

Diabetes and Diet: A Patient and Dietitian's Perspective

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ABSTRACT

This article has been co-authored by a patient with type 2 diabetes and a specialist dietitian. Here they discuss the patient's experience and difficulties with controlling weight and strategies that can help a patient in this situation. The patient discusses how stress and her corresponding comfort eating dampened weight loss progress, and how adopting a lifestyle change aided through group support helped to deal with this. The physician discusses the importance of recognizing the mental and physical challenges faced by patients in this situation.

Keywords: Behavioral; Type 2 diabetes; Weight loss; Weight management

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PATIENT'S PERSPECTIVE

I was first diagnosed with type 2 diabetes in 1998 at age 42 years.

Ill health, both physical and emotional, had plagued me for many years following the birth of my children. I was diagnosed with both postnatal depression and a mystery virus after the birth of my first child in 1981. However, I personally feel that the depression may have had a lot to do with the fact that my husband missed the birth as the baby came early and he was away working abroad and could not return home until our baby was 1 week old. I had been "comfort eating" and "eating for two" throughout my pregnancy and this continued afterwards. We then received good news of an office-based job for my husband, and although this involved moving quite a distance away, leaving family and friends behind, things did settle down at our new home and all was well for awhile. I made friends who encouraged me to join them at Weight Watchers. However, when my husband's job changed again and he returned to working abroad, life took a retrograde turn and I reverted to old food habits. We lost a child to an ectopic pregnancy. We gave up hope of another baby until I had succeeded in losing weight again. I lost 3 stone and was suddenly pregnant! The pregnancy was difficult, but all was well this time after the birth and I picked up good eating habits for a while.

Emotional eating from stress has always been my problem, I do well for a while, then something happens to upset me and I slip back into old eating habits. Spending a lot of time alone with the children while my husband worked abroad contributed to my emotional stress; my coping mechanism was “comfort eating” interspersed with many yo-yo diets. My lack of self-confidence was carefully masked by an outward bright, jolly persona.

However, I never felt really well. I received some help from a clinical psychologist in Oxford (and later from a cognitive behavioral therapy [CBT] therapist) through my general practitioner, but diabetes was never suggested as a possible cause of my physical symptoms, even though I was in the morbidly obese category! However, in 1998 a nursing friend suggested I ask for a diabetes test following recurring infections which did not respond to treatment; and yes, I was a type 2 diabetic with a fasting glucose average of 17. This explained many of the symptoms I had been having, maybe even for the past 20 years since my children were born.

At first, I learnt to deal with medications and advice, but then my father died, and things went downhill for a while again until I pulled myself together with help from a CBT therapist and support from a new slimming group who did not know the “old me”. I could make a fresh start.

I also joined the gym and lost 4 stone for a special family occasion, discovering the benefits of exercise on both mind and body. However, none of these steps was an easy process! I attended another CBT course run by Mind which was a great help, but sadly then my husband lost both of his parents within a short time and my own Mum fell ill, I started to gain weight again; I was trying to support and look after my husband and Mum, and the only way I could cope was returning to comfort eating. Ultimately, I regained much of the weight I had lost. This was typical behavior for me and, as I hate doing what people tell me, everyone’s good advice was ignored as I slipped back further and further: I stopped attending medical appointments, gave up the gym and Weight Watchers group and kidded myself that

this was OK! Mobility problems then kicked in with inactivity, I was just about at rock bottom, and I ended up being put on insulin, which I hated. At this time I was keeping my regular appointments with the nurse at my GP’s practice. The nurse was a truly wonderful support to me, eventually persuading me to give the Oxfordshire Diabetes Weightwise program a try.

I was initially skeptical, thinking “Oh here we go again,” but it has been the most marvelous approach, combining much of what I already knew but had failed to put into practice without the right support, and adding in things such as dealing with thoughts, feelings and emotions, mindfulness and accountability. I was recommended to try the MyFitnessPal phone app, which provides easy ways to track food and exercise, has recipes and a blog with support online. Being in a group of people all struggling with the same condition really helped, though sadly most dropped out over the months, leaving just two of us—and we have both done very well.

I have now lost nearly 4 stone in less than 1 year, and my aim is to lose another stone and to keep it off! The group also recommended new activities, such as Go Active, and I re-joined a gym and walk as much as possible. Following this weight-loss and fitness regime, I have reduced my Levemir from 74 units daily to just 6 units.

I cannot thank the organizers enough for presenting the course, supporting and encouraging us, listening to us and advising us. I also recently attended an excellent day at Diabetes4Ward that was very educational, especially regarding new medications that may become available in the future and reinforcing the nutritional advice provided by the Weightwise program. If only the Weightwise course could have continued for a year!

Altogether I feel so much better, look better and have more energy. I am trying some things I used to find scary, making other small changes in order to maintain this new lifestyle which I have realized I have to do for the rest of my life.

In all of this, I have also been helped greatly by my family, especially my husband who has now retired, and I see him every day! Our life is so much calmer, mostly! The birth of four

grandchildren makes our family life so different from the stresses of old, and they are our joy.

However, I am firmly of the opinion that I could not have achieved all of this until I knew what being at rock bottom felt like. I realize I was on my “final warning” and after 62 years I learnt to accept the right help from the right people. I now realize these changes have to be for the rest of my life.

I really hope that hearing my story will encourage others in my situation and wish them very well.

DIETITIAN'S PERSPECTIVE

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In the UK, weight reduction is recommended as the primary therapy for the 90% of people with type 2 diabetes who are overweight or obese [1], and Carole's story indicates that this was the case for her once diabetes had been diagnosed. A simplistic view of obesity states that it results from an imbalance between energy intake and energy output, and that weight loss can be achieved simply by reversing this imbalance. In reality, the etiology of obesity is far more complex and includes genetic influences, physiological and biochemical factors and environmental and behavioral effects [2, 3].

One aspect of obesity treatment that is frequently overlooked is that of eating in response to cues other than hunger. This is often referred to as emotional eating and includes binge eating, external eating and eating in response to food cravings [4]. Carole eloquently describes how emotional eating became her coping mechanism during times of stress.

Binge eating disorder (BED) is now a formal diagnosis and is characterized by eating large amounts of food in a discrete time period while experiencing a lack of control over eating [5]. Prevalence rates of BED are estimated to range from 1 to 4% of the general population, and approximately 40–50% of individuals with BED are obese [6]. External eating is characterized by

eating in response to the sight, smell or taste of food rather than to internal hunger cues [7], and food cravings are defined as obsessive thoughts and the compulsive consumption of specific foods [8]. Although little is known about the prevalence of these different manifestations of emotional eating, there is evidence that disordered eating generally may affect around 40% of people with type 2 diabetes [9] and that they are more common among obese individuals than among those of normal weight [10].

Emotional eating is associated with eating as a means of dealing with negative emotions, in an attempt to regulate these emotions [11]. For many people, a typical reaction to stress is to seek out and consume energy-dense foods, often referred to as “comfort foods” as they evoke a psychologically comfortable and pleasurable state [12]. It is intuitive that high levels of stress would be associated with obesity, but the evidence for this is inconsistent, although a recent meta-analysis reported that stress was positively associated with increasing adiposity [13]. The prevalence of emotional eating is unknown, but a recent study in the USA reported that 38% of adults engaged in unhealthy eating behaviors in response to stress [14], and 57% of overweight adults self-report frequent emotional eating [15].

In the case study described above, Carole reports a significant degree of emotional eating and describes comfort eating during her pregnancy and when diagnosed with postnatal depression. She recognizes that during times of stress, for example, when solely responsible for her children's upbringing when her husband was working abroad and after her mother became ill, her coping strategy was to turn to food. She also describes how she could successfully lose weight for short periods of time, but as soon as she experienced any considerable amount of stress, her comfort eating would return.

In common with many people's experience, Carole's story illustrates that emotional eating is a significant factor both for promoting obesity and preventing long-term weight loss. Weight management programs which fail to address these specific eating behaviors are unlikely to

have successful outcomes, especially over the longer term.

Useful Interventions

Behavioral modification is the key to managing emotional eating. A variety of effective strategies have been identified, including CBT, interpersonal therapy (IPT) and mindfulness, although some of these are intense, individualized and costly interventions that may be challenging for widespread implementation [16].

CBT is designed to change the way people think (cognition) and what they do in response to those thoughts (behavior). It can be delivered by an accredited therapist, although self-help using books and internet-based and computerized programs are available. CBT is widely used in the treatment of eating disorders, and components of this therapy are often included in weight management programs. A recent meta-analysis reported that CBT reduced emotional eating and increased cognitive restraint, resulting in significantly greater weight reduction than in comparator groups, although there was no difference in depressive symptoms [17].

IPT is an intense, structured therapy working on established interpersonal issues and primarily focusing on the way relationships affect mental health, thoughts and behavior. IPT is an evidence-based treatment for eating disorders in which binge eating is a feature, but there is little evidence of its efficacy for the management of other eating disorders [18]. Its intense, individual application means that it is rarely included in general weight management programs.

Mindfulness has been defined as the learned ability to be open, accepting and present in the moment, and developing mindfulness allows for adaptive responses to habitual thoughts, emotions and behaviors. In terms of weight management, mindful eating encourages a non-judgmental awareness of the physical and emotional sensations of food and supports self-regulation. Over the past few years, there has been increased interest in mindfulness-based interventions (MBI) for weight management and emerging evidence for their inclusion as a

component of weight management programs [19–21].

Components of Weight Management Programs

In the UK, the recommended first-line strategy for weight loss is structured education programs that incorporate dietary advice, physical activity and behavioral management [22]. For people with diabetes, it is also crucial that aspects of diabetes management are addressed. These components are all essential for success, and the case of Carole illustrates well how she was unable to maintain long-term weight loss when attempting weight loss with programs that did not include all of these constituent strategies. Upon referral to the Oxfordshire Diabetes Weightwise program, Carole was offered a multi-component package which included advice on diet, physical activity, diabetes management and behavioral strategies. Weightwise is a weight management program which is available on referral to people with type 1 and type 2 diabetes who are treated with insulin or sulfonylureas and who are therefore at risk of hypoglycemia. Each course lasts 6 months and consists of 2-h sessions held every 2 weeks for the first 3 months, followed by monthly follow-up. The program is offered at a variety of community venues across the Oxfordshire region, and groups typically consist of 6–15 participants. Each program is designed to meet the cultural, cognitive and literary needs of the local population in order to address equality and diversity [23].

Dietary Advice

There is no consensus on the ideal diet for people with diabetes who wish to lose weight, but there is general agreement that adherence predicts outcomes [24]. For that reason, it is recommended that people adopt a diet that suits their particular style of eating and personal food preferences [1]. Carole was offered a variety of dietary strategies and was provided with support in finding an approach that best suited her.

Physical Activity

There is no evidence to suggest that physical activity in isolation is effective for weight loss in people with type 2 diabetes [25], but it does play a role in weight maintenance and is an effective strategy for improving glycemic control and general well-being and for reducing cardiovascular risk [26]. Carole has demonstrated the benefit of increasing her physical activity by walking and joining a gym.

Behavioral Strategies

Behavioral strategies are a key component of the Weightwise program. Emotional eating is addressed using CBT and some aspects of mindfulness, and all participants are encouraged to self-monitor using food and mood diaries to identify those situations in which they use emotional eating to manage stress. There is evidence that self-monitoring can support weight loss if framed as a positive tool [27], and in Carole's case, she was supported in using a diary to identify food cravings and external eating. She also used a Smartphone application to monitor her levels of activity and general food intake, and this strategy was recommended to all group participants using a choice of either electronic or paper diaries.

Various strategies to manage emotional eating are introduced over the course of the program, including relapse prevention, coping planning, problem-solving and managing food cravings. These techniques are known as implementation intentions [28], more commonly called 'if-then' strategies, and are designed to address specific stressful situations by encouraging links between a critical situation ('if') with an appropriate response ('then'). In addition to coping strategies, the program includes fostering self-acceptance and emphasizes the role of thoughts in driving feelings and behavior. Unhelpful thoughts and thinking errors, such as catastrophizing and mind-reading, are explored and challenged. Providing a non-judgmental atmosphere in which all participants feel safe and supported and able to

explore their thoughts and feelings is fundamental to the program.

Diabetes Management

There is evidence that it is more challenging for those with type 2 diabetes to lose weight than it is for those without diabetes, and that this difficulty is exacerbated by insulin treatment, which is itself associated with weight gain [29]. One aim of weight loss is to improve (or maintain) glycemic control while avoiding hypoglycemia and achieving this balance requires both blood glucose monitoring and active insulin dose titration. In the Weightwise program, participants are encouraged to monitor blood glucose levels between two to four times daily, and insulin titration takes place under medical supervision. An essential part of the program is carbohydrate awareness and management, with the aim to minimize the risk of hypoglycemia. Carol describes how the combination of reduced dietary intake, increased physical activity, weight loss and blood glucose monitoring allowed her to safely reduce her insulin from 74 to 6 units Levemir daily.

In summary, Carole has shown that successful, long-term weight loss is possible in people with type 2 diabetes treated by insulin, but that a multi-component program which includes behavioral strategies was the key to her success.

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