

Sleep-Eating and the Dynamics of Morbid Obesity, Weight Loss, and Regain of Weight in Five Patients

Sleep-eating—eating while in a somnambulistic state—bas infrequently been described in the medical literature. This article reports five cases of sleep-eating (one in detail and four summarized) in which a psychodynamic explanation for the condition is suggested by patients themselves. These patients are of interest also because their underlying psychodynamics plausibly explain their near-lifelong morbid obesity and dramatic episodes of weight cycling ("yo-yo syndrome"). The patients were treated in the Kaiser Permanente Weight Control Program in San Diego, which uses a psychodynamic approach coupled with exercise, prolonged absolute fasting, and the nutritional supplement Optifast® (Novartis Nutrition, Minneapolis, MN).

Case 1

A 25-year-old nurse's aide weighed 410 lb (184.5 kg) when she applied to our Very Low Calorie Diet (VLCD) Program for assistance with losing weight. Fiftyone weeks later, she weighed 132 lb, having lost 278 lb without incident. She then started incrementally adding food to her diet and within a few weeks was eating normally. After a month of this normal diet, she was briefly hospitalized twice because of weakness, dizziness, and hypotension. Coincidentally, she had a flareup of psoriasis after several years of methotrexate therapy, which had stabilized the psoriasis.

Sudden appearance of dental caries on the anteromedial surface of the patient's incisors led to the discovery that she had been inducing herself to vomit so that she could maintain her weight loss. Her clinical symptoms thus appeared to be caused by hypovolemia and electrolyte disturbance. Treatment with amitriptyline ended the self-induced vomiting within ten days. Her weight remained stable for several weeks, after which she suddenly gained a documented 38 lb (17.1 kg) in two weeks, ultimately returning to a

weight of >400 lb more quickly than she had lost the weight.

The patient explained this extraordinary weight gain by stating that she had been sleep-eating. She said that she had been a sleepwalker as a child and was now awakening to find, to her surprise, that her kitchen had obviously been used for cooking and eating—although she was the only person who could have so used it—and that she could not recall being engaged in either of these activities. She denied any conscious recollection of sleep-eating, a phenomenon which she stated was her own logical inference.

After initially denying any awareness of why she had started sleepeating at this particular time in her life, the patient finally described how, on the morning the sleepeating began, she had been sexually propositioned by a coworker, "... a much older man, Doctor; he was married, a family man." Although she immediately denied that the incident had any causal relevance to the onset of her sleepeating, she admitted that the incident was profoundly disturbing and frightening to her.

This insight into a possible link between sexual fears and eating while in a dissociated state sug-

gested the utility of obtaining a detailed life history to match weight status against milestone events. The patient was born weighing 5 lb (2.25 kg) to a 400-lb (180-kg) mother and a slightly overweight father. Her parents divorced when she was two years of age. Thereafter, she never saw her father. When the patient was three years old, her mother (who was alcoholic) gave her and her two siblings to the mother's parents to be raised. Because of the age gap between the patient and her siblings (a sister and a brother), she was excluded from their activities and thereby became isolated

The patient stated that the absence of her father led to taunting at school and was a cause of being depressed in childhood. She was quite thin as a child. She stated that her maternal step-grandfather began sexually molesting her when she was five years old. At seven, vaginal intercourse began. She then began to gain weight. Her recollection of home life during these years was vague and spottily amnesic, but at ten years of age, she weighed 250 lb (112.5 kg). She describes a sense of isolation: "I grew up too fast. I was a loner. I had no one to turn to. I never told anyone because I was afraid he'd beat me. Who would believe me? He was good, a regular churchgoer. They were grownups; they had friends." Her sister and brother were now both morbidly obese; her sister acknowledged molestation by her maternal uncle. Her brother no longer had contact with either of his sisters. At 14 years of age, she started to refuse her step-grandfather's advances. At 15 years of age, weighing 350 lb

Sudden appearance of dental caries on the anteromedial surface of the patient's incisors led to the discovery that she had been inducing herself to vomit so that she could maintain her weight loss.

She was now awakening to find, to her surprise, that her kitchen had obviously been used for cooking and eating.





She now speaks clearly of the threat created "by my wall being removed" (ie, the weight loss).

During a period when, the patient said, she felt "dangerously thin" — her weight was 238 lb (107.1 kg)— her daughter found her sleep-eating.

(157.5 kg), she ran away from home to escape a situation she no longer could tolerate.

The patient then lived with an alcoholic man for the next four years. During this time, she was frequently beaten, but her weight remained steady at 350 lb. At the age of 19 years, she again ran away and thereafter lived alone. At the age of 26 years, weighing 410 lb (184.5 kg), she decided to enter our VLCD Program. Her ability to maintain the required prolonged fast was superior, as can readily be seen in Figure 1. She stated that she did not have any sense of sexual threat while losing the weight, and she denied that the incest was relevant to her obesity or to any of her other problems. As she began to acknowledge the importance of her history, she began to overeat in a fully conscious state; her sleep-eating ceased, and she returned to weighing 400 lb (180 kg) more rapidly than she lost the weight. She insisted that she did not want to think about her life's events anymore and refused further contact with the VLCD Program. Ten years later, she returned weighing more than 400 lb (180 kg) and on permanent disability. She sought and obtained bariatric surgery. After losing 90 lb (40.5 kg), she became uncontrollably suicidal, was admitted to a psychiatric hospital five times in eight months, and received 12 electroshock treatments. She now speaks clearly of the threat created "by my wall being removed" (ie, the weight loss), first by Optifast and then by bariatric surgery.

Case 2

A 47-year-old female probation officer was largely amnesic about her life before she was eight years of age. When the patient was in the fourth grade, her mother had a nervous breakdown. When the patient was in fifth grade, her father began sexually molesting her. When the patient was in sixth grade, chronic depression set in and persisted into the patient's

adulthood. At age 20, she was raped. At age 27 years, weighing 140 lb (63 kg), she married the first of four increasingly ill-chosen husbands. With each marriage, she gained a substantial amount of weight; with each divorce, she spontaneously lost most of the weight gained. In discussing her life, she remarks, "I fear I'll kill someone, maybe my father." Several major weight losses were successful initially but then converted into regain while the patient was still enrolled in the Program: "When I feel safe, the weight will come off." On several occasions during a period when, the patient said, she felt "dangerously thin"her weight was 238 lb (107.1 kg) her daughter found her sleep-eating. The incidents of sleep-eating ceased after the patient regained a substantial amount of the weight previously lost.

Case 3

A 55-year-old housewife was molested as a child by multiple relatives and neighbors. She first became obese during a traumatic marriage, spontaneously lost 100 lb (45 kg)thus achieving normal weight-after divorce, and regained a massive amount of weight immediately after her second marriage. She was first seen when, after losing 150 lb (67.5 kg) in our weight-loss program, she became manifestly terrified instead of being pleased. She readily recognized the sexually threatening nature of being normal weight and rapidly regained the 150 pounds she had lost. On several occasions in the course of regaining the weight, she was found eating in the middle of the night while in a somnambulistic state; she was awakened from these by her family, who discovered that she was unaware of how she had reached the kitchen. The episodes

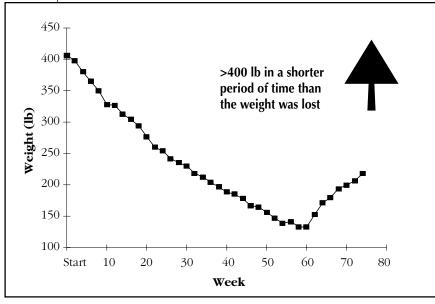


Figure 1. Chart shows rate of weight loss and regain for one morbidly obese adult female patient with a history of childhood sexual abuse.

of sleep-eating ceased after the patient regained a substantial amount of the weight she previously lost.

Case 4

A 57-year-old, morbidly obese woman had been slender as a child. Throughout her childhood, the patient was repeatedly told by her mother that she was not wanted and that her birth was a mistake. At ten years of age, she said, she was continually molested: first, by a priest; and in her teens, by two uncles. She had chronic depression that extended back to these times, was still angry about the events, and suspected that they had something to do with her eating patterns. She married while at a normal weight and felt anxious about engaging in her first voluntary sexual activity. In the early years of her marriage, she was recurrently found eating in a somnambulistic state. She ultimately gained 150 lb (67.5 kg), and the episodes of sleep-eating ceased.

Case 5

A 31-year-old woman who grew up in a troubled family described her mother as cruel and her father as alcoholic. She was depressed from childhood onward and was obese in kindergarten; in high school, she was morbidly obese. She did not acknowledge any history of sexual abuse. She married "the first person who was nice to me" and became promiscuous thereafter; she explained this behavior as seeking male approval. She became a heavy methamphetamine user, as did her morbidly obese sister. While still married, the patient was celibate for a prolonged period, lost almost 200 lb (90 kg), and again became promiscuous. At that point, she began sleepwalking and sleep-eating. She interpreted

this behavior as the result of "guilt over what I'm doing." After she regained 100 lb (45 kg), the episodes of sleep-eating ceased. She reported that she had been able to withstand occasional dreams in which she was told she had to eat.

Discussion

A search of the medical literature shows few reports of sleep-eating, even including cases that are drug induced.⁶⁻⁹ Sleep-eating should not be confused with nighttime eating (nocturnal hyperphagia),10 a term which refers to overeating at night while fully awake. No reported case of sleep-eating has been explained, but most authors indicated that their subjects evidently had psychologic turmoil. Schenck et al14 noted that some of their patients were anorexic. In a later study,11 Schenck et al noted that almost half of a series of 38 sleep-eating patients were overweight and that unspecified acute stress was often the event precipitating their episodes of sleepeating.

The five patients described here are unusual because their sleepeating has a plausible psychodynamic explanation. A notable feature of these patients is that their episodes of sleep-eating coincided with periods of potential sexual activity (a major stressor, given their common background of being abused, mostly sexually), and their episodes of sleep-eating ceased after the patients regained a substantial amount of the weight they previously lost. The relation between sleep-eating and childhood sexual abuse can be understood by interpreting weight regain as an unconscious protective device and major de-stressor, given the sexually protective aspects (real or imagined) of obesity. Indeed, eating is commonly recognized as an activity that reduces anxiety, and obesity is commonly recognized as reducing sexual attractiveness. Thus, all five patients were able to provide an extraordinary glimpse into the origins of their sleep-eating and its ultimate relation, through obesity, to childhood abuse, often incest. In this light, that all cases were women is less surprising.

Although other causes of sleepeating are yet to be identified, the common background of abuse among these patients indicates that a history of childhood abuse and its consequent dissociated states should be sought in any known case of sleep-eating. Of note is that attaining sufficient levels of obesity seemed to cure the sleep-eating. I have previously shown that a high prevalence of children subjected to incest, sexual molestation, or rape commonly become morbidly obese as adults.12 A recent report from the Mayo Clinic¹³ confirmed this relation between childhood sexual abuse and obesity in the population studied. The observations reported in the current report appear to be a variation on the theme that obesity commonly reduces sexual threat. In some patients, when the threat is sufficiently great, sleep-eating is an unconscious device for rapidly attaining safety through weight gain.

In Case 1, the unconscious nature of the link between sexual threat, protection, and obesity is underscored by the patient's eating while in a dissociated state and denying the relevance of her incest history to subsequent life events. She is a prime example of rapid regain after major weight loss—but with the reasons and mechanisms understood. Her history is important because it illustrates the underlying dynamics of a case that otherwise would

Sleep-eating should not be confused with nighttime eating (nocturnal hyperphagia).

A history of childhood abuse and its consequent dissociated states should be sought in any known case of sleep-eating.



Obesity was not the problem it was their solution.

The psychodynamics discussed here should prompt physicians to look for a history of childhood abuse—particularly sexual abuse—when they see patients who eat while asleep.

be misunderstood or viewed under the superficial rubric of "weight cycling"14 or "yo-yo" dieting. This terminology sometimes implies a changed metabolic rate for its explanation of weight regain. Those metabolic changes are real, but they are minor and transient¹⁵—and have not been shown to cause weight regain. A metabolic explanation is not even conceivable for the patient in Case 1, given the marked abruptness and rapidity of her weight regain. She herself now speaks16 clearly of the relation between her obesity and events in her life.

Obesity was a prime protective device in these five women patients. For them, obesity was not the problem—it was their solution. Efficient treatment of their morbid obesity exposed the complexity and hidden nature of the true problem to which obesity was a solution. In these patients, effectively treating their morbid obesity without understanding its dynamics set the stage for rapid regain of the weight previously lost. In other words, weight loss did not solve these patients' problem: Instead, it took away their solution.

Conclusion

This report gives a plausible explanation for the highly uncommon condition of sleep-eating. Knowing the psychodynamics of the five patients described here will enable clinicians to determine the overall prevalence of this particular mechanism as well as the causes of sleep-eating in other patients. The psychodynamics discussed here should prompt physicians to look for a history of childhood abuse—particularly sexual abuse—when they see patients who eat while asleep or who became morbidly obese from suddenly regaining a major amount of weight previously lost. Having such knowledge in advance of treatment may improve the outlook for successfully treating patients with this condition. ❖

References

- 1. Roper P. Bulimia while sleep walking, a rebuttal for sane automatism? Lancet 1989 Sep 30;2(8666):796.
- 2. Guirguis WR. Sleepwalking as a symptom of bulimia. Br Med J (Clin Res Ed) 1986 Sep 6;293(6547):587-8.
- 3. Oswald I, Adam K. Rhythmic raiding of refrigerator related to rapid eye movement sleep. Br Med J (Clin Res Ed) 1986 Mar 1;292(6520):589.
- 4. Schenck CH, Hurwitz TD, Bundlie SR, Mahowald MW. Sleep-related eating disorders: polysomnographic correlates of a heterogeneous syndrome distinct from daytime eating disorders. Sleep 1991 Oct;14(5):419-31.
- 5. Whyte J, Kavey N, Gidro-Frank S. Somnambulistic bulimia. Sleep Res 1988;17:268.

- 6. Nadel C. Somnambulism, bed-time medication and over-eating. Br J Psychiatry 1981 Jul;139:79.
- 7. Schenck CH, Mahowald MW. Parasomnias. Managing bizarre sleeprelated behavior disorders. Postgrad Med 2000 Mar;107(3):145-56.
- 8. Winkelman JW, Herzog DB, Fava M. The prevalence of sleep-related eating disorder in psychiatric and non-psychiatric populations. Psychol Med 1999 Nov;29(6):1461-6.
- 9. Rosenfeld DS, Elhajjar AJ. Sleepsex: a variant of sleepwalking. Arch Sex Behav 1998 Jun;27(3):269-78.
- 10. Stunkard A, Grace W, Wolff H. The night eating syndrome. Am J Med 1955;19:78-86.
- 11. Schenck CH, Hurwitz TD, O'Connor KA, Mahowald MW. Additional categories of sleep-related eating disorders and the current status of treatment. Sleep 1993 Aug;16(5):457-66.
- 12. Felitti VJ. Long-term medical consequences of incest, rape, and molestation. South Med J 1991 Mar;84(3):328-31.
- 13. Springs FE, Friedrich WN. Health risk behaviors and medical sequelae of childhood sexual abuse. Mayo Clin Proc 1992 Jun;67(6):527-32.
- 14. Blackburn GL, Wilson GT, Kanders BS, et al. Weight cycling: the experience of human dieters. Am J Clin Nutr 1989 May;49(5 Suppl):1105-9.
- 15. Jebb SA, Goldberg GR, Coward WA, Murgatroyd PR, Prentice AM. Effects of weight cycling caused by intermittent dieting on metabolic rate and body composition in obese women. Int J Obes 1991 May;15(5):367-74.
- 16. Felitti VJ. The threat of enforced weight loss: video interview [videotape]. San Diego, CA: Southern California Permanente Medical Group, Department of Preventive Medicine; 2000.

As Important As Knowledge

"And what is as important as knowledge?" asked the mind.

"Caring and seeing with the heart," answered the soul.

Flavia Weedn, contemporary writer and artist