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Predicting Relapse

Many factors can signal risk of relapse, especially in AN patients.

High relapse rates among eating disorders patients, especially those with anorexia nervosa (AN), are still problematic. For example, 40% to 50% of AN patients experience relapse. Those with bulimia nervosa (BN) and binge eating disorder (BED) have relapse rates of about 30%. Up to 40% of patients with other specified eating disorders (OSFED) can relapse.

A team led by Dr. Margaret Sala, Yeshiva University, the Bronx, and colleagues at the University of North Carolina, Chapel Hill, the Karolinska Institut, Stockholm, Yale University, and the University of Louisville recently conducted a meta-analysis of studies of relapse among eating disorders patients through December 2021. Thirty-five studies were selected for further analysis (*J Psychiatry Res*. 2023. 158: 281).

Relapse rates and factors identified

Dr. Salas and her team identified a number of factors that pointed to the risk of relapse. The authors found that, across eating disorders diagnoses, approximately one-third of individuals experienced relapse. This high rate of relapse is problematic, as relapse can lead to cycles of continuous readmission and discharge from treatment (*Child Adolesc Ment Health*. 2014. 19:115; *Clin Psychol*. 2017. 21:143).

Takeaway Points

- **Look for lower pre-and post-treatment weights, especially among AN patients. These patients have a longer duration of illness and lower pre- and posttreatment weights.**
- **A diagnosis of AN-BP and longer duration of illness predict a higher likelihood of relapse among individuals with AN. This was not true for younger patients.**
- **A higher leptin level was only predictive of lower odds of relapse when assessed at discharge, suggesting that leptin levels measured at discharge may serve as a biomarker of AN relapse.**

The authors advise considering watching other eating disorder characteristics for risk of relapse. The search begins with lower pre- and post-treatment body weights, particularly among patients with AN and BN. More severe eating disorder psychopathology predicted a greater likelihood of response for all eating disorders. However, they note that results from a few studies showed the opposite trendâ€”more severe psychopathology predicted a lower likelihood of relapse (*Int J Eat Disord*. 1996.19:279). A third factor was post-treatment dietary intake, including energy density, variety in diet, protein levels, and daily caloric intake (*Int J Eat Disord*. 2012. 45:79).

Age. While a diagnosis of AN binge-purge subtype (AN-BP) and longer illness produced a higher likelihood of relapse among individuals with AN, this was not the case with younger AN patients, who had

a shorter duration of illness (*Int J Eat Disord*. 2007. 40:129).

Comorbidities. Psychiatric comorbidity and worse overall psychosocial/global functioning predict relapse across eating disorders diagnoses (*Appetite*. 2010. 55: 656). Specific comorbidities associated with a higher likelihood of relapse have included exposure to traumatic events (*Psychiatry Res*. 2012. 200: 518), obsessive-compulsive symptoms (*Psychol Med*. 2004. 34:671), depressive symptoms (*Appetite*. 2010. 55:656), a history of suicide attempts, and postpartum depression (*Br J Psychiatry*. 1999. 174:135). However, other research has not found a significant relationship between psychiatric comorbidities (such as depression) and likelihood of relapse (*Am J Psychiatry*. 2002. 159:96).

Leptin levels. Higher leptin levels were a robust predictor of a lower likelihood of relapse among AN patients, but no conclusions could be drawn about how leptin levels affected the course in other types of eating disorders. And, the leptin level only predicted lower odds of relapse when it was assessed at discharge, suggesting that leptin levels at discharge may be a biomarker of AN relapse. Leptin levels may be indicative of fat mass or could reflect the reward status of food restriction (*Eur Eat Disord Rev*. 2021. 29:634). However, the authors advise that this finding should be interpreted with caution, given the small number of cases included in this study.

How did treatment affect the course?

One factor to consider is the timing when the factor linked to relapse is measured. The timing may influence the strength with which it is related to likelihood of relapse. Eating disorder characteristics assessed immediately after treatment may not robustly predict the likelihood of relapse, because some types of treatment (e.g., inpatient and residential care) are conducted in a controlled environment. Therefore, the ability to abstain from disordered eating during treatment may not predict the ability to do so outside of treatment. For example, some research suggests that whereas indicators of severity of eating disorder pathology assessed before treatment predicted likelihood of relapse, indicators of the severity of eating disorder pathology assessed immediately after treatment did not (*Int J Eat Disord*. 2015. 48:337). Specific psychiatric comorbidities were predictive of relapse, and only comorbid depression was significantly associated with a higher likelihood of relapse.

Types of eating disorders. Several effects were only significant among samples from individuals with AN and/or BN. Specifically, having a higher body mass index (BMI), and a comorbid psychiatric disorder significantly predicted a higher likelihood of relapse in samples comprised solely of individuals with AN, but not in samples of individuals with other eating disorders (such as BN and mixed eating disorders). More severe psychopathology predicted a higher likelihood of eating disorder relapse. Almost all eating disorder symptoms (except over-exercise) were significantly associated with relapse. Dietary restraint was most strongly associated with relapse, suggesting that although all eating disorder symptoms should be targeted. It may be particularly important to watch for restraint during treatment, and to ensure that it lessens before the patient is discharged.

Finding that AN-BP is associated with a higher likelihood of relapse suggested that AN-BP may reflect a later and more severe stage of illness (*Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*. 2021. https://doi.org/10.1007/s40519-021-01226-0). Patients with AN-R only have one route to relapse (i.e., weight loss), whereas those with AN-BP have two routes to relapse (i.e., weight loss or binge/purge behaviors) (*Psychol Med*. 2004. 34:671).

Eating behaviors. Normalized and varied eating behaviors were associated with a lower likelihood of relapse. Notably, most of the studies that analyzed the predictive effect of meal energy density/variety were studies of AN patients. The authors recommend that future approaches to AN treatment and relapse prevention research should examine the efficacy of having a strong emphasis on helping patients learn to eat a larger variation of energy-dense meals.

Patients who are trying to maintain a weight that is too low may be engaging in eating disordered behaviors to do so. Accepting a body-appropriate weight may improve a patient's prognosis. Thus, having a lower BMI at discharge could be an indication of a higher likelihood of returning to an underweight BMI.

Length of follow-up. In 2005, Richard and colleagues found that whereas patient motivation predicted a higher likelihood of relapse in individuals with AN six months after remission, it also predicted a lower likelihood of relapse two years following remission (*Eur Eat Disord Rev*. 2005. 13:180). Knowing the time points in which certain factors may be most predictive of relapse and would allow for optimal timing in preventing it.

Limitations

The authors pointed out a number of limitations in their study. For example, the terms "recovery" and "relapse" were not carefully defined across studies. Analyzing a small number of cases in some studies also made it difficult to calculate or categorize the effects. The small group sizes in some studies also reduced confidence in the precision of the predictors.

Implications

Overall, these findings have important implications for helping identify characteristics that may lead to relapse, shedding light on key factors maintaining eating disorders, and identifying areas in greater need of assessment before and during treatment, to minimize relapse.

The authors' findings also have important implications for guiding treatment development research, including: (1) the need for in-depth assessment and monitoring of several factors predictive of relapse; (2) developing treatments that target these factors; and (3) establishing evidence-based guidelines for the optimal time to discharge individuals with eating disorders from treatment.

—Leah Graves, RDN, LDN, CEDS-S, FAED

UPDATE: Senate Bill Would Add Nutrition Services for Older Patients with Eating Disorders

A bipartisan bill, the Nutrition CARE Act, introduced in early October, would amend Title XVIII of the Social Security Act to allow registered clinicians, dietitians, nutrition specialists, and mental health professionals to provide medical nutrition services to Medicare beneficiaries with eating disorders. The expanded services would include 13 hours of nutrition therapy services to individuals receiving Medicare benefits, including a one-hour initial assessment, and 12 hours of reassessment and intervention. Four additional hours of medical nutrition therapy would then be available during each following year. U.S. Senators Margaret Hassan (D-NH) and Lisa Murkowski (R-AK) introduced the bill, which was referred to the Finance Committee.

From Across the Desk

One of the joys of fall is enjoying the variety of colorful leaves all around us. Eating disorders also come in a wide variety of forms, and this issue includes ways to tackle some of the more difficult treatment challenges. One article includes ways to predict relapse, especially among patients with anorexia nervosa (see "Predicting Relapse," elsewhere in this issue). In another article ("A Clinical Guideline for Patients with Higher Weights"), Dr. Angelique F. Ralph, of the National Eating Disorders Collaboration in Australia, reports newer methods of questioning patients with higher weights about eating habits and compensatory behaviors. Other articles discuss the fact that excess exercise may be a sign of midlife

eating disorders among men, and another explains how racial discrimination as a young teen can result in binge eating disorder in later years. Finally, see an article that compares internet and day treatment programs that target bulimia nervosa ("Comparing Internet and Day Treatment Programs for BN").

—MKS

Chronic Health Problems and the Risk of Eating Disorders

Essential elements include being aware of commonly overlooked symptoms and weight stigma.

Having a chronic health condition, including physical and intellectual disabilities, can increase the risk of developing an eating disorder, particularly among young patients.

According to Dr. Maya Michelle Kumar, from the Division of Adolescent and Young Adult Medicine at the University of California, San Diego, adolescents with chronic health conditions are more likely than their peers to actively try to lose weight and to use unhealthy weight control behaviors (*Nutrients*. 2023. 15:3672). Some of these behaviors include fasting, self-induced vomiting, or the use of diet pills or laxatives (*J Eat Disord*. 2023. 1185; *Curr Opin Psychiatry*. 2022.35:362).

Body image

It's normal for adolescents to be concerned about their weight and shape, but individuals with chronic health conditions have poorer body image and increased body dissatisfaction than their healthy peers. Their chronic health conditions and/or needed treatments may lead to shorter stature, delayed puberty, altered body composition, and a need for assistive devices, all of which alter their physical appearance. And, some may need medications that cause them to gain weight, including steroids, antipsychotics, or medications that lower glucose levels.

One group at particularly high risk includes patients who need dietary treatment. Their increased attention to labels, food ingredients, and eating and exercise patterns and having one's weight monitored more closely than their peers may all contribute to disordered eating. Those at even higher risk include youth with type 1 diabetes, celiac disease, cystic fibrosis, inflammatory bowel disease, food allergies, or inborn metabolic errors.

Finally, this group has a higher risk for anxiety and depression, which can increase or maintain eating disorder symptoms. Dietary restriction, purging, and binge eating are often used to cope with stress and negative emotions such as sadness, anger, and fear.

ARFID

In one study, more than 50% of youth with avoidant restrictive food intake disorder, or ARFID, had a comorbid medical condition (*J Adolesc Health Off. Publ Soc Adolesc Med.* 2014.55:49). Youth with ARFID may fear reactions from eating, including choking and vomiting, and thus may limit their food intake or show little interest in food. These so-called "picky eaters" may be unable to feel comfortable eating in social situations or outside their home due to fear of embarrassment.

BED

Although there are no studies that have specially linked binge eating disorder (BED) to chronic health conditions, BED is strongly associated with gastrointestinal disorders, asthma, menstrual dysfunction, and polycystic ovary syndrome.

Identifying eating disorders in patients with chronic disorders

The author outlines a number of ways healthcare professionals can detect eating disorders among patients with chronic illnesses. One early clue is weight loss, and the author suggests that all factors that can contribute to malnutrition must be identified and treated. One helpful step is to ask young patients (without caregivers being present) if they are concerned about their weight, shape or appearance. It is also helpful to look for dietary restriction, skipping meals, over-exercising to lose weight, or even more dangerous weight-control methods, such as aggressive dietary restriction, self-induced vomiting, diet pill use, or abuse of laxatives.

Dr. Kumar adds that body image concerns should be followed up, and suggests that special screening questionnaires are widely available for this. Some screening questionnaires include the *Diabetes Eating Problem Survey-Revised* (DEPS-R), a 16-item questionnaire validated in youth with type 1 diabetes. It includes questions related to insulin manipulation and intentional use of hyperglycemia and ketosis in order to lose weight (*Diabetes Care*. 2010. 33:495). Also, many young patients with chronic health problems are not aware that their risky behaviors are exacerbated by their chronic health problems, and thus educating them about the risk is important.

Dr. Kumar also suggests steps that will help clinicians, parents, and other adults intervene to halt progression of disordered eating or eating disorders among chronically ill youth. These include partnering with adults other than parents, frequent screening, and working to encourage a healthy relationship with food from earliest childhood on.

Partnering with other adults

Partnering with as many adults as possible in the young person's life will go far to help detect poor body image and disordered eating behaviors, according to the author. In fact, physicians may be the last to realize that a young person is struggling with an eating disorder or poor body image Young patients may be extremely uncomfortable discussing disordered eating behavior or distress about body image while in a medical office. However, other adults, who may be closer to the young patient and who may play important roles in the youth's life, may suspect a developing eating disorder and can quickly ask for help. Coaches and directors of community groups can be extremely helpful in earlier intervention.

Frequent screening

It is critical to screen young patients with chronic diseases for depression, anxiety, poor self-esteem, and poor coping methods. Some screening suggestions include *The Patient Health Questionnaire 9* (PHQ-9), a depression screen, the *Generalized Anxiety Disorder 7* (GAD-7), or the *Screen for Child Anxiety-Related Emotion Disorders* (SCARED) (*J Gen Intern Med*. 2001. 16:606; *Arc Intern Med.* 2006.166:1092; *Depress Anxiety*. 2000.12:85).

Help encourage a healthy relationship with food

With the help of clinicians, parents and caregivers can create a culture of healthy and happy eating in their homes. For example, they can introduce the Total Diet Approach (*J Acad Nutr Diet.* 2013.113:307), which is recommended to prevent overweight, underweight, and disordered eating behaviors (**https://teammates.atriumhealth.org/livewell/-/media/livewell/documents/total_diet_approach_to_healthy_eating.pdf**.).

For those with chronic medical conditions (even if some foods need to be avoided or eliminated), nutrients from major food groups (for example, calcium-rich foods) are still needed. Nutrients from all food groups should be includedâ€"no foods are good or bad, and adopting a neutral stance toward all medically safe foods is recommended. Variety in the overall pattern of eating is more important than the individual foods consumed, says the author.

For youth with chronic conditions associated with or worsened by obesity, one key is working to minimize

weight stigma, keeping the focus on health rather than weight, and avoiding prescribing weight loss or setting weight targets. Also, all should be conscious of language used when discussing weight: for example, avoid terms such as "heavy," "chubby," or "fat."

As recent studies have shown, bias against higher-weight individuals is prevalent even among individual care providers and in health care settings (*Nat Med*. 2020. 26:485). Weight stigma can worsen other physical conditions, including elevated blood pressure, increased anxiety, cortisol levels, c-reactive protein and other markers. Those who experience weight bias also have higher rates of psychological complications, including depression, anxiety, and suicidality.

Comparing Internet and Day Treatment Programs for BN

Online programs had good long-term results in this Swedish study.

Many persons with binge eating disorder (BED) never receive treatment because programs are not available to them due to access to treatment and cost, for example. One way to make binge eating treatment more accessible may be using an internet-based approach, according to a group of Swedish researchers.

Dr. Louise Hogdahl and colleagues at the Karolinska Institut, Stockholm, designed a study involving an initial group of 150 participants with bulimic eating disorders. The participants were randomly assigned to one of two types of internet-based treatments: a purely online treatment approach with a self-help guide in book format, and an intensive 16-week day program. Of the 120 who started treatment, 98 were assigned to the internet treatment program (ICBT) and 22 to the day treatment program (DPP). The study ran from October 2009 through February 2013 (*Internet Interventions.* 2023.31:100598).

The internet-only group

Two types of internet-based programs (ICBT) were used, BIB-ICBT and Salut BN. For 24 weeks, both internet groups had weekly asynchronous contact with a therapist, two face-to-face (zoom) meetings, and a focus on behavioral modification and psychoeducation, cognitive restructuring, and relapse prevention. Treatment required about 10 minutes per week per patient, as well as two hours per patient for the face-to-face appointments. The BIB-ICBT group also read a translation of the manual *Overcoming Binge Eating* (**https://www.amazon.com/books/health**), which offered six treatment modules, including topics such as getting started, regular eating, and alternatives to binge eating. The Salut BN group used a CBT-based online program with 7 modules, including motivation, self-observation, and relapse prevention. Although most completed the study, only 20% completed all treatment steps. The authors noted that these rates are similar to results in prior treatment studies, where 18% and 37% of patients eventually dropped out of the studies (*Int J Eat Disord*. 2006. 39:117; *J Clin Psychiatry*. 2018. 79:16).

Day treatment

The day treatment group (DPP) took part in a 16-week intensive group treatment approach that included psychodynamic theory and group therapy, individual therapy, daily meals, body knowledge, and psychoeducation. Each group included 8 members who took part for 3.5 hours a day. Before treatment started, patients had 3 individual motivational sessions and had signed a contract noting that the goals of treatment, for example, were to break destructive eating patterns, normalize eating and weight, and to work on personal growth. It underlined the importance of daily attendance, and it was mandatory to eat the meals served.

Over time, comparable results

Both treatments led to comparable effects. Eating disorder pathology, self-image, and clinical symptoms improved significantly in both treatment groups. Although the day program had larger effects, the single significant difference was diagnostic remission after treatment: 51% of the participants were in remission in the internet treatment program, while 88% were in remission in the day program. At one year-follow-up, those in the internet program had continued to improve, as did the day treatment group. However, the internet group had a 36% dropout rate, while there were no dropouts in the day program.

In both treatment groups, there was significant improvement from the preliminary questionnaire results in *Eating Disorder Examination-Q* (EDE-Q) scores, self-image, and impairment. Binge eating and purging were significantly lessened in the DPP group but not in the ICBT group, and no difference was found for exercise. The authors concluded that cognitive behavioral therapy via the internet should be considered a potential alternative in routine practice; they also suggested that further trials be done.

Excess Exercise: A Sign of Midlife Eating Disorders Among Men

More data on male eating disorders is slowly emerging.

Research into eating disorders in middle-aged and older individuals is growing, but still lags behind that of younger groups. Information about older men is especially lacking. Men are seldom included in eating disorder studies, although this, too, is improving.

Kai K. Kummer and Barbara Mangweth-Matzek, of the Medical University of Innsbruck, Austria, recently reported a possible connection between a drive to excessive exercise in older men and development of disordered eating (*The Aging Male*. 2023. 26:1,2154571). Hormones may also be at play, according to Drs. Kummer and Mangweth-Matzek.

The drive for ideal body image in males is different in males than for females. Instead of a desire for thinness, body image among men seesaws between losing weight to get rid of body fat and gaining weight to add muscle mass (*Curr Psychiatry Rep*. 2017. 19:32). The combination of leanness and muscularity means men may ingest excessive protein or use restrictive eating behavior, a pattern resembling bulimic binges. In addition, this behavior can lead to chronic purging, with vomiting or laxative use after binges.

In an earlier study, Dr. Mangweth-Matzek and colleagues assessed eating behaviors in a group of Austrian men 18 to 80 years of age who regularly attended fitness centers (*Eat Weight Disord*. 2022. 27:1765). A total of 307 men displayed high rates of disordered eating, as shown by *Eating Disorder Examination Questionnaire* (EDE-Q) cutoff scores (5% to 11%), as well as by *DSM-5* eating disorder symptoms (10%). While the EDE-Q cutoff scores did not differentiate between age groups, there was a clear decrease in eating disorder symptoms with increasing age. Binge eating and bulimic symptoms, with excessive exercise as the purging method, were the most common forms of disordered eating.

Purging method: using excessive exercise

Among aging males, excessive exercise is often used as the purging action of choice. In one study, around one-fifth of team sports members between 18 and 25 years of age had a diagnosis of an eating disorder, and military veterans were more likely to use excessive exercise as a means of purging (*BMJ Open Sport Exerc Med*. 2021.7: e001161).

According to the authors, the current interest in healthy living and lifestyles often masks eating disorder symptoms among middle-aged and older men. In addition, age-dependent testosterone levels in aging

males seem to present a time of susceptibility to disordered eating among older men. So-called andropause isn't easily compared with menopause since, unlike the onset of menopause, it occurs gradually over a number of years, according to the authors.

A Clinical Guideline for Patients with Higher Weights

The guideline from Australia includes suggestions for psychological approaches for adults and younger patients.

An Australian research group tasked with producing a clinical guideline for people with eating disorders who have higher weights has produced a number of suggestions and guidelines (*J Eat Disord*. 2022.10:121). The group, which offered 21 recommendations, also worked with individuals with lived experiences of higher weights and weight bullying.

Although anorexia nervosa (AN) receives the most attention, the most common eating disorders are binge eating disorder (BED), other specified feeding or eating disorders (OSFED), and bulimia nervosa (BN). All can occur in people with a wide range of body types, including those with higher weights.

Dr. Angelique F. Ralph, of the National Eating Disorders Collaboration, Sydney, Australia, and the School of Psychiatry at La Trobe University, Wodonga, Australia, and her colleagues noted that people with higher weights often report misdiagnosis, dismissal by health professionals, and being sidelined or excluded from eating disorder treatment services. This population is also often absent from eating disorders research--with the exception of those with BED. Moreover, the researchers added that people who are at a higher weight are at greater risk of adverse experiences such as bullying and weightâ€ ‘related victimization from peers, friends, parents and teachers than from their peers at lower weights.

Psychological approaches

The researchers recommend using standard cognitive behavioral therapy (CBT) for an eating disorder or therapist-guided self-help as first-line treatment for adults with BN or BED. Other psychological treatments with evidence-based approaches, such as interpersonal therapy (IPT) and dialectical behavior therapy (DBT), should be considered as second-line therapy in adults with BN or BED. The group also recommended therapies using non-dieting principles and interventions to reduce disordered eating.

Therapist-guided self-help should be considered as first-line treatment in adults with BN or BED. For children and adolescents with BN or BED, the group recommends using family-based treatment first. Then, adolescent-based therapy (AFT) and CBT are second-line options for these younger patients. The authors also recommended that clinicians working with BN and BED patients with weight issues consider using psychotropic medications, and to monitor these patients for any nonprescribed use of medications. Also, physical activity should focus on positive physical and mental benefits and away from use for weight or changing shape.

Special approaches for males with BN and BED

The report also singled out male BN and BED patients. Compared to women, men more often have higher weights, and more often have experienced weight-related bullying. Weight gain also happens later among males.

Another challenge for men is that health professionals are also less likely to offer them treatment. Compared with women, men are more likely to have a history of higher weight prior to the onset of their eating disorder, accompanied by weight-related bullying (*Int J Eat Disord.* 2019. 52:497). Added to the weight stigma associated with having a "female" disorder, or an eating disorder, may keep men from

seeking help.

While men have every eating disorder diagnosis, some differences in eating disorder psychopathology have been noted across genders. Men are less likely to report loss of control of overeating, despite having similar rates of objective binge eating as women, and they are more likely to engage in compulsive exercise to for emotion (see a related article elsewhere in this issue).

Using appropriate language

An important aspect in addressing weight stigma among men and women is using language that avoids stigmatizing terms. For this reason, the Guideline uses the phrases 'people with higher weight' and 'living in a larger body.' There is not one universally preferred term for people living in larger bodies, and health professionals should discuss preferred terms with each individual.

For all people with eating disorders, especially children and adolescents, information on eating, purging, and compensatory behaviors may need to be gathered from multiple sources, including family and support persons. Eating psychopathology can impair perceptions of frequency of disordered behaviors or amount of food intake, so verification with other sources can be useful for establishing clinical status. However, for people with higher weights, it is important not to assume that the person is being untruthful or evasive. Instead, the Australian group recommends that clinicians be respectful and sensitive when gathering information, even with the knowledge that a person may minimize their symptoms for fear of losing important coping mechanisms or access to interventions.

The way clinicians approach questioning about eating habits and compensatory behaviors is critical to establishing a non-stigmatizing and supportive therapeutic alliance. This includes respectfully seeking permission to obtain further information from family members or others.

QUESTIONS AND ANSWERS

Psilocybin for AN?

Q. A patient recently mentioned hearing that a psychedelic drug was being tested for anorexia nervosa. Is this true? (GH, Austin, TX)

A. Yes, your patient was correct. The drug she mentioned was probably psilocybin, a naturally occurring psychedelic pro-drug compound produced by more than 200 species of fungi. It has been known for its mind-altering effects.

In their Phase 1 open-label study, Dr. Stephanie Knatz Peck and colleagues at the University of California, San Diego, tested a single 25-mg dose of synthetic psilocybin among women who with a mean body mass index of 19.7 kg/m^2 (*Nature Medicine*. 2023. 29:1947). Their preliminary study showed good results when 10 adult women (mean age: 28 years) with *DSM-5* diagnoses of anorexia nervosa (AN) or partial remission AN received a single 25-mg dose of synthetic psilocybin in conjunction with psychological support.

The authors' goal was to assess safety, tolerability, and feasibility of synthetic psilocybin post-treatment by noting any incidences and occurrences of adverse events (AEs) and clinically significant changes in ECGs, laboratory tests, vital signs, and suicidality. Among their group, no clinically significant changes were observed in these tests. Two participants developed asymptomatic hypoglycemia at post-treatment, which resolved within 24 hr. (The authors hypothesized that this was related to a prolonged period of fasting on the dosing day, a common effect of psilocybin, rather than due to any direct relationship to the drug.) No other clinically significant changes were observed in laboratory values. All adverse effects were

mild and transient.

Overall, the psilocybin experience was regarded as meaningful by participants. Ninety percent endorsed feeling more positive about life challenges.

Why test psilocybin? The authors noted that despite the seriousness of AN, there are no proven treatments for adult AN that can reverse core symptoms and no approved pharmacological interventions currently available. Findings suggest that psilocybin may increase emotional and brain network plasticity, which may be responsible for sustained improvements in mental health status. Psilocybin therapy typically involves the administration of psilocybin in conjunction with psychological support delivered by one or two trained therapists. When administered in a safe and therapeutic setting in conjunction with psychological support, participants report transformative experiences characterized by profound changes in values, beliefs, and perspectives, which can lead to positive changes in subjective well-being, increased openness, and greater cognitive flexibility.

Results from this open-label, single-arm study suggest that psilocybin therapy is safe and tolerable in patients with AN; however, the study sample was small, and the authors note that adequately powered, randomized controlled trials are needed before any conclusions can be drawn.

Racial Discrimination as a Young Teen May Lead to BED

Those who reported racial discrimination had a 3.31 greater risk of developing BED.

The Adolescent Brain Cognitive Study is the largest prospective study of adolescent brain development in the U.S. This study (ABCD Study ®) is a longitudinal study of nearly 12,000 youth conducted at 21 research sites across the country. Most young people studied are 10 to 11 years old. This landmark study explores the environmental, social, genetic, and biological factors that affect brain and cognitive development, behavior, and health. [For more information on the ABCD Study, contact ABCD Project Director Dr. Gaya Dowling at 301-443-4877 or online at: AdolescentBrain@mail.nih.gov.]

A connection to BED

A growing number of studies have found significant associations between racial discrimination and binge eating in African American and Hispanic populations. This can occur in schools, during extracurricular activities, and increasingly digitally and online (*Curr Psychiatry Rep*. 2021. 23:81).

A team led by Dr. Julia H. Raney at the University of California-San Francisco analyzed cross-sectional data from 11,075 teens from the ABC Study to find if racial discrimination reached out to younger teens, and then led to BED (*J Eat Disord.* 2023. 11:39). In their study, conducted from 2018 to 2020, racial/ethnic discrimination and binge-eating behaviors were assessed with the *Perceived Discrimination Scale*, which analyzes discrimination based on race/ethnicity and frequency of ethnic discrimination by teachers, adults outside of school, and other students. The scale measures adolescents' perception of not being accepted in society or unwanted in general, based on their racial or ethnic backgrounds. The students assessed were from a wide variety of ethnic groups: 54% were white, 24% Latino/Hispanic, 17% African American, 6% Asian, 3.2% Native American, and 1.4% were classified as "other." Students were recruited from Boys and Girls Clubs and other youth groups.

At one-year follow-up, BED diagnoses and behaviors were assessed with the *Kiddie Schedule for Affective Disorders and Schizophrenia,* which was completed by parents or caregivers. This computerized tool records characteristics, frequency and duration of a child's binge-eating behaviors, and stress associated with binge eating. Although the test also contains binge-eating behaviors and symptoms, the prevalence

from the sample included only 6 adolescents diagnosed with BED.

Other students: the main perpetrators of discrimination

Approximately 1 in 20 of the youths reported experiencing racial or ethnic discrimination during their first year in school. In addition, there was a statistically significant difference in discrimination scores across groups where other students were by far the greatest source of racial discrimination (teachers, 8.0%; adults; 9.8%, and other students, 25.1%).

The authors reported that 1.1% of the socio-demographically diverse sample of early adolescents had a BED diagnosis, similar to earlier reports, which have shown prevalence estimates of 1.3% to 1.6% (*Eur Child Adolesc Psychiatry*. [Internet] 2021; 67:41). Young adolescents who reported perceived discrimination had 3.31 higher odds of developing BED. Increased discrimination by other students was also significantly associated with higher odds of BED diagnosis and behaviors. Also, respondents who reported more frequent ethnic discrimination by adults outside of school had significantly higher odds of having a diagnosis of BED.

Other students were the main culprits who perpetuated racial discrimination. Prior studies have also pointed to the impact of other students on stress and mental health. Encountering discrimination by other adults outside of school was also associated with a significantly higher chance of a BED diagnosis in young teens. This finding is also reflected in other studies, which show the beneficial effects that nonparental adults, such as mentors and police officers, can have on adolescent mental health (*JAMA Pediat*. 2022. 176:78).

Results of a Federal Task Force review of screening programs

The U.S. Preventive Services Task Force recently reviewed eating disorders screening in asymptomatic adolescents and adults, but found there was not enough evidence to recommend routine screening, especially among racial/ethnic populations. However, the authors suggest clinicians consider screening for eating disorder behaviors in early teens who have significant risk factors, such as reports of racial discrimination. They also recommend a second step, implementing strategies such as the "Raising Resisters" approach. This program helps individuals recognize various forms of racism, differentiating racism from other unfair treatment, and opposing negative messages, and helps students replace them with positive actions and messages.

Coming in the Next Issue

Early Intervention for Eating Disorders

Gaining access treatment may take a long journey over many years, often resulting in no treatment at all. A team from Maudsley Hospital, London, have proposed a series of policy changes and services to help improve early intervention for eating disorders.

AND...

- **The Covid-19 Pandemic and Its Effect on Adolescents with Anorexia Nervosa**
- **Treating Severe and Enduring Eating Disorders**
- **When a Patient Needs Anesthesia**
- **Approaching Eating Disorders and Behavioral Addictions**
- **Anxiety Sensitivity and Reducing the Risk for Disordered Eating**

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