Research Review

People With Diabetes Who Eat Excessively Late At Night: What Are The Causes And What Are The Consequences?

Morse SA, Ciechanowski PS, Katon WJ, Hirsch IB (2006). Isn't this just bedtime snacking? The potential adverse effects of night-eating symptoms on treatment adherence and outcomes in patients with diabetes. *Diabetes Care*, 29: 1800-1804.

This study examined the phenomenon of late-night excessive eating in 714 people with types 1 and type 2 diabetes. Night-eating syndrome (NES) is defined as the regular consumption of 25% or more of one's daily calories after the evening meal and/or waking at night to eat at least three times per week. Recent studies have suggested that better-known problems like bulimia nervosa and binge eating disorder are more common in people with diabetes, but there has been very little study of NES in diabetes.

From the 714 patients who responded to their mailed survey, the researchers found that approximately 10% of their diabetes patients reported consuming more than 25% of their daily calories after their evening meal, therefore meeting the critical criteria for NES. It must be noted that less than half of the people contacted for this survey actually returned a completed questionnaire, therefore it may not be appropriate to generalize from these findings. Still compared to those without NES, this group of patients reported significantly poorer adherence to their providers' dietary, exercise and blood glucose monitoring recommendations. In addition, they noted more frequent eating in response to negative emotions (like anger, loneliness or being upset). NES patients reported almost twice as many sleep problems, and they were more than twice as likely to have symptoms suggesting major depression.

Of greatest concern, NES was associated with poorer medical outcomes. NES patients were more than twice as likely as non-NES patients to have poor blood glucose control (an A1C above 7.0%), to be obese, and to have two or more diabetes-related complications. Please note that these data are cross-sectional, so we cannot know for certain that NES *causes* (or even contributes to) these distressing outcomes. However, it is a likely explanation of these findings.

IMPLICATIONS. In diabetes, there is no bigger battlefield and no greater frustration than the issues surrounding food. As seen in the study, quite a large number of people with diabetes struggle with problematic late-night overeating, perhaps even larger than the 10% of patients found in this study. After all, the true number would include those people who consume many of their daily calories after the evening meal, but perhaps less than the NES criterion of 25%. For many years, this has been an important issue for my colleagues and I here at the Behavioral Diabetes Institute, where we have coined the tongue-in-cheek term, the "Werewolf Syndrome". This refers to people with diabetes who manage to follow a relatively healthy and well-balanced diet, *but only as long as the sun is up*. For as the moon rises, hair seems to sprout on their faces, their eyes grow large, and their thoughts turn crazily to food, food, and more food. We suspected this was common, but until this seminal study by Morse and her colleagues, we could never be certain.

This study suggests that people with night-eating problems are more likely to be depressed, have sleep problems, eat in response to negative emotions, and struggle with other aspects of their

diabetes regimen as well. We now can see that this may have quite serious consequences, perhaps contributing to poor glycemic control, weight problems, and even long-term complications. One issue not addressed in this study is the possibility that diabetes itself may contribute to this problem. The more one is recommended to control one's choices of foods, one's weight and one's appetite, there may be a natural tendency to rebel—to shake of this sense of externally-demanded deprivation—and this lead to problematic eating that feels out of one's control, especially during those quiet times during the evening where may be less to distract the individual from eating. Without a doubt, this is a problem that needs to be further explored and addressed.

GOOD NEWS. If you struggle with those late-night "Werewolf" urges, rest assured that you are not alone. While this study suggests that the consequences of problematic late-night overeating for people with diabetes may be quite serious, remember that this may be limited to only those individuals with very frequent and severe binges. An occasional late-night chocolate attack is familiar to almost everyone, and is not necessarily such a bad thing at all. Still, if the problem is severe, there are well-documented strategies for addressing eating problems such as these. For more information about helpful techniques, pick up a copy of *Diabetes Burnout: What To Do When You Can't Take It Any More* (see the link at www.behavioraldiabetes.org) and take a close look at Chapter 5 ("The Werewolf Syndrome").

If you are near the San Diego area, please note that the BDI offers an intensive one-day workshop, entitled ***Getting on Track***, that address problems like these. Please see www.behavioraldiabetes.org for further details and registration instructions.