

Binge Eating in Bariatric Surgery Patients

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Abstract: Objective: Eating behavior, attitudes toward eating and body weight and shape, and depression were assessed in a sample of 64 morbidly obese gastric bypass surgery candidates. **Method:** The Beck Depression Inventory (BDI), the Three-Factor Eating Questionnaire (TFEQ), and the Eating Disorder Examination (EDE) were administered at the first preoperative visit. **Results:** Twenty-five subjects (39%) reported at least one binge episode per week on average over the 3 months prior to seeking treatment. Binge eaters had significantly higher TFEQ Disinhibition and Hunger scores than nonbinge eaters. Binge eaters also differed from nonbinge eaters in terms of attitudes toward eating, shape, and weight. **Discussion:** A significant number of gastric bypass surgery candidates report binge eating. The findings are consistent with other studies showing binge eaters to be a distinctive subgroup of the obese. © 1998 by John Wiley & Sons, Inc. *Int J Eat Disord* 23: 89–92, 1998.

Key words: gastric bypass surgery; binge episodes; obese patients

INTRODUCTION

In the 4th ed. of the *Diagnostic and statistical manual of mental disorders* (DSM-IV; American Psychiatric Association, 1994), a binge is defined as consumption of an objectively large amount of food accompanied by a sense of loss of control over eating. Recurrent episodes of binge eating are the core feature of a proposed diagnostic category designated for further study, binge-eating disorder (BED). Although this diagnosis is not limited to the obese, it appears to be most prevalent in this population (Bruce & Agras, 1992).

Recent investigations indicate that eating problems may be common in bariatric surgery patients (Adami, Gandolfo, Bauer, & Scopinaro, 1995; Hsu, Betancourt, & Sullivan, 1996), and it has been suggested that binge eating could affect outcome. The present study

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involved assessment of eating behavior, attitudes toward eating and body weight and shape, and depression in a sample of gastric bypass surgery candidates. Exploratory analyses were conducted to determine how nonbinge eaters (NBE) and binge eaters (BE) differed prior to surgery.

METHOD

Subjects were 64 patients (15 male and 49 female) who had failed at previous attempts at weight loss and were seeking gastric bypass surgery at Robert Wood Johnson University Hospital. All were at least 45.4 kg above ideal weight (Metropolitan Life Insurance Company, 1984). The mean body mass index (BMI) was 52.0 (range 36.6–73.7).

At the initial presurgical appointment, subjects completed the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and the Three-Factor Eating Questionnaire (TFEQ; Stunkard & Messick, 1985). The Eating Disorder Examination (EDE; Fairburn & Cooper, 1993) was then administered.

RESULTS

Using a cutoff of at least one binge per week on average over the past 3 months, 25 of 64 patients (39%) were classified as BE. No subjects met DSM-IV criteria for bulimia nervosa. Table 1 summarizes the characteristics of the two groups.

BE scored higher on the Eating Concern subscale of the EDE (NBE = 0.8, BE = 1.9, $t = -3.4$, $p < .002$). NBE and BE did not differ significantly in Restraint ($M = 1.7$), Shape Concern ($M = 3.2$), Weight Concern ($M = 3.1$), or Global scores ($M = 2.3$), nor did they differ in terms of desired BMI ($M = 25.5$). A Bonferroni correction for multiple compari-

Table 1. Characteristics of binge and nonbinge eaters

	NBE		BE		<i>t</i>	<i>p</i>
	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>		
N	39		25			
Male/female ^a	6/33		9/16			
Age (years)	38.0	(12.3)	40.4	(10.3)	-0.8	ns
Height (cm)	167.0	(8.9)	172.3	(9.4)	-2.3	<.03
Weight (kg)	141.3	(24.3)	161.9	(43.0)	-2.2	<.04
BMI (kg/m ²)						
Current	50.7	(8.4)	53.9	(10.3)	-1.4	ns
Highest	51.6	(9.5)	55.6	(10.2)	-1.5	ns
Lowest	28.5	(7.4)	26.7	(4.7)	1.2	ns
Change (highest-lowest)	23.2	(10.0)	28.9	(9.0)	-2.3	<.03
BDI	15.5	(10.2)	17.6	(9.1)	-0.8	ns
TFEQ						
Restraint	8.5	(4.7)	7.0	(3.6)	1.4	ns
Disinhibition	9.8	(3.9)	13.1	(2.3)	-4.3	≤.0001*
Hunger	7.1	(3.7)	9.9	(3.4)	-3.0	<.004

Note: NBE = nonbinge eaters; BE = binge eaters; BMI = Body Mass Index; BDI = Beck Depression Inventory; TFEQ = Three-Factor Eating Questionnaire; ns = not significant.

^a $\chi^2(1, N = 64) = 3.6, p = .057$.

*Significant after the Bonferroni correction ($p < .003$).

sons left only the differences in Disinhibition and Eating Concern significant ($p < .003$). Individual items from the EDE subscales that discriminated between the groups are presented in Table 2.

When the classification criterion was changed to at least two binges per week on average over the past 3 months, the number of BE dropped to 25% of the sample (9 males and 7 females). BE still had a greater lifetime change in BMI, as measured by the difference in highest and lowest adult BMI, but the differences in current BMI scores also reached statistical significance. The pattern of results for the BDI and TFEQ remained the same. With regard to the EDE, only the difference in ratings on the Restraint item remained; additionally, BE reported less avoidance of eating for periods of 8 hours or more than NBE.

DISCUSSION

Several studies have shown that BE report greater Disinhibition and Hunger as measured by the TFEQ than NBE, but no consistent differences in Restraint (Adami et al., 1995; Marcus, Wing, & Hopkins, 1988; Wadden, Foster, Letizia, & Wilk, 1993). This pattern of results was replicated in the present study. The finding that BE exhibited elevated scores on EDE items regarding eating, shape, and weight lends support to research suggesting that BE exhibit attitudinal disturbance (de Zwaan et al., 1994; Wilson, Nonas, & Rosenblum, 1993). The finding that BE did not have a higher BMI at the cutoff of one binge per week, but did at the cutoff of twice per week, lends limited support to studies showing a positive association between binge eating and BMI (Adami et al., 1995; Telch, Agras, & Rossiter, 1988).

There was no relationship between subjects' BDI scores and binge status, a result that stands in contrast to numerous studies which have found a positive relationship (Spitzer et al., 1993; Telch & Agras, 1994; Wadden et al., 1993). However, results could have been confounded by subjects who were taking antidepressant medication. Based on the cutoff of one binge per week, 8 of 25 BE (32%) were currently taking antidepressants in contrast to only 4 of 38 of NBE (11%); at the cutoff of two binges per week, the trend is the same. Information from one subject was missing.

The present study found that a high proportion of gastric bypass surgery candidates reported regular episodes of binge eating. Future research should aim to determine whether those who binge eat at a frequency of less than twice per week more closely

Table 2. EDE items that discriminated between binge and nonbinge eaters

	NBE	BE	<i>t</i>	<i>p</i>
	<i>M (SD)</i>	<i>M (SD)</i>		
Restraint over eating	3.5 (2.6)	1.6 (2.2)	2.9	<.005
Preoccupation with food or eating	0.4 (1.4)	1.6 (2.4)	-2.2	<.04
Fear of losing control	0.8 (1.9)	3.2 (2.6)	-3.3	<.002*
Social eating	1.1 (1.6)	2.5 (1.8)	-3.4	<.002*
Dissatisfaction with weight	4.3 (1.7)	5.2 (1.1)	-2.5	<.02
Desire to lose weight	4.3 (2.3)	5.8 (1.2)	-3.2	<.003
Dissatisfaction with shape	4.2 (1.9)	5.2 (1.1)	-2.7	<.01

Note: NBE = nonbinge eaters; BE = binge eaters; EDE = Eating Disorder Examination.

*Significant after the Bonferroni correction ($p < .002$).

resemble NBE or BE. Longitudinal studies are needed to elucidate the impact of surgery on binge eating and its associated psychopathology, and to identify whether binge eating affects weight loss and its maintenance.

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