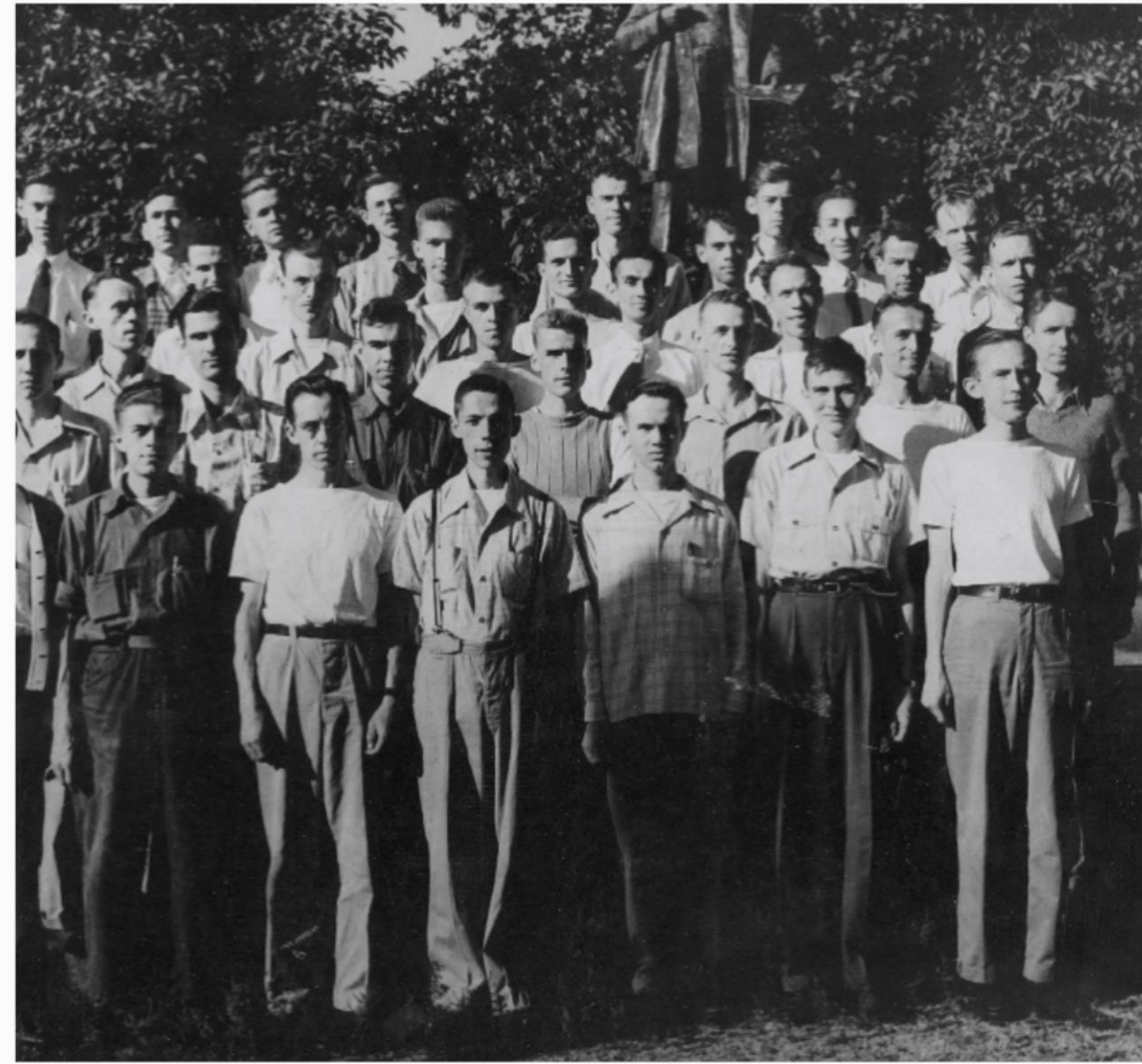


Psychoeducation for Eating Disorders: What Every Clinician and Client Should Know

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Evidence Based Treatment Centers of Seattle, PLLC

Outline

- Psychoeducation for anorexia nervosa
 - Minnesota Starvation Experiment
 - Medical/physical impact
 - Psychological impact
 - Social impact
- Psychoeducation for bulimia nervosa
 - Medical/physical impact
 - Psychological/Social impact
- Psychoeducation for binge eating disorder and dieting
 - Impact of Binge Eating
 - Dieting does not work
 - Impact of Dieting

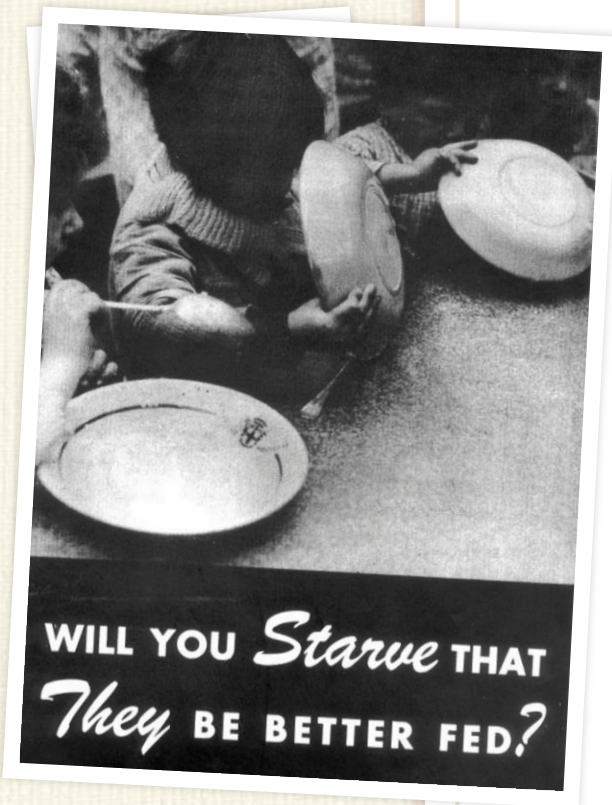


Psychoeducation for Anorexia Nervosa

The Minnesota Starvation
Experiment

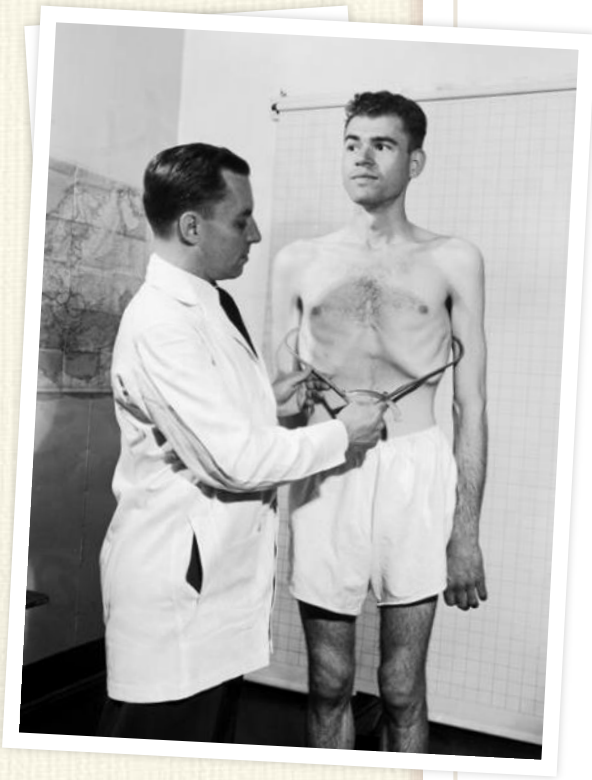
The Minnesota Starvation Experiment

- Crucial study in our understanding of what happens to the body and mind in a starved state
- Key part of educating a client and their family about the effects of undereating and malnutrition
- Helped to dispel myths about “a disorder in vain girls”
- Supports weight restoration as the first intervention in evidenced-based manualized treatments
- Would never pass an IRB today



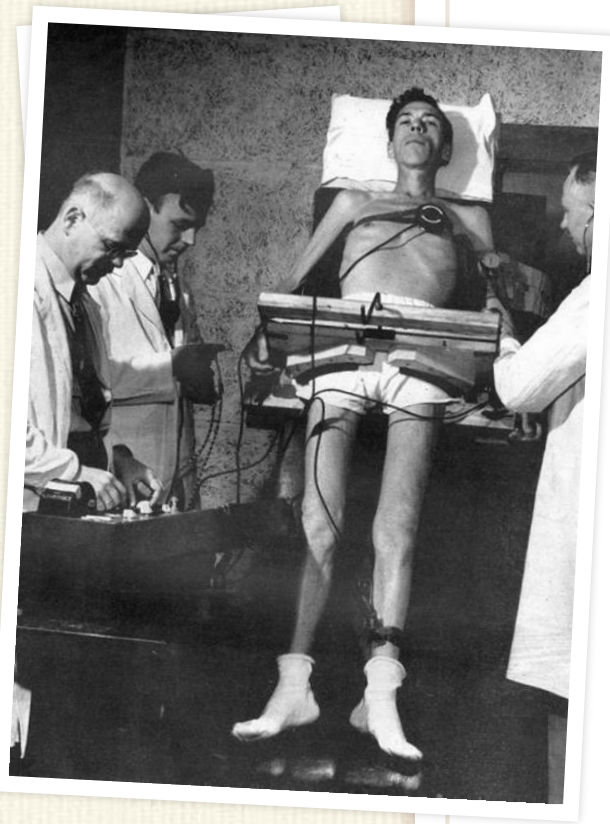
The Minnesota Starvation Experiment

- In 1944 36 healthy men answered a call to participate in a research study at the Laboratory of Physical Hygiene at the University of Minnesota
- All were conscientious objectors of the war (many came from the Historic Peace Churches: Mennonites, Brethren and Quaker)
- War was coming to an end, and Allied forces liberating parts of Europe were encountering people in extreme starvation
- A young professor of physiology at the University of Minnesota was a consultant for the War Department
 - How would such food deprivation impact civilians physiologically and psychologically
 - How best to re-feed and rehabilitate them



The Minnesota Starvation Experiment

- Ancel Keys sent out brochures to 12,000 possible volunteers through work camps and Civilian Public Service sites
- > 400 responded to the brochure
- 100 were interviewed and examined
- 36 healthy men (physically and psychologically) selected
- No underlying source of motivation for deprivation



The Minnesota Starvation Experiment

- The experiment began with a 12-week control period
 - Approximately 3,200 calories a day
- Their calories were cut by approximately 50% and the six-month semi-starvation period began
- Lost ~25% of their body weight by end of semi-starvation period
- Expected to walk 22 miles/week and participate in some work on campus or take classes if they wished
- Assessments:
 - body weight, size, and strength
 - psychomotor and endurance tests
 - intelligence and personality tests
 - required to keep a personal journal



Minnesota Starvation Experiment: Physical Impact

- Weak physically (could not open library door or push the revolving door of a department store alone)
- Less energy
- Decreased tolerance for cold temperatures, and requested additional blankets even in the middle of summer or spent time lying in the sun to keep warm
- Dizziness, extreme tiredness, anemia, neurological changes, muscle soreness, edema, skin changes, hair loss, reduced coordination, and ringing in their ears
- Several were forced to withdraw from their university classes because they simply didn't have the energy or motivation to attend and concentrate



FIGURE 8.5. Minnesota volunteers at mealtime
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Minnesota Starvation Experiment: Psychological Impact

- Irritable and impatient with one another especially at meal times
- Depressed and introverted
- Loss of interest in sex and dating
- Rare to see anyone in a courtship by the end of the semi-starvation phase
- Lack of motivation for most activities
- Anhedonia for previous interests
- Humor was gone
- Rare to see anyone smile, laugh, whistle or sing
- Unstable moods

Minnesota Starvation Experiment: Preoccupation with Food

- Ritualized eating behaviors emerged
- "They would coddle [the food] like a baby or handle it and look over it as they would some gold. They played with it like kids making mud pies,"
- Anxious about food and eating and would try to distract when new rations for the week were posted on Friday nights
- Plate-licking was commonplace as the men sought out ways to extend mealtime and or feel fuller
- "... eating became a ritual ... Some people diluted their food with water to make it seem like more. Others would put each little bite and hold it in their mouth a long time to savor it. So eating took a long time."
- or labored over combining the food on their plate, "making weird and seemingly distasteful concoctions,"

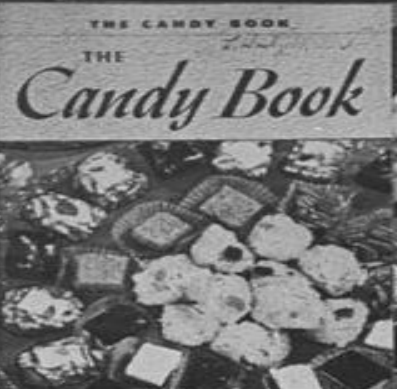
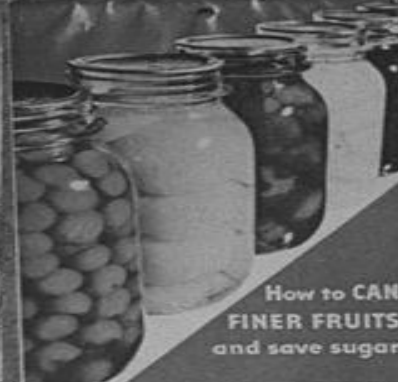
Minnesota Starvation Experiment: Preoccupation with Food

- Several men collected cookbooks and recipes; some reporting they owned nearly 100 by the time the experiment was over.
- Participants recalled the frustration of constantly thinking about food:

“I don't know many other things in my life that I looked forward to being over with any more than this experiment. And it wasn't so much ... because of the physical discomfort, but because it made food the most important thing in one's life ... food became the one central and only thing really in one's life. And life is pretty dull if that's the only thing. I mean, if you went to a movie, you weren't particularly interested in the love scenes, but you noticed every time they ate and what they ate.”

Minnesota Starvation Experiment: Preoccupation with Food

- “Food became the sole source of fascination and motivation. Many men began obsessively collecting recipes (“Stayed up until 5 a.m. last night studying cookbooks,”). They found themselves distracted by constant daydreams of food. Some sublimated their cravings by purchasing or stealing food; one man began stealing cups from coffee shops. They guzzled water, seeking fullness. Some took up smoking to stave off hunger and others chewed up to 30 packs of gum a day until the laboratory banned it.”
- One subject became “euphoric” after sneaking unauthorized food in town. This led to a binge where he visited 17 soda shops on the walk home. “He kidded with the fountain girls, thought the lights more beautiful than ever, felt that the world was a very happy place,” the researchers reported. “This degenerated into a period of extreme pessimism and remorse; he felt he had nothing to live for, that he had failed miserably to keep his commitment of staying on reduced rations.”



gettyimages
Wallace Kirkland

1. HOW DOES IT FEEL TO BE STARVED?

Let us first get a bird's-eye view of how a starving person feels by quoting directly from the diaries of our experimental subjects, written while they were starving.

First Month

"I am definitely weaker than I was once and though my energy level remains high, I have no reserve left."

. . . .

"When I feel lowest it seems as if all I'm doing is sitting like a little kid, waiting until school's out. Movements have slowed considerably this week; also less desire to move."

. . . .

"The time between meals has now become a burden. This time is no longer thought of as an opportunity to get those things done which I have to do or want to do. Instead, it's time to be borne, killed until the next meal, which never comes fast enough."

Second Month

"I just don't have any desire to do the things I should do or the things I want to do. Instead of writing a letter, I read a newspaper. Instead of studying, I read a pamphlet. Instead of cleaning, I putter around making excuses such as, 'Well, I really won't have enough time to do the complete job. I'll do it later.'"

"It wasn't what the boys did with their food that I didn't like but it was their method. They would coddle it like a baby or handle it and look over it as they would some gold. They played with it like kids making mud pies."

Third Month

"I purchased a tube of toothpaste yesterday. Finally got around to using it for the first time last night. Had a desire to eat the paste, but controlled it."

. . . .

"Received a new insight and shock as to my physical condition today. Tried to play table tennis for the first time in four months and was amazed at the amount of effort it took to hit the ball. Also the lack of co-ordination and poor response of the arm. I had no idea co-ordination would be so poor."

. . . .

"I find I am becoming more and more frank about showing my emotions and indicating my stripes, particularly at the table. I got up and left the table, telling — — that I did not appreciate his licking his plate so noisily. I told him that he sounded like a d—cow."

Fourth Month

"This week of starvation found me completely tired practically every day. If they want to get any more work out of me, they're going to have to feed me."

Fifth Month

"I also found myself becoming senselessly irritable, particularly when I watched some of the bizarre eating habits of others. One mixture that came near flooring me was potatoes, jam, sugar, gingerbread—all thrown into a bowl of oatmeal and used as a sandwich spread. I hate to see guys picking around with this or that to make a superb sandwich, all the time letting their soup get cold."

. . . .

"Last week was unquestionably my toughest. I had hunger pains every day. Tuesday afternoon I had to quit work because the pains were so bad."

Sixth Month

"The days seem to go slower, to me anyhow. More a living or passing time from one meal to the next. I do things to pass time, rather than to gain from the doing."

. . . .

"Stayed up until 5:00 A. M. last night studying cook-books. So absorbing I can't stay away from them."

. . . .

"Those words must sound artificial to the well-fed, but so is the day dark to the blind."

With this understanding of the nightmare that is starvation, let us consider the matter in a more systematic fashion: first, the changes in motivation, then the

Psychoeducation for Anorexia Nervosa: Physical Impact

- Death
 - Highest mortality rate of any psychiatric illness (Sullivan, P. et al. (1995); Franko, D.L. et al. (2013))
- Heart and circulation
 - Heart muscle wastes; bradycardia; arrhythmias; low blood pressure
- Sex hormones and fertility
 - Sex hormone production declines; decline in libido; decline in sexual responsiveness; decline in fertility
- Bones and muscles
 - Deterioration in bone strength; osteopenia; osteoporosis; increased fracture risk
 - Muscles waste leading to weakness
- GI Functioning
 - Delayed gastric emptying; constipation; taste impairments; persistent hunger

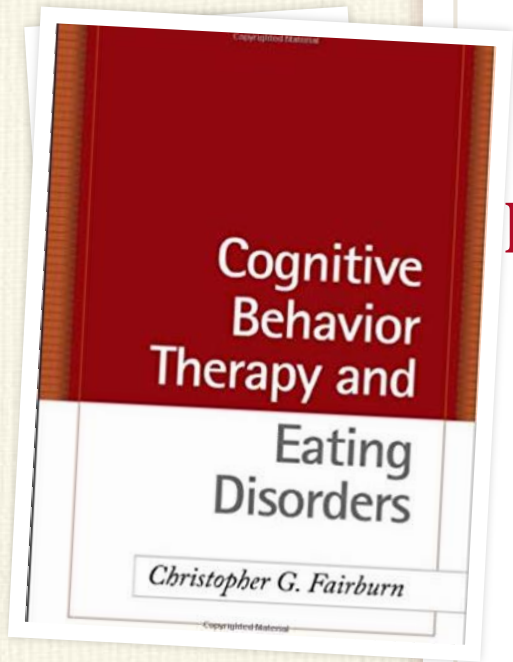
Psychoeducation for Anorexia Nervosa: Physical Impact

- Skin and hair
 - Lanugo can grow on face, abdomen, back and arms; hair loss from the scalp; dry and orange-tinged skin
- Temperature regulation
 - Decrease in body temperature and increase sensitivity to cold
- Sleep
 - Less restorative and tendency to wake early
- Do NOT have to be underweight to experience these effects. Can also result from markedly undereating, irrespective of weight.

Fairburn, C.G. (2008). *Cognitive behavior therapy and eating disorders*. New York, NY: The Guilford Press.

Psychoeducation for Anorexia Nervosa: Psychological Impact

- Difficulty concentrating or focusing
- Ritualized eating
- Preoccupation with food, eating and calories
 - Cooking for others, watching cooking shows, studying nutrition, reading recipes
- Inflexibility in thinking and set shifting
- Anhedonia
- Irritability
- Depression
- Mood lability



Psychoeducation for Anorexia Nervosa: Social Impact

- Inward-looking or self-focused
- Heightened need for routine and difficulty being spontaneous
- Socially withdrawn
- Loss of sexual appetite
- Irritability

Fairburn, C.G. (2008). *Cognitive behavior therapy and eating disorders*. New York, NY: The Guilford Press.

The Role of Weight Restoration

- Most of these problems are reversible with weight restoration
- Body image can also improve just by virtue of gaining weight
- First goal in treatment of anorexia nervosa is weight gain
- Psychological work can follow but is often not as helpful if clients are underweight
 - Many of the men in the Minnesota Starvation Experiment saw physical improvements before psychological improvement (much improvement in mood and social behavior occurred three months later)
 - But it took longer to stabilize eating (many became grazers and others continued to engage in binge eating, even eight months later)
- This is why in CBT-E and FBT a key component of treatment is re-establishing a regular pattern of eating

Psychoeducation for Bulimia Nervosa

- Check the facts
 - Self-induced vomiting is not an effective method of weight loss because some of the calories are still absorbed
 - Laxatives also are not effective for weight loss (only 10-12% of ingested calories are lost this way) because laxatives do not act on the small intestine (act on the large intestine), which is the primary site of **calorie absorption** (Mehler, P.S., Crews, C. & Weiner, K. (2004). Bulimia: Medical complications. *Journal of Women's Health*, (13)6, 668-675)
 - Most people with bulimia nervosa are normal weight or overweight

Psychoeducation for Bulimia Nervosa: Physical Impact

- Self-induced Vomiting
 - Pharyngeal soreness (irritation in back of the throat by stomach acid)
 - Dental erosion (made worse by rinsing the mouth after vomiting), dental caries and periodontal disease (irreversible but not progressive)
 - Sialadenosis = painless swelling of salivary glands has been reported in 10–50% of patients, depending on the frequency of vomiting. Initially intermittent, the swelling tends to persist
 - Esophagitis, esophageal erosions, ulcers, and bleeding. Thus, patients with bulimia nervosa often complain of heartburn and acid-reflux symptoms
 - Esophageal rupture is rare but fatal in 20% of cases
 - Callouses on knuckles (Russell's sign)
 - Self-induced vomiting using ipecac syrup can be fatal because repeated ingestions results in accumulation of emetine which leads to cardiac complications and sudden death may follow.

Psychoeducation for Bulimia Nervosa: Physical Impact

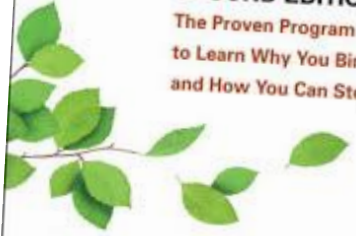
- Laxative abuse
 - Tolerance to the effects of stimulant laxatives occurs
 - Cathartic colon syndrome: loss of normal functioning of your colon
 - Severe constipation (very prolonged use can be irreversible)
 - No way to predict how when this may occur
 - May retain water for a week when stop abruptly if using regularly
 - Harmless reflex constipation can occur when someone is trying to discontinue laxative use. Usually can return to normal functioning if they can tolerate it or decrease with the help of a physician.

Over 150,000 in Print!

Overcoming Binge Eating

SECOND EDITION

The Proven Program
to Learn Why You Binge
and How You Can Stop



Dr. Christopher G. Fairburn

Psychoeducation for Bulimia Nervosa: Physical Impact

- Irregular periods and infertility (can resolve with regular eating and no purging)
- Excessive/compulsive exercise
 - Rigid thinking
 - Dehydration
 - Overuse injuries
- Electrolyte imbalance
 - Low potassium (hypokalemia) which can cause cardiac problems or death (irregular heart beats should be checked by a physician)
 - Edema of lower extremities
 - Dehydration which can cause renal failure
 - Reversible and stops with purging but may need supervision of a physician

Fairburn, C.G. (2013). *Overcoming binge eating second edition: the proven program to learn why you binge and how you can stop*. New York, NY: The Guilford Press.

Psychoeducation for Bulimia Nervosa: Psychological/Social Impact

- Binge eating occurs for the following reasons
 - Physiological deprivation
 - Psychological deprivation
 - Mood regulation
- Isolating
- Shameful
- Depression
- Mood lability
- Anxiety about eating and food (dietary restraint/restriction)

Psychoeducation for Binge Eating Disorder and Dieting: Impact of Binge Eating

- Discuss the reasons people binge eat
- Goals of treatment is not weight loss, it is to stop binge eating and establish regular eating
- Pattern of restriction or culturally-sanctioned dieting perpetuates binge eating
- Must avoid weight loss programs that encourage strict dieting or forbid the consumption of specific foods
- Binge eating can change the cues for hunger and satiety
- Can cause weight gain or maintenance of obesity

Fairburn, C.G. (2013). *Overcoming binge eating second edition: the proven program to learn why you binge and how you can stop*. New York, NY: The Guilford Press.

SECRETS FROM THE EATING LAB



The Science of Weight Loss, the Myth of Willpower,
and Why You Should Never Diet Again

TRACI MANN PH.D.

Dieting Does NOT Work

- Not as simple as calories in and calories out
- Set-point theory (humans evolved to be famine resistant)
- Too restrictive so difficult to maintain long-term
- Individual differences in weight gain/loss
 - Overfeeding by 1,000 calories/day leading to weight gain of 9-29 lbs depending on the person (Bouchard et al., 1990)
- Behavior genetics studies (twin and adoption) show genetics play a significant role in weight
 - Adopted children's weight correlates with biological parents
 - Up to 70% of variance for weight (height is 80%)

McElfish, B.M. (2018). *Dieting: The rarely successful, the hangry, and the eating disordered*. Presentation for CE at EBTCS.

Dieting does NOT work

“It is only the rate of weight regain, not the fact of weight regain that appears to be open to debate.”

- Garner & Wooley, “Confronting the Failure of Behavioral and Dietary Treatments for Obesity,” *Clinical Psychology Review* 11, no. 6 (1991): 729-80.

“If ‘cure’ from obesity is defined as reduction to ideal weight and maintenance of that weight for 5 years, a person is more likely to recover from most forms of cancer than from obesity.”

-Brownell, “Obesity: Understanding and Treating a Serious, Prevalent, and Refractory Disorder,” *Journal of Consulting and Clinical Psychology* 50, no. 6(1982): 820-40.

McElfish, B.M. (2018). *Dieting: The rarely successful, the hangry, and the eating disordered*. Presentation for CE at EBTCS.

Dieting Does NOT Work

- Evidence that the pattern of restriction and then weight regain may actually be contributing to the obesity epidemic
- More likely to notice and pay attention to food
 - Particularly strong in obese people, and get stronger the more you diet
- Hormones (Kershaw & Flier, 2003)
 - Feeling full (leptin, peptide YY, and cholecystokinin) decrease,
 - hungry (ghrelin, gastric inhibitory polypeptide, and pancreatic polypeptide) increase
 - Changes still detectible a year after ceasing dieting

Impact of Dieting

- Losing weight leads to dependence on lower energy requirements (Leibel & Hirsch, 1995)
- Weight cycling is associated with increased risk of illness and death (Brownell & Rodin, 1994)
 - Faster cell death (muscles weakening, skin wrinkling, hearing, eyesight and thinking diminishes)
- Diverts energy from reproduction, growth, immune system
 - Over time you become more susceptible to infection. Bone density decreases, Your blood pressure increases as heart has to work harder and blood vessels get damaged. Body becomes more resistant to insulin and increasingly stores fat in abdomen.

Impact of Dieting

- More emotionally vulnerable/labile
 - Minnesota Semi-Starvation Experiment
- Disordered eating
- Poorer immediate memory, longer reaction times
- Decrease in executive functioning, which returns after ceasing diet
- Dieting leads to increase in stress response

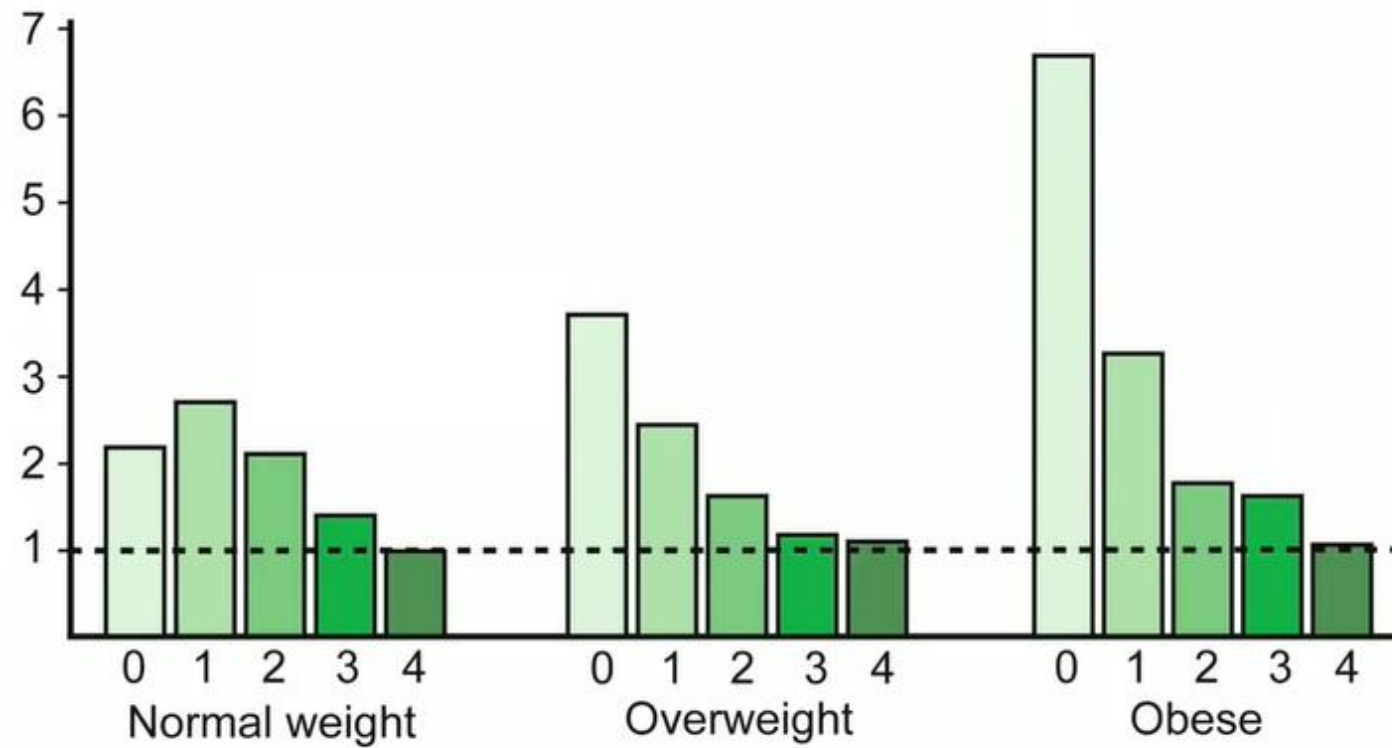
Dieting does NOT work: Health at Every Size

Study of over 11k individuals of varying BMI showed risk of death over 14 years based on 4 healthy habits:

1. Eating enough fruits and veggies
2. Exercise 3x/week
3. Not smoking
4. Drinking in moderation

McElfish, B.M. (2018). *Dieting: The rarely successful, the hangry, and the eating disordered*. Presentation for CE at EBTCS.

DiETING does NOT work: Health at Every Size



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