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# Behavioral And Psychological Factors In Obesity

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## INTRODUCTION

Obesity is as much a psychological as a physical problem. Psychological issues can not only foreshadow the development of obesity, but they can also follow ongoing struggles to control weight. Because the psychological aspects of obesity are so important, psychological assessments and interventions have become an integral part of a multidisciplinary approach to treating obesity, which includes the use of bariatric surgery.

## PSYCHOLOGICAL "RISK FACTORS" OF OBESITY

The etiological basis of eating disorders and obesity usually lies in some combination of environmental, psychosocial, and genetic or biological attributes. Individuals who suffer from psychological disorders (e.g. depression, anxiety, and eating disorders) may have more difficulty controlling their consumption of food, exercising an adequate amount, and maintaining a healthy weight.

Food is often used as a coping mechanism by those with weight problems, particularly when they are sad, anxious, stressed, lonely, and frustrated. In many obese individuals there appears to be a perpetual cycle of mood disturbance, overeating, and weight gain. When they feel distressed, they turn to food to help cope, and though such comfort eating may result in temporary attenuation of their distressed mood, the weight gain that results may cause a dysphoric mood due to their inability to control their stress. The resulting gujilt may reactivate the cycle, leading to a continuous pattern of using food to cope with emotions. This pattern is particularly applicable if there is a genetic predisposition for obesity or a "toxic" environment in which calorically dense foods are readily available and physical activity is limited. Unfortunately, these circumstances are common in America.

In addition to depression and anxiety, other risk factors include problematic eating behaviors such as "mindless eating," frequent snacking on high calories foods, overeating, and night eating.[1] Binge eating disorder (BED) is currently included in an appendix of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) and is characterized by: recurrent episodes of eating during a discrete period of time (at least 2 days a week over a 6 month period); eating quantities of food that are larger than most people would eat during a similar amount of time; a sense of lack of control during the episodes; and guilt or distress following the episodes. BED is estimated to occur in approximately 2% of the general population and between 10% and 25% of the bariatric population. An important differentiation between BED and bulimia/anorexia is that BED is not associated with any regular compensatory behaviors, such as purging, fasting, or excessive exercise,[2] so the majority of individuals with BED are overweight.

Night eating is another disorder that can lead to significant weight gain, though night eating syndrome (NES) is not currently recognized as a distinct diagnosis in the DSM-IV-TR. First identified in 1955, NES is characterized by excessive nighttime consumption (> 35% of daily calories after the evening meal), unhealthy eating patterns, "morning anorexia," insomnia, and distress. NES occurs in approximately 1% of the general population and an estimated 5-20% of the bariatric population.[3] More recently, NES has been viewed as a disorder of circadian rhythm that includes a delay of appetite in the mornings and the continuation of appetite and overeating into the night.

## PSYCHOLOGICAL SEQUELAE OF OBESITY

Society views obesity very negatively and tends to believe that people who are obese are "weak-willed" and "unmotivated".[5] Obese individuals are often aware of these negative views, and internalize them, putting themselves at risk for disorders of mood, anxiety, and substance abuse. They perceive interpersonal and work-related discrimination,[6] often suffer from low self-esteem as a result, and feel uncomfortable with their bodies (i.e. body image dissatisfaction).[3] These feelings may lead to strain on their intimate and romantic relationships.

20-70% of obese individuals considering bariatric surgery suffer from a current and/or past psychiatric disorder, of which Major Depressive Disorder is the most prominent.

Obese individuals have typically made multiple attempts to lose weight, with little or no success. Their failed attempts result in discouragement, frustration, hopelessness, and learned helplessness about the prospect of losing weight in the future on their own. For this reason, many turn to bariatric surgery as a last resort. Not surprisingly, significant weight loss confers psychological as well as medical benefits, with improved mood, self-esteem, motivation, and relationships. A meta-analysis of 40 studies focusing on psychosocial outcomes of bariatric surgery proposed that psychological health and psychosocial status including social relationships and employment opportunities improved; and psychiatric symptoms and comorbidity, predominantly affective disorders, decreased. These changes led to improved quality of life for the majority who had weight loss surgery.[7]

## BEHAVIORAL AND PSYCHOLOGICAL TREATMENTS FOR OBESITY

*Behavioral and/or cognitive therapy* can be used as part of a program of lifestyle modification with diet and exercise for individuals who do not meet criteria for or do not want bariatric surgery. *Classical and operant conditioning* are the two traditional behavioral therapy models, usually used in weekly sessions lasting 1-1.5 hours over a six-month period. Participants generally have lost an average of 10% of their initial weight.[8]

In *classical conditioning*, eating behaviors are associated with other activities. The behaviors become conditioned to occur together, as when a person eats nachos while watching the evening news. If these two behaviors are paired repeatedly, they become so strongly associated with one another that turning on the news alone triggers a craving for nachos. Behavioral intervention involves identifying and extinguishing the inappropriate psychological or environmental triggers and cues.

*Operant conditioning* uses reinforcement and consequences. A person who uses food as a reward or to temporarily attenuate stress will associate food with a more pleasurable state, which makes it more likely to become a repeated behavior. Although behavior therapy results in lifestyle changes and weight loss in the short-term, there is no strong evidence of its long-term effectiveness.

More recently cognitive therapy and cognitive behavioral therapy (CBT) have become an important aspect of the treatment of obesity. Cognitions influence both feelings and behaviors, and they cannot be ignored when treating obesity. CBT is utilized in the treatment of obesity as a way to help individuals change their negative eating behaviors and incorporate healthy lifestyle changes.[9] These CBT interventions are self-monitoring techniques (e.g. food and exercise journals), stress management, stimulus control (e.g. eating only at the kitchen table), social support, problem solving, and cognitive restructuring (e.g. helping patients have more realistic weight loss goals, avoidance and challenging of self defeating beliefs).[10]

## THE ROLE OF PSYCHOLOGY IN BARIATRIC SURGERY

An NIH consensus panel concluded that patients contemplating bariatric surgery should undergo pre-surgery psychological evaluation along with monitoring and addressing of psychological and behavioral factors pre- and post-surgery.[11,12] Many insurance companies require that patients undergo a psychological assessment prior to bariatric surgery and 88% of surgical weight loss programs require it. There are two primary reasons for this policy: (1) to identify patients who have significant psychopathology that may put them at risk for unsuccessful surgery; (2) to pre-select individuals who are psychologically stable and may have a great deal of success with bariatric surgery.[13] The pre-surgery evaluation should address characteristics of the patient such as: (1) awareness of the procedure and capacity to give informed consent; (2) motivation for surgery; (3) awareness of and capacity for compliance with post-surgery restrictions and behavior change; (4) current stressors, behavioral and eating practices that might be barriers to the life style changes that are necessary for a successful outcome; and (5) current psychological well-being and stability, self efficacy, resiliency and coping resources to manage stress.

Unfortunately, there is no single psychological characteristic or set of psychological characteristics of extremely obese individuals that is consistently predictive of success or failure following bariatric surgery, as several different psychological characteristics are likely associated with weight maintenance and relapse in obesity. Research is mixed regarding the association between co-morbid psychiatric disorders and complications after bariatric surgery.[14] One study of the outcomes of psychological evaluations of bariatric surgery candidates showed that the majority (81.5%) of individuals do not have psychological contradictions for surgery.[15] Still, although a psychiatric diagnosis may not necessarily be a contradiction for surgery, it may be an indication that additional pre- and post-surgery support may be needed for a more successful adjustment to the process of bariatric surgery.[16] Typically, a psychological assessment of bariatric surgery candidates concludes with three different types of recommendations: (1) no

psychological contradiction for surgery; (2) psychological or psychiatric treatment required prior to surgery; or (3) psychological contraindication for surgery.

An important part of a psychological assessment that may often be missed due to overemphasizing the presence of "psychopathology" is identifying unhealthy eating patterns, such as using food as a coping mechanism, eating irregular meals, or making unhealthy food choices. Psychologists who specialize in working with the bariatric population can offer patients psychoeducation regarding the post-operative diet and emphasize the importance of behavior change for weight loss and maintenance post-surgery. Patients often need to be reminded that bariatric surgery is stomach surgery, not brain surgery, and they have to maintain control over their thinking and behavior to make healthy choices for the rest of their life.

Emotional struggles are common post-surgery, as bariatric surgery has significant psychic effects. Patients sometimes feel their weight loss is less than they anticipated and it takes longer. Frustration can lead to lack of motivation and difficulty adhering to the post-operative diet. Psychologists can assist these patients by utilizing cognitive restructuring to help them rationally evaluate their progress, as well as behavioral activation to aid them in making healthy behavior changes. Additionally, some patients who struggled with emotional eating before surgery may return to similar behaviors post-surgery, resulting in less than optimal weight loss. Psychologists can help these patients identify their triggers for emotional eating and encourage them to develop a coping repertoire that involves more constructive behaviors rather than eating. Another way patients may struggle emotionally post-surgery is by feeling uncomfortable with their "new look" and body image after losing a significant amount of weight. With rapid weight loss there often is sagging skin and many patients cannot afford cosmetic surgery to correct this. It is not uncommon for patients to discover body image dissatisfaction in a new way, which unfortunately may result in issues with their marriage and intimacy. Occasionally, female patients with histories of sexual abuse report some of their posttraumatic symptoms resurfacing, particularly if their weight had been a "protective barrier" for them for many years. These patients may require psychological assistance to work through their body image, emotional, and/or relationship issues.

## CONCLUSIONS

Psychological and behavioral issues play significant roles in both the development and consequences of obesity. A multidisciplinary approach to the treatment of obesity that addresses psychological, social, environmental, and biological factors is critical to ensure comprehensive care, as well as best practices and outcomes. The importance of addressing the psychological aspects of the treatment of obesity has become more explicit over the last two decades. Not only is the role of a psychologist important for behavioral treatment of obesity and pre-surgical psychological assessment, but also following surgery to help them adjust to the post-operative lifestyle and subsequent emotional, behavioral, and social changes that often occur. The achievement of substantial weight loss from bariatric surgical or non-surgical approaches is significantly related to one's ability to make permanent changes in one's lifestyle that involves not only adherence to more appropriate nutritional intake and exercise, but also improved management of stress and emotional states with decreased reliance on eating as a coping mechanism.

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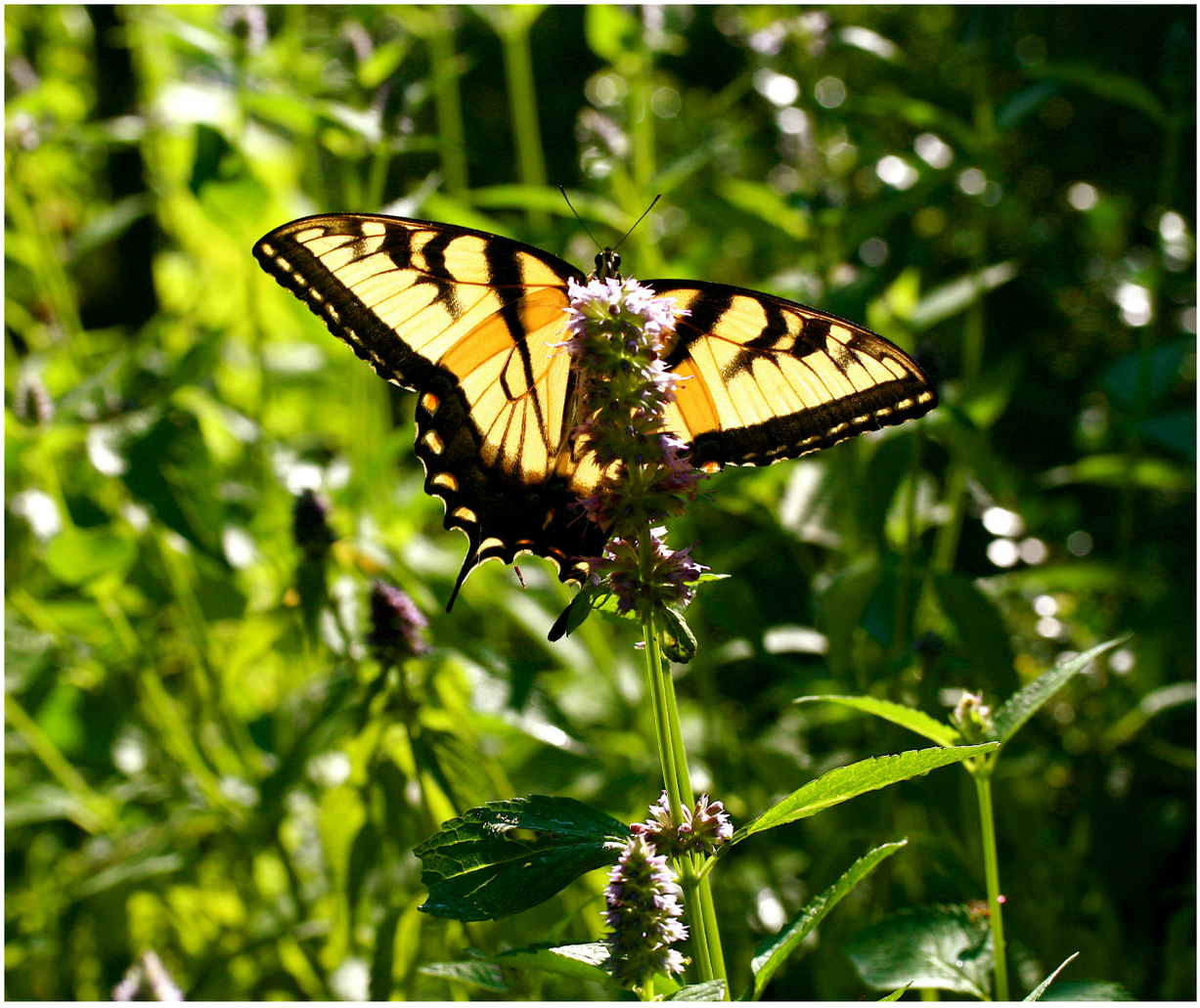

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