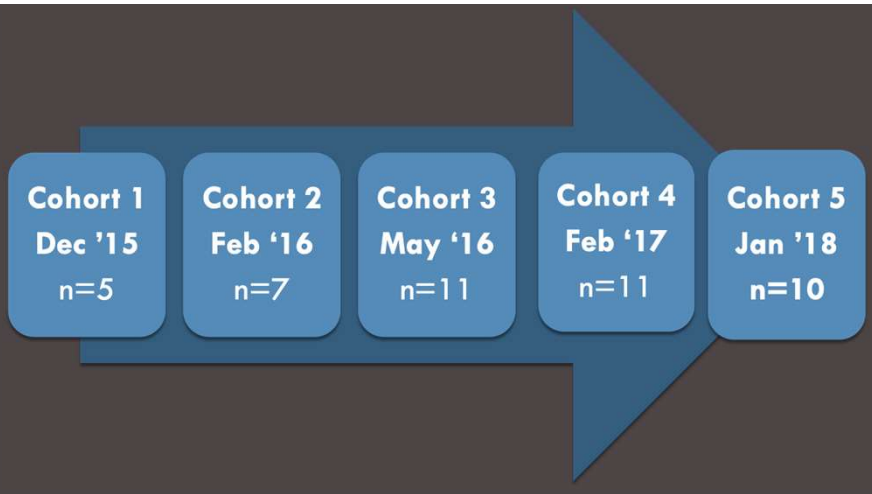
MOVE!+UP Pilot Study Sample

- N=44 Overweight Veterans with PTSD from VA Puget Sound
  - Inclusion criteria
    - Body Mass Index ≥ 25
    - Lifetime experience of trauma
    - current PTSD (a score of ≥33) based on DSM-5 criteria measured with the PTSD Checklist-Military Version (PCL-M)
    - PCP approval required
  - Minimal exclusion criteria (e.g., acute suicidality)
  - Primarily recruited through flyers and providers

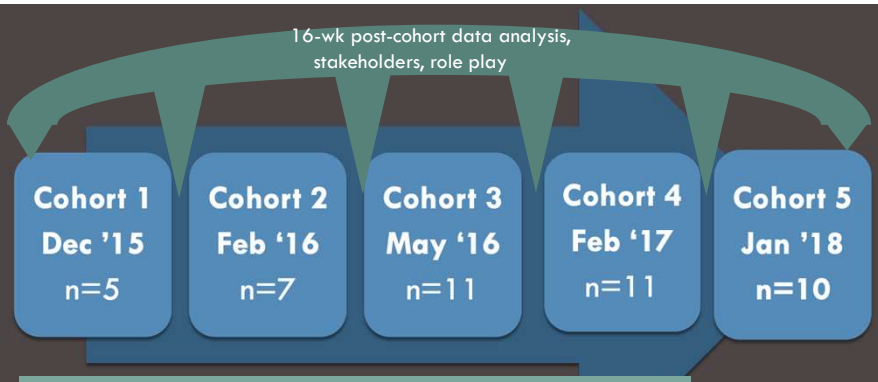
Pilot Study Sample

Variable	Mean or %
Age	58 years
Weight	246 lbs
Male	70%
White	64%
Married	70%

Pilot Study Design



Pilot Study Design



Modified:
Content
Structure
Supervision process
Fidelity rating process and application

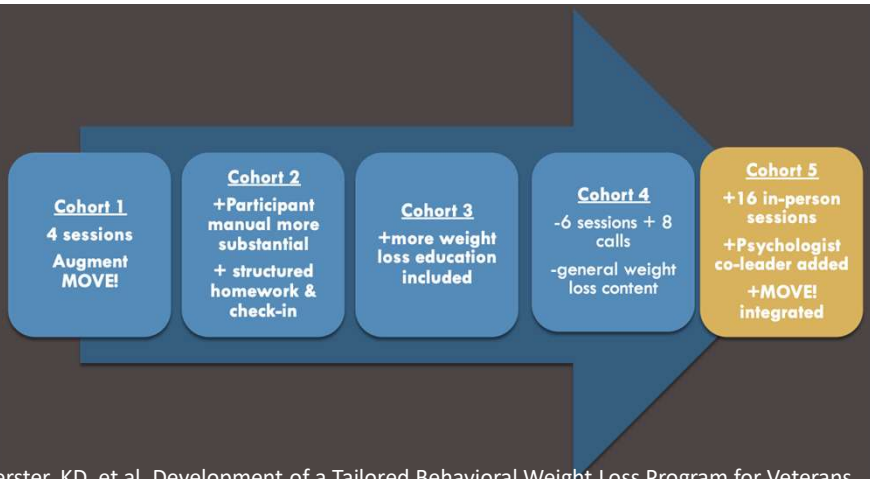
Measures

Baseline, 16 weeks, and 6 months

- Weight
- PTSD Checklist
- Diet quality: Starting the Conversation
- Physical activity: International Physical Activity Questionnaire
- Social Support for PA and Diet
- QoL: SF-12

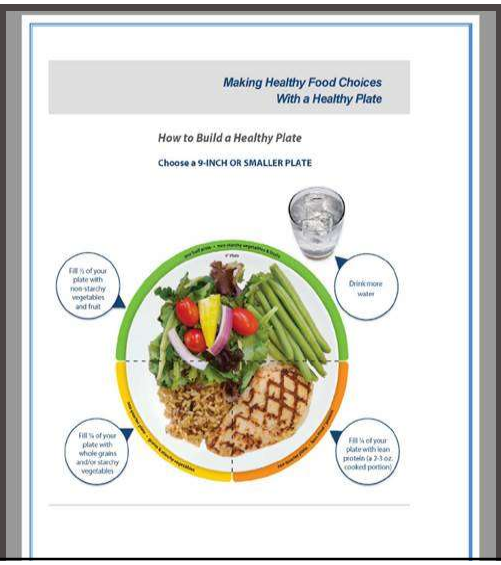
qualitative interview (1-hour after in-person group sessions concluded and at 16 weeks)

Pilot Study Design

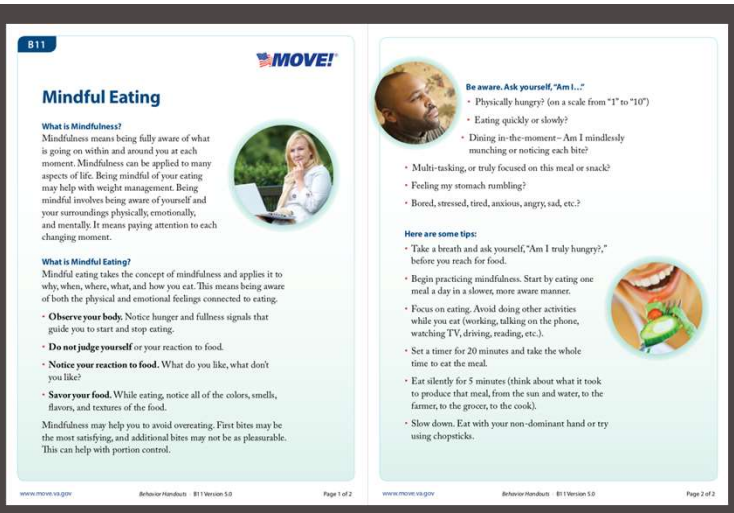


Hoerster, KD, et al. Development of a Tailored Behavioral Weight Loss Program for Veterans with PTSD (MOVE!+UP): A Mixed Methods Uncontrolled Iterative Pilot Study. *American Journal of Health Promotion, 2020.*

Final MOVE!+UP Overview: Sample



Final MOVE!+UP Overview: Sample



B11

MOVE!

Mindful Eating

What is Mindfulness?

Mindfulness means being fully aware of what is going on within and around you at each moment. Mindfulness can be applied to many aspects of life. Being mindful of your eating may help with weight management. Being mindful involves being aware of yourself and your surroundings physically, emotionally, and mentally. It means paying attention to each changing moment.

What is Mindful Eating?

Mindful eating takes the concept of mindfulness and applies it to why, when, where, what, and how you eat. This means being aware of both the physical and emotional feelings connected to eating.

- **Observe your body.** Notice hunger and fullness signals that guide you to start and stop eating.
- **Do not judge yourself** or your reaction to food.
- **Notice your reaction to food.** What do you like, what don't you like?
- **Savor your food.** While eating, notice all of the colors, smells, flavors, and textures of the food.

Mindfulness may help you to avoid overeating. First bites may be the most satisfying, and additional bites may not be as pleasurable. This can help with portion control.

www.move.va.gov Behavior Handouts B11 Version 5.0 Page 1 of 2

Be aware. Ask yourself, "Am I..."

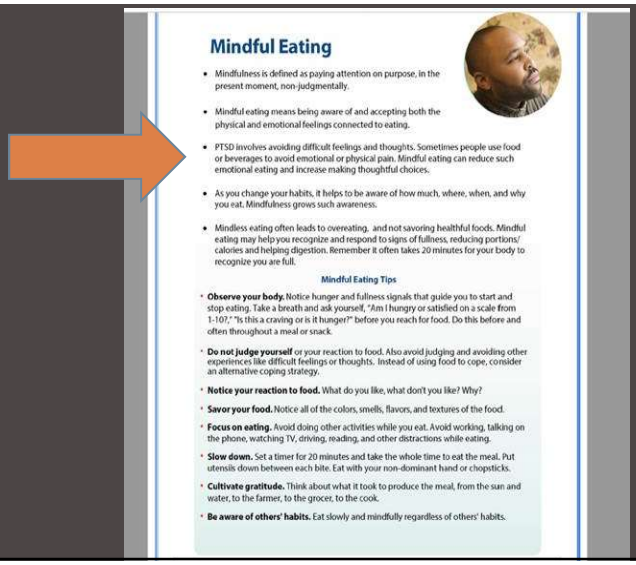
- Physically hungry? (on a scale from "1" to "10")
- Eating quickly or slowly?
- Dining in-the-moment – Am I mindlessly munching or noticing each bite?
- Multi-tasking, or truly focused on this meal or snack?
- Feeling my stomach rumbling?
- Bored, stressed, tired, anxious, angry, sad, etc.?

Here are some tips:

- Take a breath and ask yourself, "Am I truly hungry?," before you reach for food.
- Begin practicing mindfulness. Start by eating one meal a day in a slower, more aware manner.
- Focus on eating. Avoid doing other activities while you eat (working, talking on the phone, watching TV, driving, reading, etc.).
- Set a timer for 20 minutes and take the whole time to eat the meal.
- Eat silently for 5 minutes (think about what it took to produce that meal, from the sun and water, to the farmer, to the grocer, to the cook).
- Slow down. Eat with your non-dominant hand or try using chopsticks.

www.move.va.gov Behavior Handouts B11 Version 5.0 Page 2 of 2

Final MOVE!+UP Overview: Sample



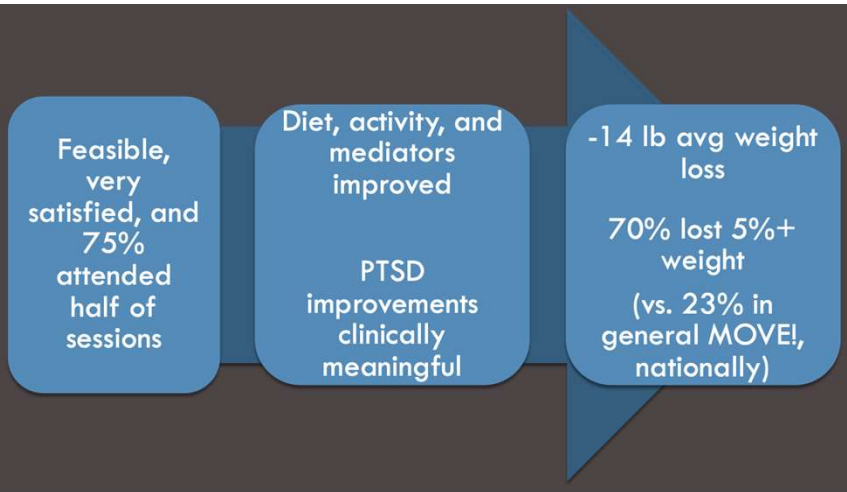
Mindful Eating

- Mindfulness is defined as paying attention on purpose, in the present moment, non-judgmentally.
- Mindful eating means being aware of and accepting both the physical and emotional feelings connected to eating.
- PTSD involves avoiding difficult feelings and thoughts. Sometimes people use food or beverages to avoid emotional or physical pain. Mindful eating can reduce such emotional eating and increase making thoughtful choices.
- As you change your habits, it helps to be aware of how much, where, when, and why you eat. Mindfulness grows such awareness.
- Mindless eating often leads to overeating, and not savoring healthful foods. Mindful eating may help you recognize and respond to signs of fullness, reducing portions/ calories and helping digestion. Remember it often takes 20 minutes for your body to recognize you are full.

Mindful Eating Tips

- **Observe your body.** Notice hunger and fullness signals that guide you to start and stop eating. Take a breath and ask yourself, "Am I hungry or satisfied on a scale from 1-10?," "Is this a craving or is it hunger?" before you reach for food. Do this before and often throughout a meal or snack.
- **Do not judge yourself** or your reaction to food. Also avoid judging and avoiding other experiences like difficult feelings or thoughts. Instead of using food to cope, consider an alternative coping strategy.
- **Notice your reaction to food.** What do you like, what don't you like? Why?
- **Savor your food.** Notice all of the colors, smells, flavors, and textures of the food.
- **Focus on eating.** Avoid doing other activities while you eat. Avoid working, talking on the phone, watching TV, driving, reading, and other distractions while eating.
- **Slow down.** Set a timer for 20 minutes and take the whole time to eat the meal. Put utensils down between each bite. Eat with your non-dominant hand or chopsticks.
- **Cultivate gratitude.** Think about what it took to produce the meal, from the sun and water, to the farmer, to the grocer, to the cook.
- **Be aware of others' habits.** Eat slowly and mindfully regardless of others' habits.

Pilot Study 16-week Results Cohort 5



Pilot Study Results Cohort 5

- "It opened up my eyes to how I was eating..if I was getting..depressed or into my thoughts, or being alone or with the PTSD that affected my mood of eating, I'd eat more."
- "[It helped me] do things that are more relaxing for me to do, and get me out of my shell. And interact with other people that are suffering from PTSD too."
- "My..eating..changed, my physical activity..changed…now it has become a habit..."

Summary: MOVE!+UP Changes

Initial	Following Refinement
• 4 in-person sessions • 6 brief counseling calls after	• 16 in-person sessions • As needed calls
• Peer support counselor delivered	• Peer support counselor and psychologist co-delivered
• Basic participant manual (13 pages)	• Comprehensive (~200 pages) • Expanded exercises for learning • Added content on sleep • All components covered in session
• Unstructured processes for goal-setting and check-in on goals	• Increased education about goal setting • Homework and check-in structured, including weekly weighing and feedback on diet/activity logs
• Encouraged to attend weight loss prgms • Limited weight loss information included	• MOVE! content integrated into the treatment

Pilot Conclusions and Next Steps

- MOVE!+UP holds promise as a program for promoting health and mental health among overweight Veterans with PTSD
  - Proof of concept
  - Efficient, improving health and mental health simultaneously
  - Brings people together (old and young, across political lines)
  - Meets multiple VA priorities
- HSR&D Merit to (Oct 2020-Sept 2024)
  - Hybrid Type 1 RCT
  - Identify implementation facilitators and barriers during RCT and in stakeholder interviews
  - Essential for implementation if MOVE!+UP is efficacious

Hoerster KD, et al. Testing a tailored weight management program for Veterans with PTSD: The MOVE!+UP randomized controlled trial. *Contemporary Clinical Trials,* 2021

Thank you to MOVE!+UP's Veteran Co-Creators!

Conclusions: Behavioral Weight Management and Alternatives

- Behavioral Weight Management can be effective but maintenance is tough, and few participate
  - Virtual and non-synchronous options can improve access
  - Can improve whole health, including mental well-being
  - Must address disparities in BMI and WL outcomes
- Alternatives to Behavioral approaches
  - Semaglutide is the most effective weight loss medication
  - Metabolic surgery is the most effective weight loss treatment
    - Both treatments are available through VA but are offered and utilized far less than behavioral approaches

Conclusions: Why Focus on Weight

Many want to lose weight

For their health, appearance, desire to fit into clothes, pressure from loved ones, functioning, etc

Conclusions: Behavioral Weight Management Best Practices

- Ask Permission and Interest to Weigh, Discuss Weight, or Discuss Recommendations
- Emphasize physical activity, guideline-concordant food/beverage consumption lifestyles (regardless of weight change)
- Support realistic, whole-health goal setting
- Change is ok/possibly healthy, but must also nurture body acceptance
  - All relevant to working with older adults

Conclusions: Advocate to Improve Systemic Drivers of Inequity

Image omitted from handout because in press paper

Persad-Clem RA, Hoerster KD, Romano EFT, Huizar N, & Maier KJ (in press). Climate to COVID, Global to Local, Policies to People: A Biopsychosocial Ecological Framework for Syndemic Prevention and Response in Behavioral Medicine. *Translational Behavioral Medicine*.

Thank you!!!

Questions?

Comments?

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