## Eating Disorders Review September/October 2022 Volume 33, Issue 5 Scott Crow, MD, Editor-in-Chief

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## **From Across the Desk**

#### Promoting Diversity, and Newer Areas of Treatment

Diversity in eating disorders care. This is a very promising and rapidly growing trend—extending eating disorders care to groups often overlooked in the past. These individuals include middle-aged and older women, Black women and men, and LGBT individuals. Another group includes those with a comorbid diagnosis of post-traumatic stress disorder, or PTSD. The keynote speakers at both the iaedp and the AED annual conferences added important information that greatly expands the longtime image of the anorexic adolescent or young woman as the official face of eating disorders.

Good news also comes from further studies of the studies of the brain, including invasive and noninvasive neurological tools that can help counter remission rates (see "The Brain: A New Avenue for Treatment of Difficult Cases?" elsewhere in this issue). Two very diverse subjects, recognizing disorders in rock-climbers and clear guidelines for ending treatment in anorexic patients, are also featured in this issue

Ketamine, an older product originally largely used in veterinary practice, has found a new use: treating refractory depression in eating disorder patients (see the Question and Answer article on "Ketamine" in this issue). Although studies are still underway, this agent is showing promise in selected patients.

Despite slowdowns due to the pandemic, research and progress in eating disorders go steadily forward. It's a trend to be proud of.

-MKS

## Needed: More Research Among Men and Transgender Youth

## One small study showed interesting results among males and transgender youth.

After many years of concentrating on stereotypical young females with an eating disorder, researchers are developing more studies of males and minorities, including transgender youth (*Clin Psychol Rev.* 2017. 7:1). Numerous authors now suggest that the gaps in research contribute to disparities in the assessment and diagnosis of eating disorders among males and transgender youth.

Dr. Jennifer S. Coelho and her colleagues at BC Children's Hospital, Vancouver, British Columbia, recently designed a study of gender and its effects on eating disorders (*J Eat Disord*. 2021. 9:113). Between September 2015 and February 2019, all cisgender male youths admitted to the Provincial Specialized Eating Disorder Program for Children and Adolescents at the BC Children's Hospital or the Looking Glass

Residence nearby were invited to participate in the study. Each male participant was matched with the next cisgender female who met matching criteria outlined by the research team. The youths completed measures of ED symptoms, including muscularity concerns and other psychiatric symptoms at baseline and at the end of treatment. A final group of 27 males, 28 females, and 6 transgender youths were included in the study. Trans youths included those who identifed as non-binary/genderqueer (n=1), transgender female (n=1), and transgender male (n=4).

#### Most ED symptoms were found in trans youth

This small study is one of the first to report on treatment-related changes in measures of eating disorders and other psychiatric symptoms in a sample of trans youths. Trans youths reported significantly higher ED symptoms than did cisgender males or females at baseline, as measured with the *Eating Disorders Examination Questionnaire*. Trans youth who participated in large surveys in youth health or college assessment surveys in public schools and colleges also reported higher levels of eating disorder symptom's compared to the cisgender youth.

Although the small sample size of trans youth precludes analysis of treatment outcomes, a reduction in eating disorder and psychiatric symptoms was noted on aggregate scores from baseline to the end of the study on aggregate scores. The reduction was similar in trans youth and cisgender females.

#### Will the differences persist?

Longer-term follow-up is needed to establish whether these improvements continue to persist. Trans youth had higher scores on measures of eating pathology relative to cisgender youth. There was a lack of gender differences in measures of concern over muscularity, and a lack of treatment-related changes on measures that assessed muscularity and other relevant concerns in cisgender males.

In line with the authors' hypotheses, males reported lower levels of depression and obsessive-compulsive symptoms than did females and trans youth. The lower levels of psychiatric symptoms reported by males in the current study aligns with previous reports that adult males have lower depression and obsessive-compulsive symptoms. Males demonstrated a better outcome than females on some of the ED symptom measures, including the EDE-Q, MBAS, and BCI. The authors also note that males, but not females, demonstrated decreased scores on the BAS and BCI, given that these measures have been proposed to assess concerns that are particularly relevant to males.

Dr. Coehlo and her fellow researchers also believe that future research is well warranted. It could highlight the nature of muscularity concerns in cisgender females with eating disorders, and could further explain how these concerns may differ from those of males.

## UPDATE: A Screening Tool Helps Primary Care Clinicians Detect EDs.

A new screening tool developed at the University of North Carolina School of Medicine, Chapel Hill, is designed to help increase care for patients with eating disorders. The Screening, Brief Intervention, and Referral to Treatment for Eating Disorders is a mouthful, but is easily abbreviated to SBIRT-ED, and enables clinicians to use conversation guides and resources to speak to an individual with a suspected ED about the next steps to take once the diagnosis is made.

Christine Peat, PhD, director of the National Center of Excellence for Eating Disorders at the UNC School of Medicine, notes that many persons with eating disorders do not have obvious signs or symptoms, and thus the ED can go undetected without routine screening. The new screening tool can be used in various types of clinics and applied to patients in several ways. The UNC staff plans to offer training sessions on

the background and implementation of SBIRT-ED to primary care physicians and their staffs. They are also developing curricula for medical and graduate training programs, so the next generation of healthcare providers can be trained to use the new screening tool. According to the authors, the tool is "feasible to use for every adult patient and facilitates referrals to specialty treatment—a key component of eating disorder management."

## Two International Meetings Remind Clinicians of Frequently Overlooked Patients

#### Eating disorders can affect a wide spectrum of patients.

At two recent international eating disorders conferences, keynote speakers reminded the audience of the importance of considering diversity in identifying and treating people with eating disorders. Both reported that groups often overlooked include black women, men, women at midlife and beyond, and LGBT youth.

Presentations at the IAEDP Annual meeting and the annual meeting of the Academy for Eating Disorders used a virtual format to reach national and international members. Iaedp has also pointed to unique issues for black women with EDs, including clinical biases in the diagnosis of EDs. In one study for example, when identical cases of EDs were presented, 44% of White women, and 41% of Hispanic women were identified as having an eating disorder, but only 17% of Black women were identified as having an eating disorder, but only 17% of Black women were identified as having an ED.

In his keynote address at the iaedp virtual conference, "What We Know, Don't Know, and Need to Know About Child Maltreatment, PTSD, and Trauma-related Symptoms in Adults with Eating Disorders," Dr. Timothy D. Brewerton drew attention to an often-overlooked group with eating disorders, those with post-traumatic stress syndrome (PTSD) originating in childhood. Dr. Brewerton, of the Department of Psychiatry and Behavioral Sciences at the Medical University of South Carolina, Charleston, pointed out that childhood adversity is a risk factor for eating disorders. Individuals with a lifetime diagnosis of anorexia nervosa who develop AN in childhood have more severe symptoms, a greater incidence of obsessive-compulsive disorder, or OCD, and other adverse childhood experiences, the lowest BMIs, the longest-lasting episodes, were least likely to attend college, and had the highest rates of lifetime psychiatric comorbidities. Those with early-onset bulimia nervosa also had more severe illness, and higher incidences of victimization, lifetime PTSD diagnoses, and substance abuse. All the results point to the importance of addressing and assessing PTSD during ED treatment, especially among those with earlier onset of symptoms.

The implications for prevention and treatment are that onset of EDs during childhood need to be a focus of further study and intervention, he stressed. This is underscored by the fact that the earlier the onset, despite diagnosis, the greater the likelihood of trauma, PTSD, and greater severity of illness that requires a higher level of care.

In a recent study, Dr. Brewerton and colleagues found that children with onset of trauma during their childhood had significantly higher rates of traumatic life events, a higher prevalence of PTSD, and higher BMIs, more traumatic life events, and greater severity of EDs (*Eur Eat Disorders Rev.* 2022. 1-11). In addition, those who had experienced childhood trauma had an overall worse quality of life. These patients also had more inpatient and residential admissions. They also had histories of more inpatient and residential admissions for ED treatment compared to those whose eating disorders had an onset during adolescence or adulthood.

#### **Dissociative identity disorder**

EDS and Dissociative Identity Disorder (DID), also termed multiple personality disorder, was another focus of Dr. Brewerton's presentation. These cases are related to overwhelming experiences of trauma, especially during childhood. This phenomenon, which was been termed "hysterical phenomena" by Josef Breuer and Sigmund Freud in 1896, has been debated for some time. Some believe that this is a fad or is rare or over-diagnosed, or is really borderline personality disorder, and even that treatment can be harmful. Instead, according to Dr. Brewerton, there is positive proof that DID can be successfully treated in a specialty, trauma-informed ED program. Patients have two or more completely different personalities, and a wide range of symptoms, including depression, drug abuse, eating disorders, anxiety, panic attacks, and suicidal tendencies, among others.

Importantly, as Dr. Brewerton pointed out, improvement of EDs and state-trait anxiety symptoms is strongly correlated with improved PTSD symptoms in patients with DID-ED following residential ED treatment.

#### **ICED Keynote Speaker Examines Fat Stigma**

The International Conference on Eating Disorders (ICED) meeting, held from June 9-11, in Monterrey, Nuevo Leon, Mexico, and in virtual sessions turned its attention to often-overlooked groups with EDs. In its virtual presentation, AED's keynote speaker, author Sabrina Strings, PhD, Associate Professor of Sociology and Chancellor's Fellow at the University of California, Irvine, took listeners on a historical tour of fat stigma among Black women. She outlined the many barriers that Black American women and men encounter when seeking treatment for an eating disorder. In her presentation, "Fatphobia as Mysogynoir: Gender, Race, and Weight Stigma," she pointed to an historical clinical bias against Black women that remains today. Just a few of today's barriers to care include lack of insurance or underinsurance, lack of clinical providers, and distrust of the healthcare system in general.

In both keynote presentations, the speakers reminded the audience of the diversity of ED patients and the importance of identifying symptoms among diverse patient groups.

# Newer Neuroimaging Studies Show Brain Changes in Acute AN

## Two studies examine results with two powerful MRI approaches.

Extensive research has been done with neuroimaging methods in people with AN. Much of this work has focused on two areas. Older studies used simple structural imaging methods to look at changes in brain volume when people were at a low weight; these studies have often shown reductions in brain volume. More recently, functional magnetic resonance imaging (fMRI) studies have examined brain activity in a brain region (or in brain circuits), either while an individual is at rest or performing a task. Recent research expanding into use of newer neuroimaging methods is providing more detail. Two recently published studies provide excellent examples.

#### A study with very-high-field MRI

First, Pappaianni and colleagues (*Sci Rep.* 2022. 16:2589) described their pilot study using very-highfield MRI to look at detailed measures of the amount of myelination in white matter. In this study, 7 people with AN and 9 healthy comparison participants were studied using a 7-Tesla MRI scanner that allowed detailed measurement of the amount of myelin (the Tesla designation measures the strength of the magnet used in the MRI).The results showed less myelin in those with AN; the authors note that they could not tell if this played a role in developing AN or was a result of it. [The FDA approved the veryhigh-field MRI system in late 2017.]

#### **DWI: a different, powerful tool**

A second study used a different powerful technique to study brain function. Dr. Daniel Geisler of Techniechnische Universität Dresden, Dresden, Germany, and his colleagues used diffusion weighted imaging (DWI) to study the brains of young men (mean age: 16.3 years) acutely ill with anorexia nervosa (*J Am Acad Child Adolesc Psychiatry*. 2022. 61:331).

DWI approaches measure the diffusion of water molecules within neurons to create images of neural tracts in the brain, and thus can show whether tract architecture is normal or abnormal, and whether connectivity in those areas is lower or higher. Limited prior studies have used this powerful technique in those with AN, with mixed findings. In this large study (96 adolescents with AN and 96 matched controls), DWI was used to examine these tracts, or connections, across the entire brain.

The results showed significantly different connectivity in those with AN than in the controls. In three regions of the brain, it showed stronger connections, and in three other regions the authors observed what appeared to be diminished connections. Just as Pappaianni and colleagues' study found, the German researchers could not specify whether the changes they observed might result from AN or might predispose the patient to it.

Taken together, these studies suggest that continued use of more powerful neuroimaging techniques will tell us in ever-greater detail about brain changes associated with AN.

## The Brain: A New Avenue for Treatment of Difficult Cases?

#### Neuromodulation may help combat remission.

Even with the best available psychotherapies, the remission rates for different EDs still range between 30% and 60%. Few studies have described the next steps to take when first-line treatments are not effective. In a recent review, a team of authors describe using neuromodulation approaches for treating anorexia nervosa, bulimia nervosa, and binge eating disorder (*Curr Psychiatry Rep.* 2022. 24:61).

Dr. L. Gallop and a team at King's College, London, designed a study to examine some newer and traditional noninvasive and invasive neuromodulation approaches, including transcranial magnetic stimulation (rTMS), transcranial direct current stimulation (tDCS), electroconvulsive therapy (ECT), deep brain stimulation (DBS), and vagus nerve stimulation (VNS).

The following section touches upon some elements of these approaches. New protocols for selected patients are being developed as research continues.

#### rTMS

In this newer noninvasive brain stimulation technique, a current of electricity is passed through an electromagnetic coil to target specific brain regions. Thus far, it has been safe and well tolerated, and is mostly used for cases of depression. New protocols are being developed. In one study, AN patients had growing flexibility and relaxation around food and food choices after receiving rTMS. A Canadian group targeted the dorsomedial prefrontal cortex in a case series, and reported improvements in core symptoms of AN (*J Eat Disord.* 2021.https://doi.org/10.1186).

The Kingâ€<sup>™</sup>s College authors recently completed the first sham-controlled randomized controlled study investigating the use of high-frequency sham-controlled rTMS applied to the left dorsolateral cortex, an area known for its involvement in working memory, planning, and cognition. The authors applied this in adults with BED (*BMJ Open.*2019.https:doi.org/10.1136/bmjopen-2019-30023). For patients with BED

and BN, rTMS has been shown to reduce binge and/or purge episodes (*Psychother Psychosom*. 2008. *Psychother Psychosom*. 2008. 77:57; *Eur Eat Disord Rev*. 2008. 24:474).

Another new area includes the use of supervised at-home rTMS, which offers ease of access and has led to increased compliance (*J Neuroeng Rehabil*. 2019. DOI: 10.1186/s12984-019-0529-5). This technique also helps save time and travel for patients and their caregivers.

#### ECT

ECT has long been used to treat mental illness, especially among patients who have severe and/or lifethreatening symptoms. ECT is done under general anesthesia and triggers a brief seizure when small electrical currents are passed through the brain. ECT seems to cause changes in brain chemistry that can quickly reverse symptoms of certain mental health conditions. However, no randomized controlled trials have looked at the efficacy of ECT in EDs.

A review by Rachael Pacilio and colleagues at Menninger Department of Psychiatry and Behavioral Sciences, Baylor College of Medicine, Houston, TX, found 11 articles involving ED patients and ECT. The authors identified 14 patients with EDs. Thirteen of the 14 patients had no side effects from use of ECT (*J ECT.* 2019. 35: 272). Several patients were treated at a time when specialist ECT treatment was not widely available.

#### INVASIVE PROCEDURES DBS and VNS

Deep brain stimulation, or DBS, involves surgical implantation of one or more small electrodes in the brain; the electrodes then receive mild electrical stimulation from a small pulse generator implanted in the chest. DBS has been selectively used in a number of illnesses, including Parkinson's disease, and is being investigated for its potential for SE-AN. The largest case series, including 28 participants with AN, reported significant increases in BMI at 6-month and 2-year follow-ups (*Brain Stimul.* 2020. 13:643.) Notably, DBS was less effective for weight restoration in patients with the binge-eating/purge subtype of AN than in those with the restricting subtype (R-AN).

Untried for EDs but promising, VNS is an established procedure for several disorders, such as epilepsy. With it, a small device similar to a pacemaker is implanted into the body to trigger the vagus nerve. The authors noted that studies have yet to be designed for ED patients, but this procedure has promising applications for these patients.

Turning to the brain to treat difficult cases of eating disorders, though still in its early stages, may offer helpful approaches when psychotherapy is ineffective for ED treatment.

## The Cascading Impact of COVID-19 on ED Treatment

#### The pandemic's trend is unlikely to slow.

Many studies have now documented that the COVID-19 pandemic has had an impact on the mental health of adolescents and adults. The pandemic has been linked to increases in anxiety, depression, and eating disorder symptoms. In addition, it appears that ED symptoms from the pandemic often worsen for those who have had eating disorders in the past. These trends have raised concern about rising clinical needs, as well as rising severity of ED symptoms and comorbid psychopathology.

A new study seems to confirm some of these fears. Feldman and colleagues (*Int J Eat Disord*. 2022.1:6) reviewed data on 71 hospital admissions of children needing medical stabilization for a restrictive eating disorder (31 prior to, and 40 following, the onset of the COVID-19 pandemic). Results showed that the

rate of admission to the program increased 2.9-fold from pre-pandemic times to during the pandemic itself. The likelihood of co-occurring depression or anxiety in those admitted for treatment roughly doubled after the onset of the pandemic. Finally, it was more common after the onset of the pandemic to require "bridge plans" for interim care between discharge from the hospital and admission to the recommended higher level of care.

These results provide evidence of the increasing burdens being felt in the mental health system generally and in ED treatment system specifically-burdens that seem unlikely to diminish any time soon.

## **Rock Climbers—Another Group At Risk?**

## As in other sports, some climbers think lower weight gives them an advantage.

Many groups are believed to be at risk for eating disorders, including those who are in certain sports or artistic pursuits where lower weight is perceived by some to confer an advantage. Figure skating, gymnastics, endurance sports, and dance are but a few of these sports and arts.

There is previous evidence of disordered eating among sport climbers (*Front Sports Act Living*. 2020. 24:2:86). Rock climbing is an anti-gravitational sport in which a low body weight may seem beneficial. In one sample, 604 climbers first completed the *EAT-26*. Then, using a cutoff score of 20, 8.6% of the climbers (6.3% of males and 16.5% of females) met criteria for disordered eating.

There is also evidence for some restrictive eating among climbers (*Front Nutr.* 2019. 6:64). This survey of 22 rock climbers showed interesting mixed results: generally low scores on the *EAT-26* but lower overall food intake than expected in terms of kilocalories. This trend seemed to be largely explained by low consumption of carbohydrates and fat, while protein intake was mostly unchanged. A documentary film on the topic was recently released (see *LIGHT—The Documentary*; YouTube, Bing.com/videos, 2021).

Although most clinicians in the field likely do not make any connection between rock climbers and eating disorders, a recent descriptive study expands on the very limited existing literature on this topic (*J Eat Disord.* 2022.10:96). This fascinating descriptive study provides context on the variety of views on the idea of ED in the rock-climbing community, which appear to span the gamut from insightful, informed and concerned, to dismissive. The author's essentially observational study of internet discussion on the topic is both reassuring and worrisome.

Although it has not yet garnered a lot of attention, it seems reasonable to add climbers to the list of groups at high risk for ED.

## The Impact of the COVID-19 Lockdown on EDs

## Were eating disorders affected when isolation was ordered?

Few studies have yet examined the association between America's COVID-19 lockdown and its effects on eating disorders. A team at the Australian National University recently learned that our pandemic lockdown clearly worsened the status of eating disorders.

Dr. Yunqi Gao and colleagues found that the lockdown environment led to increased anxiety and depression, changes in dietary habits and eventually produced worsening ED symptoms (*J Public Health*.

2022. doi. org/10.1007/s10389-022-1074-4). The researchers used a literature review to include all relevant articles published before the pandemic, from 2019 through April 2021; 12 articles fit the criteria.

#### Greater body image concern seen among women

During the lockdown, women and adolescents in general had more concern about body image and appearance, faced more difficulties in regulating eating, and were at greater risk of worsening ED symptoms during the lockdown. In general, the lockdown led to a worsening of eating disorders overall and to higher levels of anxiety and depressive symptoms in ED patients. The severity of ED symptoms then deceased to normal levels during the transition from lockdown to re-opening (*J Affec Disord.* 2021b. 285:77). One possible explanation was that some patients continued to receive virtual therapy during the lockdown. Negative elements that were in play were social isolation and loneliness, limited access to healthcare, dietary changes and food restrictions, the psychosocial impact, and negative emotions.

Further systematic reviews are needed to examine the impact of the lockdown on other continents, such as Asia, Africa, and South America, according to the authors.

#### A Letter to the Editor

A very pertinent "Letter to the Editor" to the *Journal of the American Academy of Child and Adolescent Psychiatry* (2022. 61:349) from Drs. Jace Reed and Katherine Ort at New York University Langone Health, New York, NY, pointed out the rise in eating disorders symptoms during COVID-19, and the impact upon treatment at their institution. According to the authors, health and economic effects were substantial among those with eating disorders. At their hospital, the child and adolescent consultation liaison service recorded a three-fold increase in consultations for restrictive EDs from September 1, 2019 to March 31, 2021. Patients included in the final analysis were from 5 to 18 years of age, all with a diagnosis of anorexia nervosa.

Factors that may have been involved in the increase are familiar from other studies: disruption in daily activities, including mealtimes, physical activity, sleep, effects of media, social isolation, emotional distress, and overall fear of contracting the virus.

The report gives us a view of the effects of the lockdown. As the authors note, it will be important to follow the role that the pandemic has played in EDs in the pediatric population. Continuing discussion will be needed to help increase the supply and access to specialized programs and services. The authors write that this will be helpful "to increase the supply and access to specialized programs and services to help bridge the gap between increased demand, low supply, and accessibility, which often leaves those in the most need with substandard care."

## A Web-based Program for BN

#### The principles of CBT are put to work online.

A 12-week online program hopes to reduce binge-eating episodes and compensatory behaviors.

"Selfapy for BN," a randomized, web-based self-help program for people with BN, aims to use the principles of CBT and a 12-week online program to help combat BN. Researchers at the University of Heidelberg recently described their ongoing study program.

The team, led by Dr. Steffen Hartmann at the Department of Psychology at the University of Heidelberg, hypothesized that the web-based program would lead to a substantial decline in the number of bingeeating episodes and the occurrence of compensatory behaviors during the 12 weeks of the program (*Internet Interventions.* 2022.28:100512). The researchers are also conducting a web-based self-help program for persons with binge-eating disorder.

Those eligible for the BN program must be 12 to 65 years of age, have good German language skills, own a smartphone with permanent internet access during the study period, and have a diagnosis of BN according to *DSM-5* criteria and a clinical interview. A control group is composed of a wait-listed group of BN patients.

According to the authors, despite the effectiveness of psychotherapy for persons with BN, only a small number of patients with BN in routine care receive evidence-based treatment (*Psychiatry*.2007. 1:27). Adding web-based interventions might reduce barriers to face-to-face care. They add that the long-term goal of their web-based program is to implement evidence-based interventions reduce social costs, such as stigma, and to "enhance the quality of life for individuals with eating disorders."

The program includes weekly sessions on topics ranging from eating behavior to negative thoughts to problem-solving. The intervention is designed to help participants understand risk factors for BN and their ability to cope with such factors. Some of the core exercises offered during the program include informative texts, audio files, video files, and interactive elements, such as text boxes. Individuals in the control group do not have access to the web materials during the 12 weeks but, immediately after the last assessment at the end of the 12 weeks, they automatically receive an e-mail with the access code to the intervention program. During the study, both the treatment and control groups may receive any other treatments, including drug and psychological programs.

#### Periodic assessments of essential behaviors

In the study, primary and secondary outcomes are assessed, beginning at baseline, or entrance to the study, then 6 weeks later, and at 12 weeks after entrance into the study. Eating behavior, eating episodes, and compensatory behaviors are monitored weekly. The assessment platform "Sosci Survey" is used to collect the data. Then, participants complete the *Eating Disorders Examination Questionnaire* (EDE-Q); the results are used to assess the number of binge-eating episodes and compensating behaviors that occurred during the past 28 days. A number of secondary outcomes will also be noted, including changes in depressive symptoms and changes in comorbid anxiety symptoms, for example.

The first results are expected later this year.

## **QUESTIONS AND ANSWERS: Ketamine**

**Q.** Is ketamine ever prescribed for people with eating disorders? A parent of one of my patients asked about this recently. Isn't this a drug primarily used by veterinarians? (BK, *Sacramento, CA*)

**A.** Ketamine is widely used as a short-acting anesthetic in veterinary medicine. However, it is increasingly used for patients with depression, and might help those with anorexia nervosa, according to a recent review by Dr. Anya Ragnhildst at Duke University, Durham, NC, and the University of Utah, Salt Lake City (*Brain Sci.* 2022. 12:382).

Ketamine was developed in the 1960s as a fast-acting alternative to phencyclidine, or PCP. At first it was used as an anesthetic, but now is used for treating refractory depression. In the beginning, this involved IV administration, often several times per week. When it is used for depression, two things have stood out: it often works for those not helped by other treatments and it works quickly, at times within hours (albeit with short-term effects).

At this point, only 5 case studies or small case series (about 20 people) involving use of ketamine have been reported, and these are summarized in the *Brain Science* review. Broadly, improvements in mood,

anxiety, rigid thinking, and/or ED symptoms were seen in many who received ketamine.

These results are encouraging, but there are several caveats. First, these reports involved IV ketamine, but the FDA-approved version of the drug calls for intranasal administration—simpler to administer but probably less effective for those with depression. Second, while ketamine is well tolerated by those with depression, it is still unclear whether this is true for persons who have AN. Nevertheless, there is growing clinical interest in the use of ketamine, and this will undoubtedly include use in those with eating disorders, particularly when they have a combination of depression and AN.

-SC

### **In The Next Issue**

#### Needed for Terminal AN Patients: Clear Definitions for Ending Treatment Steps to take when a longtime patient wants to opt out of treatment.

It is a controversial topic—what to do when your longtime anorexia nervosa patient opts to drop out of treatment. Two well-known eating disorders experts address the pros and cons and steps to take to help patients make their decision. A designation of terminal AN may also more readily enable patients to receive palliative and hospice care, and to provide emotional and practical resources for their families and other loved ones.

#### PLUS

- Eating Disorders and the Menopause
- Neurodevelopmental Disorders in Offspring of Mothers with EDs
- Intimate Partner Violence and the Fear of Loneliness
- Risk of Falls and Fractures
- And much more...

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