
Eating Disorders Review
September/October 2019
Volume 30, Issue 5
Scott Crow, MD, Editor-in-Chief

**African-American Women and Eating Disorders:
Depression, and the Strong Black Woman Archetype**

By Carolyn Coker Ross, MD, MPH, CEDS

While eating disorders have long been considered a “white woman’s problem,” recent findings show that eating disorders are becoming a major health issue for black women. Black women are sometimes assumed to be less susceptible to body dissatisfaction, based on the notion that African-American culture embraces larger or curvier body types than does the dominant culture. While some research does suggest that AN is less common in black women than in white women,¹ recurrent binge eating occurs at higher rates in black women than in white women.¹

An example of this trend is described in a recent article by Stephanie Covington Armstrong, in which she shares her own battle with emotional eating.² According to Armstrong, a breakup with her first boyfriend triggered memories of her childhood trauma of sexual abuse. This then brought on extreme yo-yo dieting, and later led to anorexia and bulimia. When her anorexia was at its worst, she starved herself for weeks. During her bulimic stage, after stuffing down large quantities of food, Armstrong used laxatives and exercise to try to combat the calories. She kept her struggle hidden for three years before being confronted by her sister, with whom she shared a home.

Although Armstrong’s experience is consistent with research showing that binge eating or emotional overeating is often used as a way to cope with difficult emotions triggered by past trauma, like childhood mistreatment, clinicians rarely assume that eating disorders are a problem for black women. Additionally, there are several other factors that affect black women in terms of trauma and coping that may be overlooked or disregarded but that have an undeniable effect on their health.

The Role of Stress

Problematic eating patterns may develop in response to stress, and existing eating disorders may be worsened by stress. African-American women are more likely than their white counterparts to experience poverty,³ a major, pervasive source of stress. They are also confronted with the stressors of racism and microaggressions. Black women are greatly affected by discrimination and sexual harassment in the workplace,⁴ and they may have limited avenues for effective recourse. Disordered eating can arise in part as a way of coping with the stress of living and working day after day in unwelcoming, hostile environments.

Black women experience depression at higher rates than do white women.⁵ A study of depression and coping behaviors in adolescent black and white females found that those who reported higher levels of depression were more likely to experience an eating disorder. Women who reported recurrent binge eating had especially high levels of psychological distress.⁶ Depression and eating disorders intensify one another in a vicious cycle. While bingeing may temporarily relieve unwanted feelings, the weight gain that affects some women with binge eating caused by long-term bingeing can increase feelings of depression.

The Effects of Trauma

Binge eating and overeating are often used as ways to cope with difficult emotions triggered by past trauma. Trauma can be caused not only by acute events such as assault but also by threatening circumstances or long-term situations. Thus, while childhood abuse or neglect is traumatic, so are foster-care placements and domestic violence. The illness, addiction, or absence of a parent or other primary caregiver can also be traumatic: it can also cause lasting interpersonal problems as a function of attachment style. Furthermore, a woman may experience multiple types of trauma in her lifetime.

Survivors of trauma are typically hypervigilant, always on the lookout for the next threat. This continual feeling of tension is uncomfortable, and trauma survivors often engage in some sort of self-soothing behavior in response to the discomfort. Binge eating, emotional overeating, and eating addiction are common reactions, particularly among black women. Some women with past or present trauma may have used food throughout their lives as their only reliable source of pleasure or comfort.

Stress and trauma can cause neurological changes in the brain that increase the risk of binge-eating and compulsive overeating. The cortisol and adrenaline released as part of the stress response interferes with development of other parts of the brain, especially those areas associated with judgment and impulse control. Both prenatal stress and early life stress can increase the risk of developing an eating disorder, addiction, and obesity.⁷ Exposure to stress early in life can result in more difficulty managing stress later and in regulating emotions throughout life, as well as a predisposition to mood disorders, impulsivity, and compulsivity.

How can clinicians do a better job of detecting and treating eating disorders in black women? Improving care starts with conceptualizing disordered eating not as a preoccupation with appearance but rather as a strategy for coping with the patient's stress, depression, and trauma.

Rising Rates in Eating Disorders and Depression

The Undercurrent of Racism

In a study conducted in 2008, researchers found that black women reported more comfort with being overweight, and were more likely to report themselves as underweight when they were actually in the normal range. Researchers suggested two reasons why black women may look at weight standards differently. One reason is that black women may be distancing themselves from the unrealistic weight standards of the white culture. The other reason may be due to lingering historical depictions of black female slaves as heavy, sexless, and deviant. *These findings suggest that the effects of racism from the past and present, and the trauma associated with racism, may play a critical role in black women's health. Past historical depictions and the trauma associated with racism must be considered when dealing with and effectively treating eating disorders in the black female population.*

The Strong Black Woman Archetype

There are certain characteristics many black women imbue that may shed light on why they are more prone to certain health issues. In Superwoman Schema: African American Women's Views on Stress, Strength, and Health, Cheryl L. Woods-Giscombé, PhD, RN suggests that health issues facing black women may be explained by how black women cope with stress.⁷ When it comes to health-related issues, stress plays a major role in the development and proliferation of illness and disease. How black women have been conditioned to cope with stress from life experiences relies heavily on this strong black woman archetype, or Superwoman role.

Difficulty Accepting Help from Others

The strongest characteristic in the strong black woman (SBW) archetype is difficulty accepting help from others and feeling the need to be very independent for fear of getting hurt. In a study conducted in 2000, young black women often used the word "strong" to describe themselves. Women who embraced this

SBW image said they maintained a strong sense of self in spite of the issues they faced. In another study in a demographically diverse sample of 48 African-American women, all eight focus groups reported it was not uncommon for them to protect themselves by putting up defenses. This occurred either because they did not know how to accept help or they felt their vulnerability or dependence on others might lead to getting hurt. The participants in this study also reported reluctance in expressing emotions or seeking assistance from others because of past experiences of being let down by family members or friends. When they do seek help, they often rely on a strong sense of faith or on religious outlets such as their community church to help them overcome challenges and to remain strong in the face of adversity.

Another key characteristic of the SBW is the role of nurturer. Women who take on this role not only feel responsible for the family, but for the black community at large. They also tend to take on the dominant role in intimate relationships, and this is most prevalent in the role of the single black mother. Black women also reported feeling a responsibility to meet everyone else's needs before their own, and often took on multiple roles and responsibilities and had difficulty saying no even if they knew that they were overcommitting.

Interestingly, the women in Woods-Giscombé's study made connections between the health issues they were facing and this Superwoman role. Many reported stress-related health behaviors like emotional eating, smoking, and avoiding caring for their own needs. They also reported physical health issues such as migraines, hair loss, panic attacks, and depression.

Addressing the Whole Person

Eating/food addiction and eating disorders are not really about food at all; they are about emotions. African-American women may adopt cultural values that put them at higher risk for emotional eating — and also make it more difficult for them to seek and accept help for the problem. They may use food to numb their emotions or to distract them from life issues. Like a beach ball held under water, emotions that are repressed may resurface with a vengeance, often in another form, such as overeating.

Integrative medicine has much to offer all women, including African-American women, when it comes to recovery from eating disorders. Problems such as binge-eating, emotional eating, anorexia and bulimia or compulsive overeating arise in a context of complex, interconnected factors, so it makes sense to take an integrative approach to treatment.

When you are working with African-American clients, it's important to explore their history of trauma, as identified in the Adverse Childhood Experiences study. The client cannot change a difficult past, but she can change how she cares for herself in light of her experiences. Similarly, she can't change her body, but she can transform her relationship to her body. Unlike other compulsive behaviors, eating is not something a person can be abstinent from. A new, healthy relationship with food must be established.

Levels of Change

Clinicians can help clients recover from disordered eating by guiding them through the following levels of healing. Healing from an eating disorder involves five levels of change:

- 1. Letting go of superficial behaviors, such as dieting, restricting, and obsessing about food — because these behaviors do not solve the problem of out-of-control eating, and only function as a distraction from the underlying emotional issues.*
- 2. Learning new ways to cope effectively with stress, and beginning to acknowledge and express the painful emotions that may have been driving the eating disorder.*
- 3. Developing body awareness, reconnecting with sensations, and learning to see the body as a source of wisdom rather than as a recalcitrant adversary that has to be "whipped into shape" or "kept in line."*

4. Letting go of core beliefs (such as "It's not safe to trust other people") that no longer serve a positive purpose, and cultivating new beliefs that are accurate and functional in the present (such as "I can trust that certain people in my life truly want the best for me").
5. Discovering ways to satisfy the profound human need for authenticity and meaning, because these experiences are essential to a good life, and also because they serve as natural positive reinforcers and help heal the brain's reward system. This is about satisfying the soul, not the scale. The client may view this as her spiritual self, the person God or spirit created her to be.

As clinicians, we are more effective in helping our clients when we take a holistic view of their lives. It is critically important that all clinicians work to understand the whole experience of their black female and male clients, including not only their physical health but also their emotional lives and the many particular ways in which the stresses of racism, discrimination, poverty, trauma, family disruption, and adverse childhood experiences can contribute to disordered eating. It's imperative that we recognize the potential causes and symptoms of eating disorders in our African-American clients, so they do not suffer alone.

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About the Author

Dr. Carolyn Coker Ross is an author, speaker, expert and pioneer in the use of integrative medicine for the treatment of eating disorders, obesity, and addictions. Formerly the director of the eating disorders program at Sierra Tucson, in Tucson, AZ, she is currently a consultant for treatment centers throughout the US. She is the author of three books, including one of the first books on binge-eating disorder, *The Binge Eating and Compulsive Overeating Workbook*, and her newest book is *The Food Addiction Recovery Workbook*. Dr. Ross is the CEO of *The Anchor Program™*, an online coaching program for people with binge eating disorder, emotional eating and other food and body image issues.

From Across the Desk: Progress is what happens when impossibility yields to necessity. - Arnold H. Glasow

This month, our lead article, "African-American Women and Eating Disorders: Depression, and the Strong Black Woman Archetype," by Carolyn Coker Ross, MD, MPH, CEDS, addresses an often-overlooked segment of the eating disorders population, African-American women. Other articles feature studies of eating disorders among men, another often-overlooked group, and exciting genetic advances being made to better define anorexia nervosa.

Such progress is truly welcome and long overdue, and kudos must go to the individuals and global groups alike, who so diligently work to improve our understanding of the ever-challenging world of eating disorders.

— MKS

Update: Just Under the Radar: Muscle-Building and

Eating Disorders

Muscularity-oriented disordered eating has joined some of the newer risks of muscle dysmorphia. With this type of disordered eating, teens may feel that heavy physical workouts will help them gain weight or "bulk up," to overcome a self-image of being skinny or puny. Researchers at the University of California-San Francisco Benioff Children's Hospitals recently studied 14,891 young adults from throughout the US for seven years, seeking warning signs and causes for this type of disordered eating, which can easily be overlooked and in fact felt to be healthy.

The researchers, led by Jason Nagata, MD, of the UCSF Division of Adolescent and Young Adult Medicine, reported that at its most extreme level, this pattern can lead to heart failure due to too few calories and overexertion, as well as muscle dysmorphia, which is frequently linked to social withdrawal and isolation. Teens with muscularity-related eating disorders may also exercise excessively or swing back and forth between eating excessive amounts of protein and cutting calories or restricting carbohydrates and fats, in order to achieve the body shape they want.

The researchers reported that boys who exercised specifically to gain weight had 142% higher odds of developing this type of disordered eating than boys who did not. The risks were much higher among girls, where the odds of disordered eating increased by 248%. Being African-American increased the odds in males by 61% and by more than twice as much, 181%, among girls. Non-heterosexual identity, which the participants were asked about when they became adults, was not a risk factor. By the time the study participants were 18 to 24 years old, 1 in 20 females and more than 1 in 5 males had one or more symptoms of muscularity-related eating disorders.

Clues to behavior that increases the risk of muscle dysmorphia include a highly restricted diet that omits fats and carbohydrates, compulsive weighing and checking of appearance, and devoting an excessive amount of time to exercise, to the detriment of an individual's social life.

More Genetic Evidence Found in Anorexia Nervosa

Recent large studies point to 8 regions in the genome.

As previously described in *Eating Disorders Review*, a genome-wide association study (GWAS) showed further evidence of the genetic basis of AN, but this time with a twist. Areas of the genome linked to anorexia nervosa were also identified as being correlated with body mass index (BMI, kg/m²) and metabolic effects, as well as with psychiatric traits (Duncan et al., *Am J Psychiatry*. 2017; 174:850). A recent paper in *Nature Genetics* (Watson et al.) now combines the roughly 3500 cases used in that original GWAS with data from the eating disorders working group of the Psychiatric Genomics Consortium. That study yielded nearly 17,000 cases of people with AN, as well as data from around 55,000 controls. This greatly increases the researchers' ability to examine genetic correlates of anorexia nervosa.

Eight loci are identified

The results confirm and extend evidence from the prior, much smaller, analysis. The GWAS study has identified eight significant loci, or regions within the genome. Analysis of the potential significance of those regions includes links to obsessive-compulsive disorder (OCD), major depressive disorder, schizophrenia, and anxiety. But, there were also links to metabolic factors, including factors that influence body mass index, physical activity, blood sugar, and high-density lipid cholesterol.

Taken together, these findings confirm and extend what has been known thus far. There appears to be

some shared risk with anxiety symptoms of various sorts, including OCD, and with mood symptoms. On the other hand, the findings also support and extend the fascinating new perspective that variables related to metabolism are also relevant to risk for anorexia nervosa.

Of note, this very large study now begins to approach the size of samples used to uncover valuable genetic information in other illnesses such as schizophrenia mood disorders. However, there will be great value in collecting still much larger samples for furthering our understanding of anorexia nervosa and eventually other eating disorders as well.

For More Information, Explore These Links

Work in this area continues; the next study is the Eating Disorders Genetics Initiative. This study will be larger, global, and more diagnostically broad. The study is up and running in Australia, and will begin elsewhere shortly.

The following links add helpful information about the genetic studies that are clarifying and adding to what we now know about genetic links to AN:

"Watch this space" link: https://www.med.unc.edu/psych/eating_disorders/edgi/

"Australia is up and running" link: <https://edgi.qimr.edu.au/Survey/Consent>

Another Brain Change Noted in Anorexia Nervosa Patients

With weight recovery, plasma neurofilament light chain levels fell.

A number of structural brain changes have been identified in patients with AN, including reductions in grey or white matter, as well as enlarged sulci and ventricles. Swedish scientists have examined a potential blood marker of these brain effects: increased plasma neurofilament light chain (NfL) concentrations. This blood-based biomarker (an indication of neuronal damage) is often used to follow disease progression in conditions such as Parkinson's disease or Alzheimer's disease.

Molecular biologist Ida A. K. Nilsson and a team at the Karolinska Institute, Stockholm, hypothesized that neuronal injury and/or degeneration is involved in the pathophysiology of AN. To test this, they measured levels of NfL in a small study of women with AN (n=12), women with AN who were weight-recovered (n=11), and normal-weight, age-matched, controls (n=12) (*Translational Psychiatry*. 2019; 9:180). They also sought to learn if such changes are due to degeneration of brain cells or merely to changes in fluid levels.

The team found significantly higher plasma NfL levels among the women with AN, compared to the normal-weight women with and without a history of AN. NfL levels were negatively associated with body mass index in all three groups. The results suggested that the light chain levels might normalize with weight recovery. Other studies of different neuronal change markers have shown varying results after weight is regained, and the authors could only speculate about the origin of the neuronal injury tied to elevated NfL levels. They did note that it is possible that the blood-brain barrier becomes more permeable in conditions of starvation, such as AN, which would allow more NfL to leak into the circulation. Further study is needed to better pinpoint areas of the brain that are affected, and long-term effects among AN

Linking Emotion and Impulsivity with Binge Eating

Two studies probe reasons for persisting episodes.

Binge-eating disorder (BED) is now the most common eating disorder, and currently affects approximately 2.8 million Americans. Binge-eating disorder is described as feeling out of control after regularly eating more food than most people would at a single sitting. Binge episodes occur at least once a week for 3 months or longer. Researchers in several studies have turned their attention to impulsivity as a serious risk factor for binge eating and binge-eating disorder.

Impulsivity-focused group intervention to reduce binge eating

A team of German researchers led by Dr. Kathrin Schag at the Medical University Hospital, Tübingen, Germany, recently developed a cognitive behavioral group intervention, IMPULS, to better examine impulsive eating (Psychother Psychosom. 2019; 88:141). In that study, 41 patients were randomized to the IMPULS group and 39 to a control group. The treatment group participated in the IMPULS program, and both groups completed weekly self-observation forms. At the end of 4 weeks of treatment, the authors compared the number of binge-eating episodes in both groups. They also evaluated other factors, including eating pathology, depression, general impulsivity, and body mass index (BMI, kg/m²) at the end of treatment and at a 3-month follow-up.

An unexpected result

At the end of treatment, the authors were surprised to see that binge-eating episodes were reduced in both study groups. However, at the 3-month follow-up, the IMPULS group showed further improvement, while the control group did not. (One explanation for the early reduction in binge-eating episodes in the control group might have been a short-term effect determined from the participants' self-observations.) At follow-up, the IMPULS group showed further improvement, including a lessening of eating pathology. Depression was reduced only in the treatment group, while general impulsivity and BMI were unchanged. The authors also concluded that among the IMPULS group, general impulsivity and BMI might take longer or need more intensive treatment.

Emotional reasons for regaining weight

Emotion regulation has been linked to a number of eating disorders, including AN, BN, and BED, suggesting that many disordered eating behaviors may represent attempts to regulate emotions. In a second study, Dr. Kirby Sainsbury and colleagues in Newcastle Upon Tyne, UK, and in Denmark, and Lisbon, Portugal, sought to determine the relationship between problems regulating emotion and the degree of weight gain among 2000 adults from three European areas, the United Kingdom (n=1000), Portugal (n=500), and Denmark (n=500), who had lost weight, then regained it (Eat Weight Disord. 2019; 24:341). The study participants were at least 18 years of age, with BMIs greater than 25 during the past year, at least one attempt to lose weight in their lifetime, and an attempt to lose weight during the past 12 months. Participants completed a specially designed online questionnaire, as well as the BED screening measure from the Patient Health Questionnaire. The authors noted that, consistent with a previous study and with DSM-5 criteria for BED, the criteria for binge eating was relaxed to bingeing once a week, instead of twice per week, over the past 3 weeks, as before.

Half the sample (43.5% of men and 58.9% of women) attributed their weight gain to at least one emotion - turning to food for comfort after having negative emotions and feeling greater-than-usual stress. Only a small percentage used food to punish themselves when having negative emotions. More than half reported losing control over eating.

Some of the reactors tied to emotional reasons for weight regain included younger age, female gender, higher current BMI, frequent loss of control over eating, feeling less successful at maintaining weight loss, and using more self-regulating strategies during the previous weight loss attempt. The strongest predictor was frequent loss of control over eating: affected individuals were 1.8 times more likely to attribute regaining weight to emotional reasons. Interestingly, participants from the United Kingdom and Portugal were more likely than those from Denmark to attribute weight regain to emotions.

The authors suggest that simply encouraging patients to use more behavioral strategies, without also teaching emotion-regulation skills, may not be an effective way to improve binge eating and weight outcomes.

Men with Eating Disorders: Data Are Scarce

Authors call for a new evaluation of diagnostic criteria among men.

For a long time, information about eating disorders among men has been largely lacking. The results of an eight-year, population-based observational study in Poland have given us some new information. For example, the trend of AN in males was relatively constant, and in this study occurred mainly among young males, while BN was relatively rare among all ages (*Am J Men Health*. 2019. July-August; 1-8).

Dr. Mariusz Jaworski and a team at the Medical University of Warsaw used data on eating disorders among Polish men who sought treatment for an eating disorder through the Polish National Health Fund (NFZ) from 2010 to 2017. Criteria included an ICD-10 diagnosis made by a psychiatrist. All patients must have made at least one visit to an outpatient or inpatient center for care when they were diagnosed with an eating disorder.

What the researchers found

The most common diagnosis was AN, and this mostly affected males between 11 to 30 years of age. After the age of 40, diagnoses of AN decreased significantly. Atypical AN was most often diagnosed among males from 11 to 20 years of age; after the age of 20, the number of males with this diagnosis largely decreased. The number of men with AN remained relatively stable during the study period. In contrast, among men older than 40, atypical anorexia was significantly more common. Like AN, BN was found most often among males 11 to 30 years of age, but rates were lower than for AN. A few individual cases were reported among males 11 to 60 years of age. The researchers established that the relative risk of males having an eating disorder was about 95% to 96% lower than among females.

The authors believe there is a very real need to change current views of eating disorder pathology, and to adapt diagnostic criteria specifically for males. In the case of AN, they noted that men who do seek help run into stigma and thus are less likely to be diagnosed with AN. In addition, the fact that people with AN encountered in the clinic are overwhelmingly female may have biased clinicians against making a diagnosis of the disorder among men. The authors also point out that different strategies may be taken by young females and males in response to body dissatisfaction. Women more often have a desire to be thinner, but men often want to be "bigger" and more muscular. The authors add that not every male who is dissatisfied with his body shape tries to become more muscular. Instead, these men may create social barriers by denying the diagnosis because it does not fit into the current notion of eating disorders.

A less stable condition among men

The study results also showed that BN occurs relatively rarely and is less stable among males, especially young men 11 to 20 years of age. The low incidence may be connected with gender differences in eating disorder theory; for example, adolescents and young adult males who show bulimic symptoms are less

likely than women of the same age to engage in dieting, laxative abuse, or self-induced vomiting.

The low rates of AN and BN reported among men may seem to indicate that these conditions are rare among males; however, according to the authors, this might be a result of stigma for men that may prevent them from seeking help (in fact, the authors cite evidence to that effect). If one thinks about what we know from epidemiologic studies, the gender ratio of women to men with AN or BN is much closer than is seen in this study, so the results should be thought of as showing the picture in the clinic—not in the community. Because of this, the authors call for additional studies to examine the dynamics of gender-associated factors involved in body weight and body image.

Selling Health and Happiness on Instagram

Study shows how 'influencers' use the social network to promote their products in the guise of improving beauty and health.

A Germany survey has indicated that 85% of 12- to 17-year-olds spend almost 3 hours a day on social networks (https://www.bitkom.org/sites/default/files/2019-05/itkom_pk-charts_kinder_und_jugendliche_2019.pdf). Instagram, which was launched in 2010, had 6.7 million users in 2016. By 2017, the site had 15 million users—a dramatic 124% increase over a 9-month period.

A recent study in Germany has attempted to analyze how marketing influencers use health communications on dieting and exercise to reach young people, who frequently use social networks emphasizing happiness, well-being, health, and beauty. Drs. Katharina Pilgrim and Sabine Bohnet-Joschko, of Whitter/Herdecke University, Witten, Germany, first analyzed 1000 posts from Instagram (representing the last 20 posts from 50 top posters). Then they conducted an in-depth content analysis of 27 communication threads (9 rated typical and 18 extreme) (BMC Public Health. 2019; 19:1054). They first identified and ranked the accounts that publish posts in German according to the total number of followers, excluding brand names and company profiles. They then examined the 100 most often used hashtags worldwide. The following hashtags were relevant and were then used as keywords for searching: gym, fitness, nutrition, train, food.

The researchers found that the focus on fitness, bodybuilding, and strength training was clearly illustrated by the staging of pictures and by large parts of the captions as well. Achieved physical goals on the basis of the outlined ideal were also strikingly staged. The influencers, dressed in advertised close-fitting sportswear, are usually the focus of the shared images. An unanswered question was whether digital editing was used to alter the images—both pictures and captions suggest external perfectionism, they reported. Influencers first try to position themselves as experts, and to increase the personal appeal to the followers. Then, brands or products are presented and the influencers share the advantage or personal affinity for the products. Messages then imply that an ideal body image cannot be reached without following advice on the site.

The authors note that recent research shows that young women with low self-esteem, depression, an urge for perfectionism, and being thin as an ideal of beauty are the user groups who are most attracted to social networks to find confirmation and to satisfy a personal desire of security. They also point out that public health professionals, teachers, guardians and decision makers need to enhance their digital skills to provide appropriate health information to minors as the influence of social media continues to grow.

This study provides a fascinating look into the world of social media influencing, and how it is studied. It highlights concerns about the impact of such messages; the potential for health promotion; and the need

Improving Gastroenterologists' Awareness of Eating Disorders

Red flags include progressive food restriction and fear of food.

In a recent interview, gastroenterologist Kimberly N. Harer, MD, ScM, from the University of Michigan, Ann Arbor, noted that disordered eating or an eating disorder can complicate the clinical picture of a patient with irritable bowel syndrome (IBS) and other gastrointestinal (GI) conditions (Gastroenterol Hepatol [NY]. 2019; 15:280). She added that it is important to be aware when disordered eating habits shift from being a reasonable response to an underlying GI condition to pathologic behaviors that cause physical or psychosocial impairment.

Avoidant/restrictive food intake disorder (ARFID) is a good example, according to Dr. Harer. Most of the research on ARFID, a condition first included in the DSM-5 in 2013, has been done in pediatric and adolescent populations, and there is limited information about the role of ARFID among adult populations. Dr. Harer and her colleagues conducted the largest study to date of the prevalence of ARFID among adult GI patients (Am J Gastroenterol. 2018; 113:S247). They found that 19% of patients from their adult outpatient GI clinic screened positive for ARFID. Furthermore, IBS patients were twice as likely as non-IBS patients to screen positive for ARFID.

According to Dr. Harer and colleagues, a helpful tool for screening for ARFID among adults with GI complaints is the 9-item ARFID screening questionnaire; this should, however, be only one part of the workup, according to the researchers. Red flags include severe food restriction or lack of reintroduction of foods, fear of foods, weight loss, dependence on nutritional supplements or tube feeding, or differences between the clinical diagnosis and the degree of dietary restriction. Clinicians treating patients for GI disorders should be aware that eating disorders and GI disorders occur concomitantly. Additional red flags include progressive food restriction in an already restrictive diet, body dysmorphia, or lack of concern about a severely restrictive diet or weight loss.

Predicting the Return of Menses in Anorexia Nervosa Patients

A relatively simple and widely available test aids the diagnosis.

Despite the fact that the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, or DSM-5, removed amenorrhea as one of the diagnostic criteria for anorexia nervosa, return of menses is often viewed as one of the indicators of recovery. As many authors have noted, prolonged amenorrhea is one of several factors that lead to poor physical outcome in AN, including increased risk of bone fractures. Body weight alone does not improve bone density; instead, both optimal body weight and normalization of gonadal function are needed.

Israeli researchers have reported the use of a safe and simple method assessing the percentage of total body fat needed for the return of balanced menstrual cycles among teens with AN. To do so, Dr. Itay Tokatly-Latzer and a team at the Chaim Sheba Medical Center, Ramat-Gan, Israel, used bioelectrical impedance analysis (BIA) among 62 female adolescents hospitalized with AN at their medical center from

2012 to 2017. In BIA, a weak electric current is sent through the body, and the voltage is measured and used to calculate impedance. Measurements are taken with a bioimpedance analyzer, which uses electrodes similar to electrocardiographic electrodes. The analyzer calculates tissue and fluid compartments using an electrical current not perceptible to the patient, passed through pads placed on one hand and foot.

Lean tissue, which is more than 70% water, is a good conductor of electrical current; in contrast, fatty tissue, which is low in water, is not. Resistance to the flow of electrical current measured by the analyzer can be used to calculate the body composition. All participants in the study were followed with anthropometric data, body fat measured with BIA and hormonal measurements, in addition to routine medical and gynecologic tests.

Of the 62 teens entering the study with secondary amenorrhea, 20 remained amenorrheic and 42 had return of menses during their hospitalization. The authors noted that those with return of menses regained significantly more weight and had higher mean body mass indexes than those who remained amenorrheic. The best cutoff measurement to predict return of menses was the percentage of total body fat: a measurement of 21.2%. This method is simple and, in contrast to other methods, such as dual energy x-ray absorptiometry, bioelectrical impedance analysis does not use any radiation.

Tracking Self-Image and Treatment Outcome

A patient's initial self-image had an impact on outcome a year later.

Self-image, or the way we view ourselves, has real predictive value in treatment outcome, according to findings at the Karolinska Institute in Stockholm, Sweden. A trio of researchers led by Dr. Emma Forsén Mantilla came to this conclusion after a year of following a large clinical sample of adult women with eating disorders ($n=2221$) (*J Eat Disord.* 2019; 7:15). Participants were from five diagnostic groups: 457 women with restrictive-type anorexia nervosa (AN-R); 228 women with binge-purge type AN (AN/BP); 861 women with BN; 505 with other specified eating disorders (OSFED), and 170 with binge-eating disorder (BED).

The authors used data from the interpersonal Structural Analysis of Social Behavior (SASB) self-image or introject, which captures both the valuation of self-esteem and self-directed actions, or how one treats oneself as a result of interpersonal learning. Previous studies had shown that a negative self-image predicted poor treatment outcome, dropping out from treatment, and suicidal behavior. Participants also completed number of questionnaires, including the Eating Disorder Examination Questionnaire (EDE-Q).

Dr. Forsén Mantilla and colleagues' goal was to extend the findings by Birgegård et al. (*Int J Eat Disord.* 2009; 42:522) by studying the predictive value of the SASB on 12-month outcome among patients with DSM-5 eating disorder diagnoses. Data were taken from the STEPWISE clinical database, an Internet-based data collection system for specialized eating disorders care in Sweden. STEPWISE has been in use since 2005 (*Eur Eat Disord Rev.* 2010; 18:251). The authors hypothesized that self-control, self-blame and, inversely, self-acceptance, could be used to strongly predict outcome in AN, whereas variables related to affiliation, as in self-love/attack would moderately predict outcome among patients with BN.

Results for AN/BP, AN/R

For patients with AN/BP, lower self-neglect scores predicted a more positive clinical outcome. For those diagnosed with AN/R, higher self-love and lower self-blame scores predicted a more positive clinical outcome at 12 months. Among those with OSFED, higher scores on self-love and lower self-blame and self-control scores predicted a better outcome; for those with BED, higher self-love scores predicted a

better outcome at 12 months.

The authors also reported that AN/R patients with less severe baseline eating disorders, younger ages, and higher self-love scores do better after one year in specialist care. One intriguing finding was that higher scores on Self-examination were associated with still having an eating disorder after a year of treatment. The authors pondered whether accepting oneself "as is" when ill, by allowing the self to remain static and to follow current impulses, can be detrimental even though the SASB variable is positive at face value. This might be a reflection of the "anorexic self" rather than the "authentic self," and might encourage resistance to change.

Compared to previous findings, the authors' results among AN patients were not clearly related to Self-control. Instead, the dimension of affiliation was prominent and led to the addition of Self-control in those with AN/BP and OSFED. A strength of this study, compared with earlier reports, was the authors' attempt to include the entire eating disorders diagnostic spectrum, as represented in the DSM-5. Thus, AN subtypes were included as well as previous EDNOS (eating disorders not otherwise specified) patients in AN and BN groups. Two limitations of the study were: (1) that relevant follow-up data were not available for 40% of the complete patient sample follow-up data (a large number), and (2) as a minor limitation, the authors attempted to construct the DSM-5 diagnostic categories based on DSM-IV diagnostic data.

The authors concluded that self-image aspects may provide clinically useful information at the beginning of treatment, especially in those with AN, because self-image are clinically relevant and may predict outcome.

QUESTIONS AND ANSWERS: Looking for the Cause of Clubbed Nails

Q. I have a new patient, a 23-year-old woman, who has significant clubbing of her fingernails (chronic swelling, or deformity of the nail bed) on both hands. She was referred from a renal specialist, who suspected she had an eating disorder because of her low weight. Can you comment on this? (**A.C., Phoenix**)

A. The renal specialist was likely on the right track. Two reports have linked laxative abuse and clubbing of the fingernails. In the first report, Dr. Olivia A. Charlton and colleagues at Royal North Shore Hospital, Sydney, Australia, described a 36-year-old woman with numerous gastrointestinal problems, a body mass index (BMI) of 16.8 kg/m², and an intake of at least 15 senna- or docusate (Coloxyl™) tablets a day (*J Eat Disord.* doi.org/1186/s40337-019-0236-4; e-pub before print). The second study, by Saidfudin Rashique, MB, and co-workers at the University of Alberta, linked clubbing to excess ingestion of herbal tea (*Can Resp J.* 1996; 3:269).

The common dominator in the two reports was continuous excess ingestion of senna-containing laxatives; another was that the laxative abuse developed in an attempt to control weight. All of the few cases reported since the first study in 1975 (Silk et al.) involved young, underweight women. The mechanism that causes clubbing is still uncertain, and Dr. Charlton and colleagues stress that the diagnosis should only be made after first ruling out pulmonary, cardiac, gastrointestinal, and cancer-related causes for the clubbing. In Dr. Rashique's report, the patient was 47 years old and had been admitted to the hospital for investigation of abdominal pain and finger clubbing. She had a decade-long history of constant pain in all areas of her abdomen that was not relieved by changing posture, therapeutic agents, or dietary manipulation. She had undergone extensive testing that yielded no clues. When seen, she weighed 48 kg (105 lb). When the clinicians re-visited the patient's history, the patient reported having used an herbal tea preparation as a laxative for more than 30 years; she thought this

was a healthy, non-pharmaceutical way to have normal bowel movements. The senna compound (Bekunis®) contained 2.5% Tinvelly Senna by weight.

It is still not known how senna abuse can cause finger clubbing, and very few cases have been reported in the literature. One theory (Dickinson, *Eur J Clin Invest.* 1993;23:330) is that the local tissue growth results from deposits of megakeratocytes and platelet clumps in the fingertips. It seems possible that it was a direct effect of senna but also possible that chronic fluid and electrolyte changes from laxative use played a role.

— SC

In the Next Issue

When Your Patient Refuses Treatment

As many as one in five persons with anorexia nervosa may die from their illness, either from the direct effects of starvation and malnutrition or from suicide. When a patient refuses treatment, what can be done, particularly when the patient has long-term, unremitting illness?

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