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Body Composition Changes in Anorexia Nervosa: A Review

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One of the cardinal symptoms of anorexia nervosa (AN) is the fear of gaining weight and becoming fat (DSM-IV, criteria B). With near-delusional conviction, patients tell us that if they gain weight, it will be “all fat and no muscle.” Another common complaint during treatment is that weight gain isn’t being evenly distributed, but is collecting “all in my stomach.”

Historically, we have labeled these concerns as persistent distortions, and used them as evidence of the need for continued treatment. Evidence that these concerns may be valid, however, is beginning to surface. This article will provide a brief review of body composition changes in women with AN.

Disturbance of Body Composition

In the underweight state, many studies have documented that body composition is severely disturbed.^{1,2,3} Although patients may say they “feel huge,” they do not have a disproportionate amount of fat. In fact, total body fat, as well as total body muscle, is severely decreased, consistent with the starved, underweight state of AN.

Surprisingly, however, few studies have systematically examined changes in body composition with weight normalization. There is growing evidence that patients may not gain weight in an evenly distributed pattern. There may be a tendency to deposit a disproportionate amount of fat in the trunk

(abdominal) region compared to the extremities (arms and legs).

What Studies Have Shown

Forbes was the first to examine body fat distribution in a cross-section of women with anorexia nervosa.⁴ Using the waist-to-hip ratio (WHR) as a measure of body fat distribution, he reported no difference in the WHR between women with AN and healthy controls.

Mayo-Smith and colleagues used computerized axial tomography to measure subcutaneous fat (the layer of fat under the skin) and visceral abdominal fat (the fat that surrounds internal abdominal organs, stomach intestines, liver, kidneys, etc.) in three populations. These were patients with AN, patients with Cushing’s syndrome (a state of abnormally high cortisol levels associated with truncal obesity), and normal controls.⁵ Although limited by the cross-sectional nature of the study, the authors described a five-fold decrease in subcutaneous abdominal fat and only a two-fold decrease in visceral fat in low-weight patients with AN compared to controls.

The authors also reported that the
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Update

Anticonvulsant Shows Promise in Treatment of BED

Binge-eating disorder (BED) is marked by uncontrollable and recurring episodes of overeating. Topiramate (Topamax), first introduced in 1997, is an antiepileptic agent that has produced weight loss in patients with epilepsy. At the recent Eating Disorders Research Society Meeting in Albuquerque, James I. Hudson, MD, SM, and colleagues reported that, compared with placebo, topiramate led to a significant reduction in frequency of binge eating. Fifty-three females and 8 males with BED and obesity participated in the 14-week randomized double-blind trial (58 received at least one dose of topiramate or placebo). Significant reductions were also reported in binge days, body mass index, and in the Clinical Global Impression Severity Scale among those who received the drug. Mean baseline weekly binge frequencies were 6.3 for the placebo group and 5.3 for the treatment group. Nine patients (3 in the placebo group; 6 in the topiramate group) dropped out; the most common reasons for discontinuing topiramate were headache and paresthesias. In other studies, a small number of patients on topiramate have developed secondary angle closure glaucoma.

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proportion of visceral fat to total fat is significantly larger in patients with AN (0.4) compared to controls (0.14). As visceral fat is concentrated in the abdominal region, the authors suggest that patients with AN show a central concentration of body fat.

Zamboni and colleagues used computerized tomography (CT) to measure changes in the subcutaneous and visceral fat compartments of the abdominal region (more specifically at the L4-L5 level) with weight gain, and extended the findings of Mayo-Smith.⁶ They replicated the finding of increased visceral compared to subcutaneous fat at low weight in patients with AN, and reported that with a mean 7.3-kg weight gain, subcutaneous fat increased by 212%, and visceral fat increased by 117%. Not surprisingly, they concluded that patients with AN gain abdominal fat. Whether there is a distinct *preference* to deposit weight centrally cannot be addressed by this study because they did not measure body fat in other regions (i.e., the extremities). Another limitation of this study is that, despite an approximately 7-kg weight gain, patients were still significantly underweight (BMI: 17.5+2.0 kg/m²) at the time of retesting. It is possible that changes that occur during the process of refeeding may resolve with normal weight.

Orphanidou et al. used anthropometry (calipers) and dual x-ray absorptiometry (DEXA) to measure changes in body composition and body fat distribution in 26 women undergoing treatment for anorexia nervosa.⁷ Changes measured by anthropometry supported greater deposition of fat in the central regions than in the extremities. However, the changes in regional fat mass as measured by DEXA did not confirm the anthropometric findings. There is still no satisfactory explanation for this.

Iketani and colleagues used DEXA to assess changes in body fat distribution with weight gain, and extended the Orphanidou study by including a group of normal-weight control women.⁸ Consistent with

previous reports, at low weight, patients had reduced body fat mass. With weight gain, trunk mass increased to levels similar to controls, but extremity fat remained significantly below control values. These authors, too, argue for a disproportionate increase in abdominal fat compared to the extremities during weight gain. However, as in the Zamboni study, patients remained significantly underweight at the second assessment, and thus the distribution of body fat after complete weight recovery cannot be addressed.

An Increase in Truncal Fat

Most recently, Grinspoon et al studied body composition changes in a group of low-weight patients with AN undergoing outpatient treatment and controls.⁹ (See article on page 4). At baseline, weight, total percent body fat and extremity fat as a percentage of total fat were reduced in patients compared to controls. Truncal fat as a percentage of total fat, however, was not statistically different between the two groups. When patients gained weight, truncal fat as a percentage of total fat increased but percent extremity fat did not. As in previous studies, patients were still underweight at the end of this 9-month trial, leaving uncertain what body fat distribution would be with more complete weight restoration. Regardless, this report of an increase in trunk fat relative to extremity fat contributes to the growing evidence of a central distribution of body fat during weight gain.

What Our Data Revealed

At the recent annual American Psychiatric Association meeting in New Orleans, our group presented body composition data from 20 patients with anorexia nervosa, before and after weight gain, and 20 healthy controls. Patients were all inpatients on the Eating Disorders Unit of the General Clinical Research Unit at the New York State Psychiatric Institute/Columbia University. Data on controls were drawn from the database of healthy

subjects studied at the Body Composition Unit at St. Luke's-Roosevelt Hospital (BCU), New York, NY, where the patients were also studied, and were matched to weight-restored patients for body mass index (BMI).

Body composition was measured by anthropometry and DEXA (Lunar). Patients were assessed within two weeks of admission (prior to the onset of formal weight gain), and again within 2 weeks after reaching a target weight of 90% IBW (1959 Metropolitan Life tables). All subjects were free from medications for a minimum of 2 weeks prior to testing.

As expected, all body compartments were reduced in underweight patients compared to controls. Body weight was significantly lower, as was total percent body fat and lean body tissue. After weight gain, all compartments significantly increased, and those in patients were not significantly different from controls. Patients' body circumferences (mid-arm, mid-thigh, waist and hip) increased relatively uniformly with weight gain (approximately 20%). However, the waist and hip circumferences of the weight-restored patients were significantly larger than controls, and extremity circumferences were significantly smaller in weight-restored patients compared to controls (Figures 1 and 2).

Attempting to replicate and extend the body fat distribution findings of Grinspoon et al, we examined the changes in trunk and

extremity fat with weight normalization, using the regional fat measurements obtained by DEXA.⁹ At low weight, extremity fat as a percentage of total fat was $52.8\% \pm 10$, and trunk fat as a percentage of total fat was $40.7\% \pm 8.3$. Similar to Grinspoon's

(lipodystrophy) that preferentially deposits fat to the trunk and away from the periphery. This study extends the previous study by examining subjects after they regained to 90% of a normal weight.

Future studies would include a larger sample size and a more sophisticated assessment of body fat distribution by total body magnetic resonance imaging. Additional research might also explore whether these changes are predominantly a short-term, post-weight-gain phenomenon or persist with longer-term recovery and maintenance of normal weight.

A link to heart disease

Significant research links increased visceral fat with risk of heart disease.^{10,11} Traditionally, patients are counseled that the medical complications of starvation resolve with weight restoration.

Additional lines of inquiry might also include the exploration of how these biological changes track with psychological changes. One could easily imagine that patients whose worst fears are realized ("It's all going to my stomach," "I

look fat," "I look pregnant") might have a more difficult time normalizing their weight and/or preventing relapse. This information might help guide therapeutic interventions.

References:

1. Krahn DD, Rock C, Dechert RE, et al. Changes in resting energy expenditure and body composition in anorexia nervosa patients during refeeding. *J Am Diet Assoc* 1993;93(4):434.
2. Probst M, Goris M, Vandereycken W,

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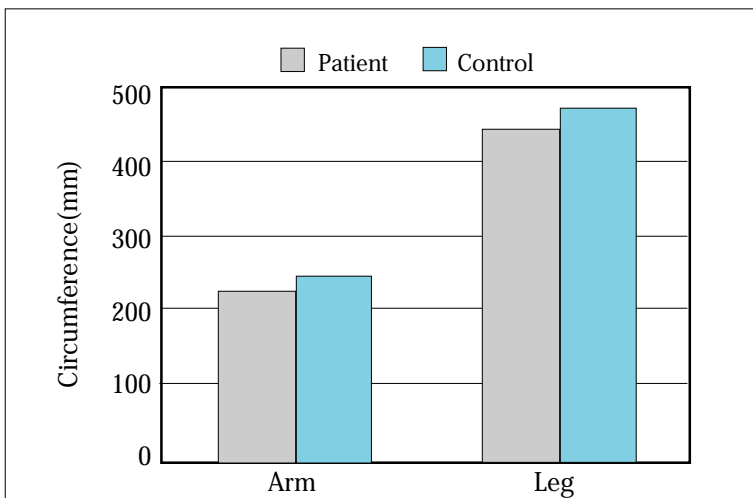


Figure 1: Arm and leg circumferences in weight-restored women with AN and controls. Differences are statistically significant ($p < 0.05$).

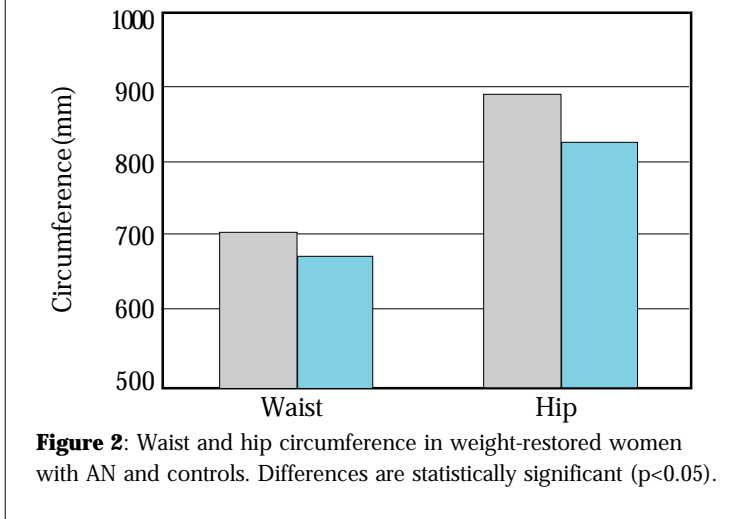


Figure 2: Waist and hip circumference in weight-restored women with AN and controls. Differences are statistically significant ($p < 0.05$).

findings, percent trunk fat increased with weight normalization. Additionally, whereas Grinspoon's group reported no change in percent extremity fat, our data revealed a **decrease** in percent extremity fat.

Body fat is deposited preferentially to the trunk. Although these findings are preliminary, they are consistent with the accumulating evidence that patients with anorexia nervosa may demonstrate an abnormal distribution of body fat

Pregnant Patients with History of ED at Higher Risk of Depression, C-section

Pregnant patients with current or past eating disorders should be carefully monitored during and after pregnancy because they are at greater risk of postpartum depression and delivery by cesarean section, according to Dr. Debra L. Franko and colleagues at Massachusetts General Hospital, Boston (*Am J Psychiatry*, 2001 158:1461).

The initial study group included 246 women with anorexia nervosa or bulimia nervosa participating in a longitudinal study. Of this group, 49 women who were pregnant were divided into two groups, those with eating disorders symptoms and those without. The women were interviewed at approximately 6-month intervals over the course of the study. The participants were categorized by diagnoses at the time they entered the longitudinal study and in the 9 months before conception.

Live births occurred in 2 women with anorexia nervosa with occasional purging, 16 women with anorexia with binge eating or purging, and 31 women with bulimia nervosa. Twenty-two of the live births occurred among women who had an active eating disorder (full or partial) when they became pregnant.

Three infants had birth defects

Most women with eating disorders had uneventful pregnancies and delivered healthy babies. The mean length of pregnancy was 38.7 weeks and the mean birth weight was 7.6 lb. Apgar scores at 1 and 5 minutes after birth were 8.2 and 9.0, respectively.

On the downside, 3 newborns (6 %) had birth defects, which included an undescended right testicle, persistent hyperplastic primary vitreous, and a ventricular septal defect. Two of the three mothers had a history of binge eating and purging and alcohol abuse. A history of alcohol or drug abuse before pregnancy was found in 11 of 22 pregnancies among

women who had symptoms of an eating disorder. Only 5 of 25 asymptomatic women reported substance abuse.

Twelve women (26% of the group) underwent cesarean section; most of these women were in the symptomatic group. A quarter of this group had had a prior cesarean section.

Postpartum depression: Three times the normal rate

More than a third (35%) of the women reported postpartum depression. In the general population, the prevalence of clinical depression in the postpartum period is estimated to be between 3% and 12%. In this study, the rate was three times higher. Half of the patients with symptoms of eating disorders reported postpartum depression that was confirmed by medical records. This might have been due to the mothers' lifetime history of affective disorders. Another theory is that the vulnerability to postpartum depression may have been increased by medical complications from the eating disorders, including dehydration and electrolyte instability.

Anorexia Nervosa: Charting Patterns of Weight Regain

Regaining weight is the number-one goal for clinicians who treat patients with anorexia nervosa. Until recently, however, relatively little was known about how anorectic patients adapt to increasing weight gain and how the relative distribution of body fat is affected during spontaneous weight recovery (see also article on page 1).

Dr. Steven Grinspoon and coworkers at Harvard Medical School and Massachusetts General Hospital recently reported that in women with anorexia nervosa, spontaneous weight gain leads to a

significant increase in trunk adiposity. An additional finding was that administration of estrogen may not protect against accumulation of central fat (*Am J Clin Nutr* 2001; 73:865). In their study, the gain in central fat occurred even though weight recovery was incomplete and the subjects were still at a very low weight.

A role for cortisol

Another notable finding was that truncal fat accumulation was greatest in women with the largest increases in urinary free cortisol concentrations (20% of patients in this study had increased urinary cortisol excretion). Therefore, according to the authors, one explanation for the pattern of fat deposits might be that initial weight gain among patients with hypercortisolemia may predispose them to greater accumulation of fat in the abdomen.

Twenty-seven amenorrheic women (mean age: 26 years) were identified through an outpatient bone loss study and were randomly assigned to receive or not receive estrogen without any dietary intervention other than calcium and multivitamin supplements. Body composition was measured at the beginning of the study, then at 6 and 9 months, and was compared with values obtained from 20 healthy, eumenorrheic, age-matched control subjects.

Twenty of the 27 patients with anorexia nervosa spontaneously gained weight over the 9 months (mean gain: 4.1 kg), and the mean body mass index among anorectic patients increased from 16.1 to 17.5. Fat mass and lean mass accounted for 68% and 32% of the gain in total body mass, respectively. With spontaneous weight gain, there was a significant increase in the percentage of truncal fat—from 32.4% at baseline to 36.5% at 9 months.

The mechanisms responsible for the accumulation of abdominal fat relative to extremity fat during weight gain are unknown. One potential mechanism is that weight gain in the first phase of weight

recovery in anorectic patients occurs because of relative estrogen deficiency, which may help contribute to changes in fat distribution. Many studies suggest that estrogen administration affects regional and whole-body composition in estrogen-deficient women. In this study, however, this was not the case.

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- Van Coppenolle H. Body composition in female anorexia nervosa patients. *Br J Nutr* 1996;76(5):639.
3. Dempsey DT, Crosby LO, Lusk E, et al. Total body water and total body potassium in anorexia nervosa. *Am J Clin Nutr* 1984;40(2):260.
 4. Forbes GB. The abdomen: hip ratio: normative data and observations on selected patients. *Int J Obes* 1990;14(2):149.
 5. Mayo-Smith W, Hayes CW, Biller BM, et al. Body fat distribution measured with CT: correlations in healthy subjects, patients with anorexia nervosa, and patients with Cushing syndrome. *Radiology* 1989; 170(2):515.
 6. Zamboni M, Armellini F, Turcato E, et al. Body fat distribution before and after weight gain in anorexia nervosa. *Int J Obes Relat Metab Disord* 1997;21(1):33.
 7. Orphanidou CI, McCargar LJ, Birmingham CL, et al. Changes in body composition and fat distribution after short-term weight gain in patients with anorexia nervosa. *Am J Clin Nutr* 1997; 65: 1034.
 8. Iketani T, Kiriike N, Nagata T, et al. Altered body fat distribution after recovery of weight in patients with anorexia nervosa. *Int J Eat Disord* 1999; 26(3): 275.
 9. Grinspoon S, Thomas L, Miller K, et al. Changes in regional fat distribution and the effects of estrogen during spontaneous weight gain in women with anorexia nervosa. *Am J Clin Nutr* 2001; 73: 865.
 10. Lapidus L, Bengtsson C, Hallstrom T, et al. Obesity, adipose tissue distribution and health in women—results from a population study in Gothenburg, Sweden. *Appetite*. 1989;13(1):25.
 11. Bjorntorp P. Abdominal fat distribution and the metabolic syndrome. *J Cardiovasc Pharmacol* 1992;20 Suppl 8:S26. Review.

BOOK REVIEW

A Starving Madness

Tales of hunger, hope and healing in psychotherapy

(Judith Ruskay Rabinor, Ph.D., Carlsbad, CA: Gürze Books, 2002; 212 pp; \$14.95)

If, like me, you enjoy stories, you'll enjoy this brief, easy to get through, nicely written book. Dr. Rabinor is a compassionate clinician who shares seven tales about her therapy with various eating disorders patients, telling the patients' stories and the stories of their therapeutic collaborations together, describing her personal reactions to these patients and how these treatment encounters have impacted and changed her. Sometimes the therapies were successful and sometimes they weren't. Writing about these patients and their treatments may have helped Dr. Rabinor to increase her understanding of what transpired.

Her therapies tend to be eclectically designed for each patient: her work is largely educational, humanistic, and psychodynamically informed. It makes use of supportive and interpretive therapy, suggestion, counseling, and guidance. Where appropriate; she involves the family, assigns homework such as expressive journaling, combines individual and group therapy, and even uses eye movement desensitization and reprocessing (EMDR). A wide variety of clinical situations is presented: anorexia nervosa, bulimia nervosa, compulsive overeating— young adolescents to older women, with a male patient thrown in to boot. Among others, the cast of characters includes a

15-year-old with anorexia nervosa; a 20-year-old woman with binge-purge type anorexia nervosa who reveals a story of sister-brother incest that sort of gets worked through; a self-mutilating, somewhat impulsive woman with bulimia nervosa who takes off to the opposite coast in the middle of treatment; a 58-year-old woman with bulimia nervosa with complex family issues who had never previously sought treatment; and a 65-year-old compulsive overeater treated with EMDR.

A cognitive behavior therapy, interpersonal or family therapy-based treatment manual this isn't. A revealing description of a therapist's working style this is. The clinician in me thoroughly resonated with these struggles, both the patients' and the therapist's. The scientist in me wished for more understanding of why these clinical approaches were chosen, and for a more thoughtful discussion about treatment selection, e.g., where more evidence-based methods might have been incorporated into these interventions. I'm still skeptical about EMDR, and would really like someone to do a careful study with eating disorders patients before I'd consider endorsing its use. My reading of the most recent discerning research regarding EMDR in the clinical psychology literature suggests that it may not be more successful than other strongly suggestive methods. In any event, these stories smack of clinical authenticity. This casebook can inform clinicians, teachers, patients and their families at several levels, and can warm the hearts of those of us who value humanism in our work.

—J.Y.

Orlistat Abuse Reported

The Food and Drug Administration recently approved orlistat (Xenical,) for the management and treatment of significantly obese patients. Now, however, Spanish researchers have reported two cases of two normal-weight patients, both nurses, who used the drug to purge. Both women had easy access to the intestinal lipase inhibitor, and used it as their only purging mechanism (*Int J Eat Disord* 30:458, 2001).

In the first case, a 26-year-old nurse, who had an eating disorder

for 13 years, began to abuse the drug when she was 25 (coinciding with the market launch of orlistat in Spain). In the second case, a 34-year-old woman developed purging subtype BN. When she was 18 years old, she had frequent binge-eating episodes followed by vomiting and daily misuse of laxatives and diuretics. When she was 33, she began to misuse orlistat.

These cases point out that it might be a good idea to question anorexic and bulimic patients about orlistat use.

Inpatient Nutrition Care

In the past two issues, we've examined different aspects of nasogastric tube feeding. This month's column is devoted to inpatient nutrition care. I recently spoke with a colleague, Donald Barker, RD, inpatient dietitian for the St. Paul's Hospital Eating Disorder Clinic in Vancouver. Until a short time ago, inpatient treatment services at St. Paul's were limited to a four-bed, short-term program known as "Extra Care." The Clinic has just opened a three-bed, long-term program, the "Quest Program." Donald is responsible for the care of all inpatients in both programs.

LW: *How do the nutrition goals of the two inpatient programs differ?*

DB: In both programs, nutrition intervention is largely determined by the client's individual goals. However, during preparation for admission to either program, I discuss the non-negotiable aspects of treatment and how they affect or relate to the client's goals.

In Extra Care, the non-negotiables are: (1) completing 100% of their meal plan (energy content varies greatly); (2) including foods from all food groups in their meal plan (although clients can choose to replace foods with oral supplements); and (3) increasing the energy content of the meal plan to improve nutrition recovery and prevent weight loss.

In Quest, the non-negotiables are slightly different. They include: (1) completing the basic minimum meal plan (~1500-1600 kcal/day), regardless of weight status; (2) reducing dependency on oral supplements (unless needed for significant weight gain); and (3) setting a specific weight change goal before coming into the program.

The Extra Care Program is a 1- to 4-week admission that focuses primarily on nourishment, rest, medical stabilization and/or assessment for suitability for other types

of treatment. This program is usually the first treatment experience for most of our clients in our entire clinic; thus, development of a strong therapeutic alliance is always a primary objective.

Clients admitted to this program have generally been unsuccessful in maintaining or improving their nutritional status as outpatients. Because of this, most are willing to try challenging their eating disorder within the program guidelines to gain insight as to how much work they are currently ready to do. Others are so medically compromised that they have been admitted under certification or threat of certification. Clients' nutrition goals are generally quite simple and specific, such as: interrupting restrictive behaviors and excessive exercise patterns, stopping or reducing binge-eating/purge cycles, decreasing laxative misuse, or correcting micronutrient, electrolyte and hydration imbalances.

The Quest Program is a 2- to 4-month inpatient admission with an outpatient transition module. Participants in this program have historically not responded well to the structure or expectations of other intensive inpatient and outpatient treatment options. They are not ready for complete recovery from their eating disorder, but they are motivated to work on improving their quality of life. Participation in the Quest Program is voluntary and participants are motivated to challenge their ambivalence around certain aspects of the eating disorder. Their nutrition goals are more ambitious or complex than those of the Extra Care program. Some examples of goals include slow yet significant weight gain (6.8-9.0 kg), overcoming barriers around food preparation, grocery shopping and social meal situations, or preparation to participate in the Clinic's intensive outpatient program.

LW: *What are your role and responsibilities as the dietitian involved in these treatment programs?*

DB: With respect to direct patient care, the role of the dietitian is

somewhat multi-faceted. My responsibilities fall into five major themes. The first three are: clinical assessment, including management of refeeding syndrome and tube feeding issues, nutrition education (both one-to-one and in groups), and nutrition intervention (through community living activities such as cooking, grocery shopping and restaurant/social meals). The last two are: helping clients' understand the value they place on their nutrition-related behaviors, and exploration of how clients' eating behaviors and beliefs oppose or relate to their nutrition goals and overall quality of life.

The Quest program offers significantly more potential for creativity and community integration work. It is very difficult to foster enough self-sufficiency in short-term inpatients so that they are actually able to develop new skills and coping strategies before being discharged back to their former environment. With Quest, participants have more time to challenge their nutrition-related fears in their natural surroundings, away from the hospital. It is amazing how much a dietitian can learn when interacting with clients in real-life settings.

LW: *Donald, has your opinion of effective nutrition intervention changed over the years? And, if so, what impact has this had on the nutrition care you provide?*

DB: It's changed tremendously! In the past, the general focus was on maximum weight gain, to improve cognitive and physical status. Now I tend to focus more on patients' perception of nutritional progress by relating all nutrition interventions to their goals. There is much less emphasis on mandatory weight gain and much more effort in understanding, accepting and supporting clients' readiness to make only small changes.

This shift would seem obvious since all the Clinic's programs are actively involved in research on motivational interviewing techniques. However, the change in my stance has also allowed me to more

effectively engage patients in making decisions around their care. I always find it difficult when clients depend on me to determine which nutrition goals are in their best interest. This does nothing to improve their perception of self-sufficiency. Instead, I communicate to clients that the responsibility for change is ultimately up to them. When they recognize their active involvement in decisions around their treatment, there is more opportunity to discuss how difficult it is to willfully relinquish nutrition-based coping mechanisms. It also allows patients to recognize their strengths and ability to change.

LW: *When and how do you decide to use nasogastric tube feeding with patients?*

DB: I rarely use nasogastric tube feeding any more in the Extra Care Program. Most Extra Care patients are well prepared for their admission and are fully aware of the nutrition guidelines. For those who are not emotionally ready to eat enough orally, tube feeding is offered as adjunct nutrition therapy *for a short period of time only* (i.e., one week). This is rationalized by emphasizing that one of the primary goals of the program is to work on issues related to eating regular-sized meals and feeling the normal sensation of being full. I never describe or perceive the need for tube feeding beyond one week as negative or ineffectual.

All treatment needs to be individualized, and tube feeding does not always interfere with clients' other nutrition goals. Some critically ill clients, who need tube feeding, are more appropriately treated on the medical wards at St. Paul's because of their inability to participate effectively in program group work and/or meals. Clients in the Quest Program are generally not offered tube feeding as part of their treatment, especially since weight change is gradual (0.5-1.0 kg/week) and not as difficult to achieve using food and oral supplements alone.

When patients are tube-fed, formula is almost always delivered

as bolus feeds during supported meal times in order to reduce any urges to manipulate or purge the supplement as it is flowing. Most patients receiving feeds quickly express negative reactions towards it. They experience more anxiety and less control around their renourishment process and often switch to oral supplements within the first week of tube feeding. I suspect this negative attitude is partially related to the fact that all (or most) of their co-patients are accepting 100% of food and supplements orally.

Adverse staff reactions and overwhelming feelings of invasiveness are also possible contributing factors. As a result, tube-feeding rarely continues beyond one week.

LW: *How do you evaluate the impact of inpatient treatment on clients' nutrition progress?*

DB: With the help of our research psychologist, I have recently developed a self-reflection questionnaire that asks patients to consider both quantitative and qualitative aspects of their nutrition progress. The quantitative components include topics such as changes in binge-eating and/or purging behaviors, ability to improve fluid intake, and shifts in food avoidance patterns. The qualitative aspects focus on how and why clients were or were not able to make specific changes to their eating disorder behaviors and beliefs. I plan to use this questionnaire as a monthly follow-up device, and hope to use it beginning next year.

The questionnaire has not been validated for research purposes. Instead, I want to use it as more of a discussion and reflection tool between clients and myself. It may provide a way to increase clients' self-awareness about why they have or haven't reached some of their nutrition goals. It may also give them a chance to indicate what type of support they need to continue with their work towards nutrition recovery.

— **Linda M. Watts, MA, RD**

Predicting Weight Gain in Hospitalized Bulimics

Most bulimic patients entering inpatient or outpatient treatment have been dieting. However, once they are hospitalized, bulimic patients lose their preferred means of weight regulation (such as dieting, binge eating, and purging). Michael R. Lowe, PhD, and colleagues at Hahnemann University and the Renfrew Foundation studied 61 bulimic inpatients to learn how hospitalization affected their body weight.

At admission, the mean body mass index (BMI) was 22.29 kg/m². The researchers also evaluated the mean average degree of weight suppression (the difference between highest BMI ever and current BMI). During the average hospital stay of 17 days, patients gained an average of 1.6 kg, or 3.5 lb. The researchers found that the degree of weight suppression, defined in both absolute and relative terms, independently predicted weight gain during hospitalization. Thinner patients had larger weight gains, which might be explained by the fact that underweight bulimic patients were encouraged to gain weight during their hospital stay.

They then examined the relationship between weight change and change in clinical indicators. The more weight bulimic patients gained during hospitalization, the more their binge eating decreased—thus, weight gain was associated with improved clinical indicators.

The researchers found that many bulimic patients used radical weight control behaviors because of legitimate fears of becoming overweight again. The results also suggested that bulimic persons who are below normal weight for their height and/or well below their highest weight ever might benefit from partial weight restoration during treatment. Some patients with BN become overweight after treatment, but there are some specific reasons why this occurs. First, some patients have a long history or a family history of obesity that may predispose them to obesity or they may have been binge-eating and purging for so long that their body composition has changed in a way that predisposes them to fat accumulation. Dr. Lowe presented the results of the study at the Eating Disorders Research Society.

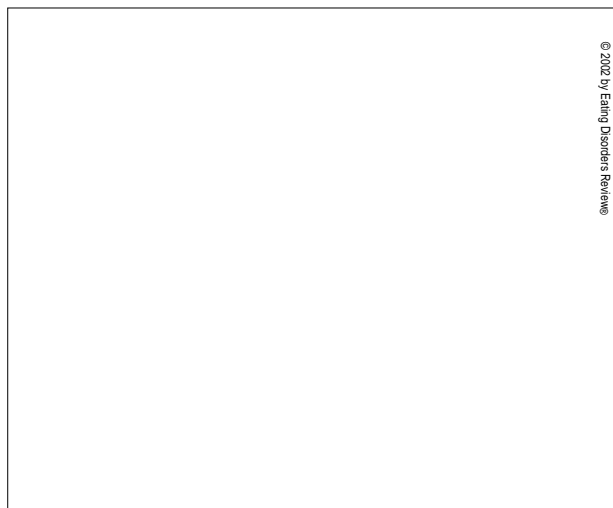
Questions & Answers

Bingeing on NutraSweet

Q. I am an outpatient dietitian, and one of my patients, who has a history of anorexia nervosa, revealed that she consumed 100 packets of NutraSweet® daily for an entire year. She first did this three years ago; then she began bingeing on the packets again, this time for 9 months. She stopped 9 months ago. She now has a blood disorder and she is wondering if there is a connection. Her doctors haven't related the blood disorder to the NutraSweet, although, I am not sure how much it has even been considered. (CF, Santa Rosa, CA)

A. I believe that you can reassure your patient. Although there's an extensive "urban legend" about the toxicity of aspartame (see, for example, <http://www.snopes2.com>), the active ingredient in Nutrasweet, all the rigorous studies that have been reported seem to support the fact that this substance is safe, even in large doses. This is true even for the equivalent of several dozen packets per day, taken over a long period. Although some migraine sufferers may be susceptible to having headaches triggered by aspartame (*Neurology* 1994; 44: 1787), controlled studies have shown that up to 10 times the usual amount causes no cognitive impairment in children with attention deficit hyperactivity disorder (*Pediatrics* 1994; 93:70). Also,

Nibbles, by Hunter



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nothing I could find in the medical literature linked aspartame to blood dyscrasias. At the same time, a variety of hematologic abnormalities with mild anemias and moderate leukopenias and thrombocytopenias and problems such as iron-deficiency anemias have been linked to the nutritional deficits caused by anorexia nervosa itself (*Pediatr Res* 1996; 40:108; *Q J Med* 1993; 86: 791; *Acta Haematol* 1998;100: 88). Of course, no one has data on what 100 packets per day can do to humans.

— J.Y.

Eating Disorders Awareness Week Found: High School Students at Risk of Eating Disorders

Eating Disorders Awareness Week will be observed throughout America from February 24 to March 3. The National Eating Disorders Screening Program (NEDSP) also starts during that week.

Last year, for the first time, more than 35,000 high school students, from 152 high schools in 34 states filled out a self-report eating disorders survey and the Eating Attitudes Test (EAT-26), and answered questions about binge eating, over-exercising to control weight, and any past treatment for an eating disorder. Those found to be at risk were then advised to contact a physician for further testing and evaluation.

Dr. S. Bryn Austin and colleagues from Children's Hospital, Boston, reported that among a subgroup of 4,639 students, 30% of the girls (826) and 16% (301) of the boys reported disordered eating behaviors that required further evaluation.

Among normal-weight and overweight girls, 14% and 18%, respectively, reported binge eating once or more each week, and 11% and 14%, respectively, reported that they had vomited to control their weight at least once in the past 3 months. When normal-weight and overweight boys were compared, 2% and 5%, respectively, reported vomiting to control their weight.

In the Next Issue

Integrating Dialectical Behavior Therapy Into Exposure Therapy for PTSD

By Carolyn Black Becker, PhD

• Trinity University, San Antonio, TX • Claudia Zayfert, PhD • Dartmouth Medical School, NH

Patients with post-traumatic stress disorder (PTSD) and an eating disorder are often considered challenging to treat and are frequently believed to be poor candidates for exposure therapy. These authors have found it is sometimes easier to treat PTSD symptoms first via exposure therapy.

PLUS

- Self-regulation in teens with anorexia nervosa
- The Children's Eating Behavior Questionnaire
- Ethnicity, self-esteem, and disordered eating among elite athletes
- Self-help vs. therapist-led group CBT therapy for binge-eating disorder
- ...and much more

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