The interaction between bariatric surgery, alcohol abuse, and an eating disorder diagnosis calls for an interdisciplinary approach and a multi-faceted treatment plan, which included behavioral, food, and nutrient supplement interventions.

1. **Anonymous ID Number**: 2016-4
2. **Primary Behavioral Health Category**: □ AD; X ED; □ IDD; □ MH
   - Partial hospitalization LOC, length of stay: 62 days
   - Intensive outpatient LOC, length of stay: 45 days
3. **Age**: 48
4. **Gender**: Male
5. **Diagnoses**: Eating disorder not otherwise specified (F50.9); history of bariatric surgery (V45.86); alcoholism (chronic) (with remission) (F10.21); post-traumatic stress disorder, chronic (F43.12)
6. **Medical Conditions**: Status-post roux-en-y gastric bypass in 2004; hx gastro-jejunal junction dilations post-bypass; neuropathy bilaterally in both legs; hx gunshot wound to left foot in 2000; iron-deficiency anemia; hypcobalaminemia; thiamine deficiency
7. **Medications**: Rx: Neurontin, Seroquel, Clonidine, Cymbalta, Remeron, Prazosin, Buspar, Campral. OTC: Iron sulfate 325 mg/day, B12 1000 mcg/biweekly, Cholecalciferol 1000 IU/day, thiamine 30 mg/day; Issues: Seroquel induces food cravings and is potential risk for binge/over-eating behaviors. Iron sulfate may cause constipation and should be monitored for tolerance. No drug-nutrient interactions observed.
8. **Relevant Family History**: Patient’s mother had gastric bypass performed secondary to obesity, and patient reports alcoholism in a paternal uncle; he denies substance abuse or eating disorder in other family members.

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**Objectives**: Upon completion of reviewing this case study, the participant will be able to
1. Identify the members of the interdisciplinary team required to plan and execute treatment for patients with multiple abuse and medical diagnoses.
2. Describe some of the nutrients commonly needed in patients with co-occurring diagnoses of alcohol abuse, an eating disorder and hx of bariatric surgery
3. Identify a selection of RDN interventions for including in the Nutrition Care Plan
**From the Chair**

Janice Scott, MS, RDN, CSP, LD

This is the beginning of a new century for the Academy of Nutrition and Dietetics and what a marvelous time to be a part of the Behavioral Health Nutrition practice group. BHN represents registered dietitians practicing in seemingly diverse areas but with the common focus of neurological functioning. Our new logo will soon be unveiled: a large tree with many branches, demonstrating the impact our practice group has on the world of nutrition. We offer expertise in four major areas: Mental Health, Eating Disorders, Addictions, and Intellectual and Developmental Disabilities. Our resource professionals are available to advise and support your work in these areas.

BHN is privileged to lead the revision of the SOP/SOPP for nutrition care in Mental Health and Addictions. The members of this committee have worked directly in the field and are setting the standard for medical and nutritional care for persons with mental health and addiction issues.

Our website is the heart of our communication and highlights the range of our member services. There you’ll find recorded webinars and case studies that offer insight and new knowledge as well as continuing education. Over the last several years BHN has developed Fact Sheets which provide a synopsis of certain developmental disorders. Our calendar of events links you to conferences both inside the Academy and in the community. Are you hosting an event and need an expert to highlight behavioral nutrition? Look no further than our speaker’s bureau. This section of our website provides easy access to experienced presenters that are recognized across the country.

Welcome to our returning members. We look forward to your active participation again this year. If this is your first year as a BHN member, we think you will find extraordinary value and camaraderie in our practice group.

Many current members have been with this group since its inception. But that doesn’t mean we’re old and dusty! BHN members are the thought leaders of our practice areas and our student volunteers are comprised of the best and brightest.

There is so much happening it’s hard to put it in one note. Our Public relations team has amazing plans for 2017 and 2018. Our member event at FNCE will be on Sunday morning and is guaranteed to nourish both your mind and body. You’ll be pleased you woke up early and joined your fellow BHN members. You’ll network with colleagues in your specialty and meet new friends with similar interests.

We’ll be debuting our new logo at the Showcase. Stop by to chat and take a selfie with your area of BHN specialization circled. We are looking forward to meeting many of you.

The Behavioral Health Nutrition team stays active all year. In addition to the great webinars we feature throughout the year, we’re planning a marvelous event that will provide an afternoon of knowledge building and CEU’s without leaving your office. Watch the website for registration details. The sessions will include each of our broad practice areas.

As always, we value your input. Please contact anyone of us on the executive committee with your questions, concerns or ideas. We look forward to an amazing year.

Your Chair,

Janice Scott
9. **Recent Laboratory Results:**
   - Hgb 9.8 g/dl (normal range 13.8-17.2 g/dl), B12 189 pg/ml (normal range 200-900 pc/ml), 25-hydroxy vitamin D 12 ng/dl (normal range 30-50 ng/ml)

10. **Nutrition Focused Physical Examination:** Evidence of temporal, clavicular, and mandibular wasting. His skin is pale and waxy in appearance, and tongue appears red and enlarged, both consistent with thiamine deficiency. Spider angiomas observed in patient’s neck and face. Patient reports tingling pain in both feet, and is observed with unsteady gait.

   **Anthropometrics:**
   - Height: 74 inches; Weight: 175 lbs (79.5 kg); BMI: 22.4; large frame
   - Ideal Body Weight range: 175-205 lbs (190 lbs midpoint) based on BMI 23-27 at age 48
   - Usual body weight: 200 lbs (BMI 25.6)
   - %UBW: 87.5%
   - Lowest body weight (2011): 135 lbs (BMI 17.3)
   - Highest body weight (1999): 340 lbs (BMI 44.8)
   - Recent weight loss: 15 lbs x 2 months (8% - significant)

11. **Reported Diet & Supplements:**
   - Patient reports current supplements include: protein shake once daily x 3 months; for past week: B12, iron, B1, vitamin D. Patient reports no oral food intake for 14 days prior to the day before admission to detox. The day before admission to detox, patient reports he ate a small amount of Thanksgiving dinner (mashed potatoes and turkey). Patient stated that usual food intake prior to relapse on alcohol was: protein shake for breakfast or lunch, sometimes a turkey sandwich or bagel bites for lunch, and fast food for dinner (i.e. pizza, hot dog, tacos). Patient was not taking any vitamin or mineral supplements prior to attending detox even though he was aware that he may need B12 and iron for management of gastric bypass. He reports drinking the protein shake daily because of the learned behavior post-gastric-bypass and the need for protein, in combination with poor appetite and aversion to solid food. He frequently skipped lunch and/or breakfast and would only eat dinner with his wife and kids. He also cuts food into small pieces and avoids several foods due to history of gastric bypass, including iceberg lettuce, skins of fruit, corn and maple syrup, seeds, nuts, steak, desserts. Patient reports he can tolerate juice, soda and honey, but not syrup or desserts, due to instances of dumping syndrome and postprandial hypoglycemia. Caloric intake was estimated to be 800-2000 kcals/day prior to alcohol relapse with variance based on level of restriction.

12. **Information from Consults/Referrals:**
   - Patient was referred from detox (length of stay 7 days), where patient received IV nutrient repletion (thiamine, folic acid, magnesium). Records from detox did not provide information on food intake. Patient had records available from prior chemical dependency program, which described a) excessive and compulsive physical activity (1-2 hours at gym daily), b) reported fear of weight gain 3) belief that 175 lbs was his ideal body weight, and d) restrictive eating habits including skipping meals (typically breakfast and lunch). Patient’s outpatient RDN was contacted. She met with him for an initial consultation and he did not show up to follow-up appointment. Patient’s wife was unwilling to communicate with RDN. Patient’s gastric bypass surgeon was retired and unavailable for consult. While in PHP/ IOP programs, RDN worked with primary therapist, group therapists, clinical director, primary care physician, and gastroenterologist.

13. **Relevant Observations:**
   - Patient repeated himself frequently and mimicked RDN’s speech, and was observed with uncoordinated gait when entering and leaving the room. Patient is candidate for Wernicke’s-Korsakoff Syndrome given long-term alcohol dependence, recent alcohol abuse with poor oral food intake, uncoordinated gait, and possible confabulation and/or impaired memory observed in session. Presenting behaviors from initial assessment and from above referrals include: restriction of all food x 2 weeks; poor food variety x 12 years (since bariatric surgery); restriction of caloric intake x 12 years via meal skipping and calorie counting; compulsive exercise (2 hours x 7 days/week) x 12 years; excessive weighing (once daily) x 12 years; rumination and purging 1-5 times weekly x 5 years. Patient initially reports that “purging” and rumination are not voluntary and are a result of gastric bypass. He reports that he must take small bites, not eat high-fiber foods, or eat beef because they cause reflux. He then reports re-chewing the food and swallowing it again most meals, or purging it into the toilet approximately twice weekly.

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**continued on page 4**
14. Nutrition Diagnoses:
- Inadequate protein-energy intake (NI-5.3) related to restrictive eating as evidenced by 15 lb (8%) weight loss x 2 months, physical exam showing muscle and fat store wasting, and client reports of skipping up to 2 meals and 3 snacks/day x 1.5 months and no food intake x 2 weeks.
- Altered GI function (NC-1.4) r/t roux-en-y gastric bypass as evidenced by low serum hemoglobin and B12, patient reports of dysphagia, postprandial hypoglycemia and flushing consistent with dumping syndrome.
- Excessive alcohol intake (NI-4.3) r/t alcohol dependence AEB pt reports of 1-2 liters vodka intake daily, thiamine deficiency, and physical exam with waxy skin and reddened, enlarged tongue.

15. Guidelines or Criteria Utilized:
- Abstain from cognitive-based nutrition counseling until patient is weight-restored and nutritional deficiencies are resolved: “Nutrition Intervention in the Treatment of Eating Disorders”. Practice Paper of the American Dietetic Association
- Increase caloric intake higher than RDA of 20-30 kcal/kg given abnormalities to GI tract and malnutrition:
- Utilize guided relaxation and mindfulness techniques to support adequate intake:
  - Teach intuitive eating skills after weight restoration and nutritional deficiencies are repleted:
  - Promote meal plan compliance for decreased restriction and compensatory binging related to “restraint stress”:
    - Supplementation of thiamine in alcoholism:
      - Rees E., Gowing, L.R. (2013) Supplementary thiamine is still important in alcohol dependence. Alcohol and Alcoholism 48(1);88-92.
- Coordinated care post gastric-bypass:
- Health at Every Size approach to ideal body weight:
- Mindfulness-based intervention to over-eating/binge-eating:

16. Nutrition Care Plan**: The Nutrition Care Plan for this patient is in the setting of a partial hospitalization and intensive outpatient treatment program for patients with a dual-diagnosis of eating disorder and chemical dependency. First the plan approached nutritional and medical needs to restore cognitive function and support medical stability in order to allow psychotherapeutic interventions to occur; next the plan treats the patient’s long-term pattern of disordered eating from binge eating to restrictive eating and compensatory behaviors in order to prevent relapse after discharge from treatment program. This patient was approached as ED-primary due to his biopsychosocial history in which binge-eating preceded binge-alcohol use, and the fact that patient reported his triggers for alcohol relapses were related to his perceived body image, which then triggered restrictive eating and excessive exercise, followed by alcohol use and complete starvation during alcohol abuse.

17. Patient Response: Patient was initially amenable to following a meal plan, keeping a food and

continued on page 5
Table 1. Nutrition Care Plan - Goals and Interventions

<table>
<thead>
<tr>
<th>Goals</th>
<th>Interventions</th>
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| Goal 1: Restore weight to UBW 200 lbs - Patient’s ideal body weight  | 1. Provide staff supervision at 2 meals and 2 snacks daily to promote adequate intake,  
| range was calculated based on BMI range 23-27 (180-211 lbs) given  | 2. Redirect ritualistic eating behaviors, and challenge disordered eating habits  
| patient’s age and history of obesity. RD was open to an IBW higher  | 3. Increase meal plan once to twice weekly to result in 1-2 lbs weight gain per week until IBW achieved  
| than 200 lbs based on any weight maintenance without binge or restrict | 4. Decrease meal plan once to twice weekly once IBW is obtained to reach maintenance meal plan  
| behaviors. (Robison, 2005)                                           | 5. Hold meal plan calorie amount at observed weight maintenance around IBW range  
|                                                                      | 6. Complete “Body Image Timeline” assignment listing patient’s opinion of body image and approximate weight at significant points throughout patient’s life.  
|                                                                      | 7. With RD, process the circumstances surrounding client’s usual body weight versus weight resulting from eating disorder behaviors to promote client’s body acceptance. |
| Goal 2: Obtain and maintain healthy body weight via 90-100% meal plan | Partial Hospitalization Program: Intervention 1 above Intensive Outpatient Program:  
| compliance (Bello et al 2009)                                        | 8. Provide staff supervision at 1 meal and 1 snack daily to promote adequate intake, redirect ritualistic eating behaviors, and challenge disordered eating habits |
| Goal 3: Achieve patient abstinence from restriction, purging/regurgita- | Partial Hospitalization Program: Intervention 1 above  
| tion, and over-eating behaviors via goal #2. (Bello et al 2009)       | 9. Prohibit client’s bathroom use for 1.5 hours after each meal and snack to prevent purging  
|                                                                      | 10. Educate client on normal GI anatomical function and health risks to chronic regurgitation/purging (i.e. Barrett’s esophagus, esophageal cancer, damaged tooth enamel)   
|                                                                      | 11. Refer to gastroenterologist for evaluation and treatment of suspected gastro-jejunal stoma stricture  
|                                                                      | 12. Client to identify emotional and psychological triggers and alternative coping strategies to restriction, over-eating, and purging behaviors  
|                                                                      | 13. Habituate former binge foods in normal portions utilizing mindfulness-based techniques |
| Goal 4 : Resolve iron-deficiency anemia, thiamine deficiency, and hy- | 14. Adequate oral intake, oral supplementation, and IV infusion as necessary  
|                                                                      | 16. IV infusion was recommended for this patient given altered GI anatomy due to bariatric surgery and no significant change on 1 month follow-up   |
| Goal 5: Patient will become independent in choosing, procuring, prep- | Patient will:  
| aring, and consuming food in amounts appropriate for weight mainte- | 17. complete weekly meal plans with RD supervision for all meals and snacks and corresponding grocery list;  
| nance and remission of eating disorder behaviors. (AND ED Practice | 18. complete grocery shopping once weekly with staff supervision  
| Guidelines)                                                         | 19. attend restaurant outings twice weekly with staff to assist in ordering and consumption of meals/snacks  
|                                                                      | 20. eat out in restaurants independently at least once weekly  
|                                                                      | 21. keep food journal daily with corresponding thoughts and feelings about challenges to appropriate food intake  
|                                                                      | Partial Hospitalization Program: intervention 1 above Intensive Outpatient Program: intervention 8 above |
| Goal 6: Evaluate and liberalize as appropriate dietary restrictions | 22. Patient to complete “Food Rules List” linking food intake with physical symptoms, emotions and cognitive thoughts about food restrictions  
| (i.e. low-fiber foods, low-sugar foods) related to gastric bypass in- | 23. Provide food exposure therapy twice weekly with staff in addition to #18, 19, 20 above to liberalize diet, prevent restraint fatigue  
| terventions (Richardson et al, 2009)                                 | 24. Educate patient on GI anatomy  
|                                                                      | 25. Refer to gastroenterologist for evaluation and treatment of suspected gastro-jejunal stoma stricture |
| Goal 7: Habituate physical activity as non-compensatory behavior   | 26. Partial Hospitalization Program: Limit patient’s physical activity to 0-15 minutes walking daily  
| for physical and emotional health maintenance (AND ED Practice     | 27. Intensive Outpatient Program: Patient to complete “Physical Activity Journal” describing emotions and thought surrounding body image before, during, and after physical activity   
| Guidelines)                                                         | 28. Intensive Outpatient Program: RD-supervised physical activity exposure therapy at the gym once weekly x 4 weeks, instructing client on redirecting compensatory thoughts, and respecting physical limits during physical activity.   |
| Goal 8 : Habituate 90-100% prior binge foods in normal portions | 29. Patient will record physical and emotional hunger and fullness cues  
| to prevent both binge eating and restrictive eating/disinhibition   | 30. Complete “Mindful Eating Group” with staff once weekly to expose client to prior binge foods in normal portion sizes and to teach mindfulness-based techniques. |
| (Kristeller & Woleve, 2011) (Bello et al 2009)                      |                                                                                                                                  |
feelings journal, and abstaining from weighing and physical activity. Patient initially insisted that he “has never binged” and “is not a binger”, and was not interested in “habituating binge foods” or exploring his body image via the timeline activity.

18. RDN Response/Expectation:
RDN was concerned about patient’s unwillingness to discuss the period of time in which he was over-weight (prior to gastric bypass surgery), as well as his lack of insight into past disordered eating behaviors. Patient’s cognitive function also appeared impaired. RD hoped that cognitive function would improve as nutrition status improved, but RD was unclear if any permanent brain damage was sustained via long-term alcohol abuse.

19. Follow-up/ Progress***: Patient was seen individually by RDN once weekly for 4 months. Patient obtained his UBW weight goal by week 9 via caloric intake of 2900 kcals. Overall he gained 35 lbs in 16 weeks. Patient’s meal plan was gradually lowered to 2100 kcals for maintenance of UBW (approximately 22 kcals/kg). Patient’s weight continued to increase beyond what was expected for caloric needs, however, and RD suspected over-eating behaviors and/or need for reduced calorie meal plan. Patient was not amenable to decreasing meal plan because of reported hunger cues. Patient eventually admitted to eating an additional snack in evenings after taking Seroquel, which was calculated to account for approximately 400 kcals per day in excess of meal plan and would at least in part explain continued weight gain. Furthermore, when client discharged to IOP level of care he reported frequent dining in restaurants, and RD suspected that client may have been over-eating during those meals. Patient was also highly offended when RDN asked if client was over-eating, which was suspicious for shame around ED behaviors. Patient’s weight maintained around 210 lbs for 3 weeks prior to discharge. In months 2-4 of treatment, patient was more willing to discuss body image timeline, liberalize dietary restrictions, and habituate former binge foods. Patient admitted that several dietary restrictions and “food rules” retained from post-bariatric diet instruction were utilized to prevent binge-eating and weight gain, and served to maintain restrictive eating. Patient verbalized acceptance of maintenance body weight, purchased new clothes to fit his body, and reported decreased obsession with body image by the time of discharge. Upon discharge, however, patient still had not habituated all prior binge foods and was unwilling to do so with certain foods (i.e. donuts, candy bars), and patient is advised to complete exposure therapy with outpatient dietitian.

20. Lessons Learned from this Case: This case study reflects the prevalence of co-occurrence of substance abuse disorders and eating disorders. It is consistent with risks for substance abuse and eating disorders in patients receiving gastric bypass surgery. Unfortunately the patient relapsed on alcohol within 1 week of discharging home to outpatient setting. His relapse also reflects the relapse rate observed in this population. More effective methods
BHN Case 2016-4
continued from page 2

for preventing relapse need to be developed in this population. This patient likely would have benefited from transfer to a chemical dependency-primary program after his time at the eating disorder-primary treatment program. Client also did not achieve a long period of weight stability while in treatment nor did he complete all recommendations for habituating prior binge foods and accepting current body weight. Although it is unknown what triggered the patient to relapse, given past history it is likely that struggles with body image may have played a part. Furthermore, this patient had no family involvement in his eating disorder treatment. The case demonstrates a high need for social support in maintaining remission from substance abuse and eating disorders. Unfortunately contact with the patient’s wife was attempted approximately once per week and the wife never responded. Patient refused to discuss lack of family involvement and down-side to the wife’s lack of communication with the treatment team.

Check one of the following:

X HIPAA identifiers, including unique patient characteristics were removed prior to submission and publication.

 Consent form has been signed by individual or responsible party and retained by the author for future reference.

Writing opportunity for dietitians and students with a passion for their work:

The BHN Psych Manual Revision work group is seeking dietitians with experience to write various small scope sections of the manual building on their clinical experience. Students interested in this project will be tasked with writing background material or editing to ensure that the material presented builds on common knowledge and provides relevant information to new dietitians. Please email Jaimie Winkler, Publications Chair, at publicationchair@bhndpg.org if you are interested in participating.
Pleasure Overrides Fullness When It Comes to Controlling Food Intake

by Ralph E. Carson, PhD, RD

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One method for controlling food intake is to stop eating when you feel full. This ability is assumed to be programmed into our natural homeostatic feedback design. Being aware of fullness supposedly will adequately indicate when we have had the appropriate amount of food to maintain our energy stores and sustain our “natural weight.” Going beyond this hypothetical point could lead to overconsumption, weight gain, and obesity. When asked about what indicates fullness, clients trained in this technique will reply, “It is a feeling of tension or pressure in the stomach.” By honoring fullness, it is assumed that the individual will stop overeating and binge eating will end. However, this internal message of “listening to your body” may not always reliably indicate to clients when they have had enough to eat, leading to the question: Do stomach cues unequivocally provide permission for clients to trust their body signals? This article examines various factors regarding fullness and the body’s role in overriding fullness cues.

**Gastric Stimulation: Fullness Cues**

The gastric electric stimulator (GES) is an implanted device that manipulates gastric signals and produces a sense of fullness.\(^1\)\(^,\)\(^2\) With the GES, the consumption of food trips a sensor that sends a signal to the device. Electrical activity within the stomach muscles sends continuous waves from the entry and eventually the outlet of the stomach. The gastric stimulator quickly “tricks” the brain into registering fullness by stimulating these stomach muscles. Thus, the GES is expected to increase feelings of fullness, reduce food intake, prevent overeating, and contribute to weight loss.

Several assessments have concluded that there is insufficient scientific evidence to support gastric stimulation.\(^3\)\(^-\)\(^5\) Shikora et al compared implantable gastric stimulation therapy with a standard diet and therapy regimen in a group of obese subjects and evaluated differences in weight loss.\(^6\) The results did not support GES application because it failed to produce any significant weight loss when compared with diet and exercise.\(^7\)\(^,\)\(^8\) Those losing less than 5% body weight seem to have powerful conditioned responses that override regulatory signals. The general consensus of these studies is that people cannot self-regulate food intake relying solely on homeostatic feedback.\(^9\)

**Vagal Nerve Blockage: Hunger Cues**

The vagal nerve plays a significant role in modulating sensations of feeling hungry. Cutting the vagal nerve decreases appetite and reduces weight. Although vagal stimulation has a crucial role in signaling hunger, there is little evidence suggesting that it also plays a significant role in long-term weight maintenance.\(^10\)

VBLOC\(^\circ\) vagal blocking therapy consists of a device designed to intermittently block the vagus input from the stomach to that part of the brain linked to hunger.\(^11\) Periodically, the device delivers an electronic impulse that blocks hunger impulses and leaves the patient feeling fuller, reducing food intake and lowering body weight. The device produced an overall difference in total body weight of only 3% more than a control device that did nothing.\(^12\) Although there was clinically significant weight loss, the procedure fell short of being as effective as the researchers had hoped. The advisory committee for the U.S. Food and Drug Administration recommended approval based on the fact that the VBLOC\(^\circ\) helped some people lose weight and keep it off. The lasting power of the device beyond 18 months is unclear. The VBLOC\(^\circ\) device does not address behavioral and lifestyle changes that include incorporating healthy eating habits, making healthy choices, addressing emotional eating, or promoting physical activity. The effectiveness of vagal blockage begs to question whether one can rely on stomach cues of hunger to determine how much to eat. Researchers recommend diet and exercise over vagal blocking devices for long-term durable treatment of weight.\(^13\)

**Gastric Capacity**

Do obese individuals have a larger stomach capacity? Studies of gastric emptying in normal-weight and obese persons have shown inconsistent results.\(^14\) Using an intragastric balloon, researchers showed that the stomach was larger in obese individuals.\(^14\)\(^-\)\(^16\) People with a larger maximal volume can tolerate more food. Areas of the brain responsible for stress and pain are activated by gastric distension, and it has been shown that a larger stomach capacity associated with obesity produced less activation of continued on page 9
Pleasure Overrides Fullness When It Comes to Controlling Food Intake
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these loci.17

Obesity may not result primarily from a large gastric capacity. Normal-weight binge eaters have an even larger gastric capacity than the obese.16,18 As the degree of obesity increases, the likelihood of binge eating also increases. This provides a possible explanation of why the gastric capacity of morbidly obese individuals is so large.19

Eating for Pleasure (Hedonic Hunger)

There is a belief that if one tunes into his or her physical and mental fullness signals, the likelihood of preventing mindless overconsumption is increased. Research is continually finding that regardless of how full a person may feel, the body is hard-wired to chemically reward itself by overeating when tempted with highly palatable foods.20-22

Hedonic hunger refers to consumption of food solely for pleasure and not to maintain energy homeostasis. In this condition, the subject not only eats when in a state of short-term energy depletion, but also overconsumes specific foods because of their rewarding properties.23

Ghrelin and 2-Arachidonylglycerol

Two gut compounds are credited with causing us to indulge in goodies well beyond the point of caloric need. The stomach hormone ghrelin regulates the drive to eat and the capacity to experience pleasure. The endocannabinoid 2-arachidonylglycerol (2-AG) is also involved with appetite and pleasure. These chemicals override fullness when a person wants a particular food. We are programmed to stuff ourselves for a rainy day. Despite feeling full, faced with an appealing food one eats more than originally intended. As noted previously, our innate predisposition to overeat when presented with tempting food may overrule feelings of fullness.25,26 This response can be blamed on a brain that is preprogrammed to store up energy for future famines. It is a natural consequence of existing in an environment where food was difficult to obtain. Ghrelin and 2-AG levels become elevated when appealing food is available, and this triggers us to stuff ourselves. The behavior is counterproductive in an environment where there is an overabundance of cheap food.24

Ghrelin stimulates some people to keep eating enjoyable foods even after they are full. Mice who received ghrelin continued to push buttons with their noses to get high-fat pellets long after those who had not received the hormone gave up.28 Humans and mice share similar architecture in the “pleasure centers” of the brain—the same neurotransmitters, neuropeptides, and reward centers, according to researchers at University of Texas Southwestern Medical Center.28

Ghrelin is reduced in humans following roux-en-y-gastric bypass (RYGB) or the vertical sleeve gastrectomy (VSG). As a result, postsurgery patients have a decreased preference for highly palatable foods.29 Functional magnetic resonance imaging revealed that ghrelin-activated areas in the brain are involved in reward-seeking behaviors. When participants ate their favorite food, their blood levels of ghrelin increased significantly and stayed high for 2 hours following ingestion. After eating an unappetizing nutritionally equivalent item, ghrelin levels progressively decreased.30,31

Hedonic signals release messengers that stimulate cannabinoid receptors.32 These receptors are implicated in the drive to continue eating.25 Highly palatable foods trigger continuation of eating regardless of fullness.33 Consumption of a favorite food allowed 2-AG levels to remain higher for up to 2 hours compared with the non-favorite food.25 In overweight and obese people, 2-AG levels are significantly increased.34 This leads to an increase in food seeking, absorption of more sugar, burning less sugar, and ultimately storing more fat.35

In summary, there is a pleasure system in the brain that responds to food. Studies show there are higher levels of endocannabinoids in overweight and obese people. Higher circulating levels are correlated with body mass index.36 The primary mechanism is the endocannabinoids effect on appetite, sugar metabolism, and fat storage. Certain individuals will continue eating whether or not they are full, because they cannot resist the pleasure stimulus.

Pleasure Overrides “Fullness”

After years of sporadic dieting, can one discern if he or she is experiencing true hunger? Mind hunger creates an imaginary feeling of hunger that is persistent. Being full and being satisfied are not the same thing.37 Some people might eat a high-fiber cereal instead of chocolate ice cream and find themselves consuming so much fiber they feel like they will explode—but they may still feel unsatisfied and crave something that tastes good.

What determines when and how much we eat?38 Our bodies have a homeostatic system that stimulates or inhibits eating. Messages are sent from the digestive tract to the brain that informs us that we are hungry or full. The mechanism includes gastric expansions that activate the vagus...
nerve or neurohormonal chemical messages that travel to the brain’s feeding center. There is also a hedonic feedback that drives us to eat because food tastes good. A dysfunction in either systems could result in overeating that contributes to obesity or binge eating.

Highly Palatable Foods Disrupt Fullness Signals

For decades our bodies had been accustomed to whole foods from natural sources rather than highly processed food. Disrupting this balance has led to a confused brain and inappropriate fullness feedback that can result in obesity. The body controls food intake by balancing a need to survive (homeostatic) with a desire for pleasure (hedonic). Pleasure incorporates such senses and perceptions as taste, smell, mouthfeel, and appearance. Defective brain signaling shifts the balance between these systems, causing pleasure to take over. This may explain why humans overeat on a highly palatable diet, even when they are full. Over time this ultimately impairs the ability to control caloric intake.

About the Author

Ralph Carson, PhD, RD is vice president of Science and Innovation – CORE Program for the Eating Recovery Center and consultant to Pine Grove’s behavioral health and addictions services. He is author of The Brain Fix: What’s the Matter with Your Grey Matter and Harnessing the Healing Power of Fruit. He has been involved in the treatment of eating disorders, obesity, and addiction for more than 40 years and is a board member of the International Association of Eating Disorder Professionals.

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Check out the BHN website at bhndpg.org

- **Calendar of events** Posted activities and events related to our areas of practice that can include local, state, national and international and sponsored by service and professional organizations, colleges and institutions, government and our members. You can submit an event for posting online.
- **Marketplace**, in the shopping section, members can post books and guides that they developed and are for sale or services such as training and web-based resources.
- **Forum** in the member’s section where we encourage members to check out postings and to post your own general questions and share advice. Read the instructions to post and get started!
- **Resources** in all areas of practice are available on-line with links to national organizations, research, and more.
- **Case Studies** with CEUs available in the member’s section.
- **Nutrition Fact sheets** ready for use with your clients or others. In the member’s section.
- **Webinar recordings** available to purchase or one to sign up for a small fee or at no cost in the events section.

**Communicating with Members**

Consider joining our EML and Member Forums to connect with about 300 BHN members at this time, ask questions and get responses. These features are in the member’s area on our website.

**Mentoring program in the works**

Jessica Barth Nesbitt, member and volunteer, is now managing the mentoring program in its development. The applications for being a mentor and mentee are in its final stages.

**BHN Speaker’s Bureau**

Go to the BHN website “Store” and the Speakers Bureau drop down to complete a survey if you are interested in participating.
Policy and Advocacy Leader Update  
Carol Bradley, PhD, RDN, LD, BCBA

Greetings!

I am serving as both Political Advocacy Leader (PAL) and Reimbursement Chair for BHN for the 2017-2018 year. Many practice issues overlap for the two positions. Most of my time is spent viewing webinars to be aware of changes and updates but I also attend in-person meetings for both positions. In addition, I serve as a liaison between members and the Academy on public policy concerns, and forward through BHN Yahoo Groups. The following is an example of how we contribute to public policy:

The Senate’s Special Committee on Aging held a hearing on “Nourishing our Golden Years: How Proper and Adequate Nutrition Promotes Health Aging and Positive Outcomes.” The Academy met with the committee staff in advance of the hearing to share resources and information about senior nutrition and current initiatives. During the hearing, testimonies were given from medical professionals, public health personnel, and a woman who receives senior nutrition benefits in addition to Medicaid. The panel highlighted how senior nutrition services, in both the clinical setting and the community setting, help reverse malnourished seniors in the short-term, but have long-term affects by keeping health care costs down. The panel and committee members, including Connie Bales, PhD RD, stressed the importance of reimbursement for nutrition services provided by registered dietitians to offset health-care costs that result without such services. We were asked in late July to comment on how well dementia is addressed in the community because of its potential to increase the likelihood of malnutrition.

As previously mentioned, a major part of my position is to attend PPW on behalf of BHN. On June 25 and 26, the annual Public Policy Workshop (PPW) was held in Washington, D.C. Much of the training is done in advance by webinars and handouts, including sample scripts for scheduling Congressional office meetings, which is very helpful for first-time attendees. PPW attendees, including students, are seated by the voting state of attendees. Larger states have more than one table while smaller states share a table. Education is provided and soon attendees are off to meet with their respective legislators. Additionally, Public Policy Coordinators (PPCs) for each affiliate receive packets prepared by the Academy to leave behind at Congressional offices with information on key legislative issues.

Fun events that many of us participated in to raise money for ANDPAC, included the ANDPAC Power Breakfast which was sold out! There was a very original D.C. Walking History Tour, at 8:00 a.m. on Sunday where we saw many sites we would not have seen otherwise.

The ANDPAC Power Breakfast honoring Public Policy Leadership Award Winner Senator Pat Roberts (Kansas) was a real treat. He was hilarious! Following the ANDPAC breakfast, attendees wore red, white and blue professional attire as they made their visits to Capitol Hill from 9:30 a.m. to 3:30 p.m.

The following are some of the issues we addressed with legislators and the most current updates as of August 7, 2017:

**Centennial Resolution:** As of August 7, the Congressional resolution commemorating the Academy’s Centennial has **32 cosponsors in the House of Representatives** and **10 cosponsors in the Senate**. Please continue to reach out to members of Congress in your media channels. If a member of Congress expresses interest, please email the Academy’s Policy Initiatives and Advocacy Team at swinston@eatright.org.

**Senate Health Care Bill:** Thanks to the outreach by Academy members and our partners, on July 28 the Senate voted to reject the latest amendment to the American Health Care Act, entitled the “Health Care Freedom Act,” or “skinny bill repeal” by a vote of 51-49. Senators John McCain (R-AZ), Lisa Murkowksi (R-AK), and Susan Collins (R-ME) joined all Democrats in opposition. The next steps for Congress remain uncertain. Twenty senators submitted their names to co-sponsor a motion by Senator Richard Blumenthal (D-CT) to preserve the Prevention and Public Health Fund, a testament to the power of advocacy!

The Academy issued a press release commending the Senate vote, and urging Congress to work in a bipartisan process to improve access to quality and affordable health care for all Americans.

**Get Motivated and Support ANDPAC** Health related legislation, and regulations, will impact public health and your livelihood as an RDN. In this video, listen to Academy President, Donna Martin, and Past President Lucille Beseler, explain why they believe you should support ANDPAC. ANDPAC is the only PAC that represents the Academy’s food, nutrition and health professionals. Stay informed on the Academy legislative priorities and donate to ANDPAC today.

**Watch for Action Alerts!** Even if you think you answered an alert, check each time as there may be a new alert related to that topic. Please take action when each alert goes out so that your members of Congress know our issues are important. Every letter counts! The Academy has recently added buttons at the bottom of the page after you take action to share the information on Facebook and Twitter. Thank you to all who respond to each Action Alert!
Policy and Advocacy Leader Update

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Even better, get to know who represents you. One of the most basic, yet effective, means of advocating is writing or calling your elected official. Hearing from constituents is all part of a day’s work for a legislator, and they are generally committed to responding. Visit them during August and September when they are back in their home states. If you can’t get to their offices, send them a personal email.

When contacting a legislator in writing, express your views clearly, briefly and firmly. The following are some tips for making effective comments:

• Before writing, think through the key points you want to make. Get your facts straight. If you are using facts or statistics to support your views, make sure they are current and accurate.
• Organize your remarks. Clearly identify the subject or title of the legislation in the first paragraph and identify yourself as a constituent early in the letter. Write simply and clearly and limit your comments to one page. Proof carefully for spelling and grammar.
• Learn the committee assignments of your legislators. Keep in mind legislators have much more influence over bills pending in their own committees. Be specific as to the action you want the legislator to take. (Offer solutions instead of complaining).
• Be sure to ask for a reply to confirm that your letter has been received and read.
• Sign your letter. Always include your name, address, e-mail, and telephone number to facilitate a response from your legislator.

Reimbursement

The latest edition of the Academy’s monthly newsletter, The MNT Provider, can be found at www.eatrightpro under “resources”. In the latest edition: Learn how to use the Explanation of Benefits (EOB) to manage claims, read about the expansion of CMS’ Comprehensive Primary Care Plus model and opportunities for RDNs, and discover new resources to assist with successful participation in Merit based Incentive Payment System (MIPS). This is a free service to Academy members!!

Previous editions of the newsletter can be found here:


http://www.eatrightstore.org/product/FF773F6E-6B92-40B4 -83A4-D4E1D4A96424

If you would like to be part of a committee for either legislation or reimbursement, please contact me at carol.bradleyrd@yahoo.com. There is strength in numbers and we need to have our voices heard.

Meet the BHN Resource Professionals!

These highly experienced RDNs are available to serve you with resources and suggestions for the challenges faced in behavioral health nutrition.

Addictions Resource Professional
Cynthia Rutkowski, MA, RDN, FADA, FAND
addictionsresourceprofessional@bhndpg.org

Cynthia currently works as a Clinical Dietitian for Walter Reuther Psychiatric Hospital in Westland, Michigan. Additionally, she serves as Adjunct Faculty for Wayne County Community College District in Detroit, Michigan. In 2015 Cynthia was awarded the Behavioral Health Nutrition Excellence in Practice: Addictions Award for her contributions to the field. Throughout the years she has held many volunteer roles for the Academy of Nutrition and Dietetics as well as previously serving as the Public Policy Chair for BHN.

Eating Disorders Resource Professional
Marci Anderson MS CEDRD LDN cPT
eatingdisorderresourceprofessional@bhndpg.org

Marci is a self-proclaimed Food and Body Imager Healer™. She has dedicated her career to counseling, supervising, and teaching in the field of eating disorders. She is a Certified Eating Disorder Registered Dietitian and Supervisor, certified Intuitive Eating Counselor and Certified ACSM personal trainer. In addition to her group private practice and three adjunct teaching positions, Marci launched an online eating disorders training for dietitians in 2015 and co-directs a specialized eating disorder internship at Simmons College. She volunteers for a number of national eating disorder organizations including the iaedp certification committee and is serving as an eating disorder resource professional for The Academy of Nutrition and Dietetics. She has spoken locally and nationally at numerous conferences and media outlets. She loves social media so tweet her @marciRD, follow her on Facebook and Instagram, and check out her blog at www.marciRD.com.

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Meet the BHN Resource Professionals!

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Intellectual / Developmental Disabilities
Resource Professional
Jean Daniello MS, RDN, CDE, LDN
intelectualdevelopmentaldisabilitiesresourceprofessional@bhndpg.org

Jean is Director of Dietary Services at the Regional Institute for Children and Adolescents (RICA) in Baltimore, MD. RICA serves adolescents from age 12 – 21 who have emotional disabilities. She is currently implementing a new computer system for the department.

Jean also is the Wellness Dietitian at the Defense Information System Agency at Fort Meade, MD where she provides nutrition counseling to employees as part of their Wellness Program.

She received her MS in Nutrition Science from Hunter College, City University of New York Science and BA in Dietetics from Brooklyn College.

In her current position she oversees all of the nutrition services at RICA Baltimore. In addition, she has worked previously for 10 years at Carroll Hospital Center as their out-patient dietitian counseling anyone with a physician referral covering many different medical conditions ranging from heart disease to renal disease and many other conditions affecting individuals from age 10 and up. She has consulted for a Senior Inclusion Program that serves developmentally disabled Senior Citizens within the Department of Aging.

She has worked as a “cooking coach” for a young man with autism who was learning to live independently. She co-wrote a United Way Community Grant to assist a non-profit agency that managed three group homes to improve the nutrition status of individuals living in the homes and to provide guidance to the staff and families. In this role Jean developed menus, taught cooking and food safety skills to improve the lives of these individuals.

Prior to that she worked at the Maryland State Department of Education as a Food and Nutrition Program Specialist for Family Day Care Programs and Adult Day Services. Jean has also worked at the Joslin Diabetes Center at University of MD Medical System where she worked with many individuals with multiple disorders beyond diabetes.

Beyond her professional career she is the parent of two adult daughters with cognitive developmental disability and has been advocating for the rights of individuals with disabilities for many years. In that capacity Jean was appointed to the Commission on Disability issues in Howard County and served two 4 year terms and was vice Chairperson in 2010-2011 and Chairperson in 2012-2013. During this time she was instrumental in enacting legislation that allowed individuals with a HS Certificate of Attendance from the State of MD to apply for positions that they would be able to work in with some adaptations. Prior to that legislation these positions required a high school diploma. This led to the County Executive forming a Youth Transition Council. She then was appointed to the Council for Transitioning Youth as a parent advocate.

She has testified at budget hearings at the state and local level and has participated in working to improve the lives of individuals with disabilities for the past 30 years.

Mental Health Resource Professional
Ruth Leyse Wallace PhD RD
mentalhealthresourceprofessional@bhndpg.org

Dr. Leyse-Wallace received her BS degree from the University of California at Davis as a member of Phi Kappa Phi; earned her MS degree while completing her dietetic internship at the University of Kansas Medical Center in Kansas City, and in 1998 was awarded her PhD from The University of Arizona in Tucson, Arizona. She began practicing clinical dietetics at Osawatomie State Hospital, followed by practicing at The Menninger Foundation in Topeka, Kansas from 1977 to 1984. She was later employed at Mesa Vista Hospital (now Sharp-Mesa Vista) in San Diego, California and HCA Willow Park Hospital in Plano, Texas. Her practice included providing nutritional care for patients of all ages hospitalized for eating disorders, alcohol and drug abuse, and general psychiatric diagnoses. While attending graduate school in Tucson, Dr. Wallace served at Sierra Tucson and Hospice Family Care in Tucson, as well as Group Health Medical Associates. She has served as an adjunct faculty member at Pima County College in Tucson and Mesa College in San Diego. A long-term member of The American Dietetic Association (ADA), She has been an active contributor to the Behavioral Health Nutrition dietetic practice group in the ADA, (now The Academy of Nutrition and Dietetics). Dr. Leyse-Wallace retired from clinical practice and has published three books: Linking Nutrition to Mental Health and Nutrition and Mental Health as well as a reader-friendly version of her doctoral dissertation The Metaparadigm of Clinical Dietetics: Derivation and Applications. She lives in Alpine, California in San Diego County and has three adult children and five grandchildren.

Email the Resource Professionals directly or even better, share the Q &A with other BHN members on the EML at assist@bhndpg.org, include first and last name, email address and please title the subject as BHN LIST SUBSCRIBE. Additionally, search and/or post to our Member Forums to communicate questions and information for specific practice areas.
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Contribute an article or topic for future BHNNewsletter issues!  
Contact  
newslettereditor1@bhndpg.org  
or one of the BHN leaders listed in this newsletter.

A complete list of BHN Executive Committee members and volunteers is available at  
www.bhndpg.org.

BHN: Fuel Your Brain, Feel Your Best!

Mission:  Empowering BHN members to excel in the areas of Addictions, Eating Disorders, Intellectual and Developmental Disabilities and Mental Health by providing resources and support.

Vision:  Optimizing the physical and cognitive health of those we serve through nutrition education and behavioral health counseling.

Academy of Nutrition and Dietetics website:  www.eatright.org

BHN website:  bhndpg.org  •  BHN practice standards:  www.bhndpg.org/members/practice-standards/