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UPDATE: More Clues to Binge Eating Emerge

Orexin neurons, a small group of cells in the hypothalamus, appear to be a promising target for medications for controlling binge-eating episodes in individuals with obesity, according to scientists at the Brain Health Institute at Rutgers University and the State University of New Jersey. These neurons have previously been shown to be important for addiction to drugs such as cocaine.

Dr. Gary Aston-Jones, director of the Brain Health Institute at Rutgers, and a senior author of the study, and his team, found that key symptoms of eating disorders, such as the sense of losing control, overlap with what is now known about the driven nature of drug addiction. The authors targeted the orexin system to better understand the change in food motivation caused by repeated episodes of binge eating. The study team reported their findings in July at the annual meeting of the Society for the Study of Ingestive Behavior (SSIB), an international group of scientific experts on eating behavior.

Using a rodent model, the researchers found that the orexin blocker reduced the amount of food consumed during the binge eating episodes, where rats were given unrestricted access to a sweetened fat mixture over a 30-minute period. The authors will continue their research by investigating how the size and number of orexin neurons in the brain might be altered following changes to dietary habits or weight or their combination.

From Across the Desk

Refeeding the seriously ill and underweight patient is one of the more challenging and stressful stages in treatment. The long-time cautious daily caloric prescriptions for initial weight restoration, in the 5- to 10-kcal/kg range, is undergoing a change. In their article, **Small Feedings and Current Nutrition Practices in Anorexia Nervosa,** authors Meghan Foley, RD, Carrie Schimmelpfennig, RD, MS, and Philip S. Mehler, MD, FACP, FAED, CEDS, detail the benefits of more rapid refeeding and weight gain for AN patients. They write: "... more recent research has shown that higher dietary prescriptions are associated with a reduced length of in-hospital stay, and with no increased risk of electrolyte disturbances or other adverse reactions."

Another nutrition-related article this month, **Needed: More Vitamin 'N,'** comes from Sandra Wartski, PsyD, CEDS. She points out that numerous studies have shown the incredible physical and psychological benefits of spending more time in Nature, and this may be an intervention that more clinicians need to consider as part of the eating disorders treatment plan. The idea is catching on worldwide, and two University of Virginia researchers have developed a "Nature Pyramid," like the Food Pyramid, which outlines ideas on getting adequate servings and variety of Nature in the course of a year. Is it time to trade "screen time" for "green time"? the author asks.

— MKS

Needed: More Vitamin 'N'

By Sandra Wartski, PsyD, CEDS

Eating Disorder (ED) recovery work includes much focus on food inclusion, meal regularity, and nutritional balance. However, there is often little emphasis on adding more Vitamin N (for Nature).

Numerous studies have shown the incredible physical and psychological benefits of spending more time in Nature, and this may be an intervention that more clinicians need to consider as part of the eating disorders treatment plan. The notions of slowing down and mindfulness are commonplace for therapists teaching clients about food, mood, and body. Taking in more Nature can have exponential benefits as well.

Richard Louv coined the term, "Vitamin N" in his landmark book, *Last Child in the Woods* (in which he also creatively references Nature Deficit Disorder and "Leave No Child Inside") and adds more in his latest book, *The Nature Principle*. Louv has been actively promoting the concept of teaching today's children about nature, particularly in our current technologically-focused society overrun by electronic devices. One of his well-known quotes is "The child in nature is an endangered species, and the health of children and the health of the Earth are inseparable."

The "Nature movement" has grown exponentially, and many other authors have explored and reviewed various aspects of the benefits of nature, including the seminal work of Florence Williams' *The Nature Fix*, Amos Clifford's *Forest Bathing*, and Eva Selhub and Alan Logan's *Your Brain on Nature*. Although the periodic reference by some of the authors to assisting the "obesity epidemic" is likely to bring up disgruntlement or disagreement among ED clinicians, the science behind the benefits of nature remains awe-inspiring.

The Value of Time Spent in Nature

The value of time spent in Nature is indisputable, and some of the quantifiable benefits are fascinating. Many great thinkers and inventors (Aristotle, Darwin, Beethoven, Einstein, and Roosevelt) have noted that they were inspired by Nature. Now, neuroscientists and social psychologists are going back into Nature as well. Scientists have documented that individuals who spend more time in Nature are happier, calmer, less anxious, learn better, have improved memories, pay attention better, get sick less often, have more social skills, and in general are nicer individuals.

Many studies also consistently show the many physiological benefits of those who spend time in natural environments. Some of these benefits are decreased sympathetic nervous system symptoms (heart rate, blood pressure, sweat glands and decreased cortisol [stress hormone], and increased performance on memory and creativity tests.

Some of these positive effects have even been duplicated by simple things - like putting more green plants or Nature photos in the lab or the office where they do their testing. Others plan testing subjects before and after a walk on an urban street compared to a walk in the woods. Some subjects are subjected to temporarily stressful events, like watching a video of a gruesome woodworking accident, and then view a Nature or urban video. Individuals who viewed Nature photos following a stressful video returned to baseline considerably faster than those viewed non-nature videos. Hospital patients with "green" views apparently have been found to have shorter postoperative stays, require fewer painkillers, and have slightly fewer complications compared to those who have no such views. This type of research is clearly complicated, and involves many confounding factors, but the initial findings are quite impressive.

The World Takes Notice

Research on this topic is spreading worldwide. In the United Kingdom, a Mappiness App with a reported 3 million subjects tracked mood randomly throughout the day and found strong evidence of joy correlated with being outside. Japan started a practice of "forest bathing" (hiking in the forest for a weekend) and found many healing effects, including increased immune system health and decreased inflammation. In the Netherlands and Canada, researchers found a lower incidence of various diseases—including depression, anxiety, and migraines—in people who lived closer to green spaces.

Effects on the Brain

The neuroscience behind being out in Nature suggests a number of important brain functions are affected. For instance, subjects tested after spending time in urban settings were found to have more blood flow to the amygdala (known as the alarm system of the body, where fear and anxiety are processed), while subjects spending time in natural settings were found to have more blood flow to the anterior cingulate and insula (areas of the brain associated with empathy and altruism). Those spending time outside were found to have higher alpha waves (with accompanying increased levels of serotonin and greater relaxation), as well as less blood flow to the lower area of the prefrontal cortex (and therefore suspected to have decreased levels of depressive rumination).

Research Looks at the Positive Effects

There has been a fair amount of research into why Nature has such a positive effect on so many areas of the body, and this realm of research seems to include a bit more controversy among scientists. There are some who say that the positive relaxation effects of being outside relate primarily to increased body movement, which is more likely to occur if an individual is outside. Others suggest that bodies relax in more natural surrounding because this is where humans evolved. Time spent in Nature also tends to touch upon all of our senses, and so there are hypotheses about how a recalibration of our senses with natural input is key. Some theories focus on the visual senses, including the fact that more fractal shapes may trigger neurochemicals in our visual cortex, which assists in relaxation. Others focus on the smells present in outdoor space; here, airborne chemicals raise white blood cell counts, which are helpful in fighting infection. We might not know exactly why Nature can be both tranquilizing and re-energizing, but the evidence continues to support that there are certainly multiple benefits.

A 'Nature Pyramid'

How much nature time is beneficial also remains unknown, but Tanya Denckla-Cobb and Tim Beatley from the University of Virginia have developed a "Nature Pyramid," which outlines ideas on getting adequate servings and variety of Nature in the course of a year. Like the Food Pyramid, there are elements in Nature that should be consumed more frequently and in greater quantities, and those that might be consumed less frequently. Denckla-Cobb and Beatley, along with others, argue that exposure to Nature is a necessary part of human life. As ED clinicians, we are quite familiar with the prospect of helping clients learn that attention to all foods in various quantities throughout the day is what allows for healthy brain and body functioning. The Nature Pyramid is not intended as a strict guideline, but more as a conversation-starter about getting doses of outside time at regular intervals.

Regular Infusions of Nature Could Help Almost Everyone

Regular infusions of Vitamin N could help most anyone living in our fast-paced, plugged-in, social-comparison digital age, particularly those struggling with serious mental health issues like EDs, who might derive even greater benefit. There is good sense and science behind including time in Nature as part of the wellness plan, especially given the many improvements in mood, mindfulness, mental capacity, medical recovery, creativity, and overall better functioning that are reported after contact with Nature. This recommendation might not only be more readily accepted by our clients but could have long-lasting impact as well.

Ideas for how we might use nature in our ED treatment plans abound, ranging from simply

recommending time outdoors to using active 5-senses-centering in the woods. Being in Nature allows time and space for slowing down, and for distraction, metaphor hunts, and taking in a big-picture perspective. Outside there are no mirrors, no scales, and no electrical outlets. There is less need for a certain "look" before spending time outside, and instead a greater focus on being functional and comfortable, notions quite similar to those being emphasized in ED treatment in terms of aiming for feeling good rather than over-focusing on looking good.

There are, of course, caveats for our ED clients, such as not allowing the Nature prescription to become an excuse for over-exercise or for isolation. However, as is the core of so much of ED work, using moderation and an individualized approach is key. Attending to Nature could not, naturally, be a substitute for the primary steps of ED treatment, but it might allow an add-in of a "vitamin" often overlooked in our usual approach to addressing the brain and the body in recovery.

So, as has become the new motto in Nature proponents' blogs, let's promote trading screen time for green time!

About the Author

Sandra Wartski, PsyD, CEDS has been working with eating disorders over the past 25 years. She is a licensed psychologist who works as an outpatient therapist at Silber Psychological Services in Raleigh, NC. She enjoys providing presentations and writing articles on a variety of mental health topics, particularly ED-related topics.

Small Feedings and Current Nutrition Practices in Anorexia Nervosa

by Meghan Foley, RD, Carrie Schimmelpfennig, RD, MS, and Philip S. Mehler, MD, FACP, FAED, CEDS,
Eating Recovery Center and University of Colorado, Denver

During this decade there has been a general change in the manner with which nutritional rehabilitation is prescribed for patients with anorexia nervosa (AN).

In the past, daily caloric prescriptions for initial weight restoration were in the 5- to 10-kcal/kg range. However, more recent research has shown that higher dietary prescriptions are associated with a reduced length of in-hospital stay, and with no increased risk of electrolyte disturbances or other adverse reactions. In fact, the risk of refeeding hypophosphatemia has been demonstrated to increase with the severity of nadir weight rather than with the amount of calories delivered. Thus, the lower the initial percentage of ideal body weight (IBW), the greater need for vigilance in checking serum phosphate levels.

Taking a more aggressive approach to refeeding

A weekly inpatient-residential weight gain goal of 1.5 kg to 1.8 kg is being accomplished through a more aggressive approach to refeeding. Initial meal plans now start at 1400 to 1800 kcal/day, with increases of 300 to 400 kcal/day every 3 to 4 days, until a consistent weight gain of 0.2 to 0.25 kg/day is noted. No maximum calorie levels are applied, as dietary prescriptions are individualized to support ongoing weight gain toward ideal body weight. Also, the ideal macronutrient source of energy (calories) is still not entirely proven for this type of severe malnutrition, but a typical composition is 40% carbohydrate, 40% protein, and 20% energy from fat.

Many dietitians agree that it is helpful to allow patients to choose the form their calories come in while encouraging solid and broad varieties of food for the majority of meals when medically appropriate, but with a lower threshold to revert to liquid supplements and enteral feeds via a nasogastric (NG) tube if oral intake is inadequate. This is because of a new focus in treating AN, avoidance of "underfeeding." An ill-defined, passive "wait and see approach" to refeeding AN patients is no longer acceptable.

Comorbidities can affect the nutrition prescribed

Comorbidities such as superior mesenteric artery syndrome (SMA), found with increased frequency as the percentage IBW is lower, and dysphagia, can affect the refeeding regimen or diet prescription, but not the starting calorie prescription. The severity of SMA determines how a patient's nourishment is administered. The utilization of the gut is always preferred; if a patient has complete SMA, diagnosed by abdominal CT scan, the recommendation would be to refeed with 100% liquid formula administered via an NG or perhaps a nasojejunal (NJ) tube, placed distal to the obstruction. If the patient has partial SMA, the diet is typically formulated as a pureed or soft diet. Normally, the diet can then be advanced slowly after only a 5- to 10-lb weight gain, as the SMA obstruction resolves.

Dysphagia can also occur in more severely malnourished patients with AN due to pharyngeal muscle atrophy, which places these patients at risk for aspirating liquids and solids. If aspiration is confirmed by a speech language pathologist, consistent modifications in food and/or formulas should be made until weight restoration normalizes swallowing function. It is important to note that with both of these medical complications of AN as well as with others such as gastroparesis, diarrhea, and diabetes, increased intensity of nutrition education and counseling by an informed registered dietitian (RD), are imperative to promote patient compliance as enteral feedings, supplements, or modified textures may create an extra challenge to patient compliance.

The benefits of nutrition intervention

According to Ozier and Henry, "It is the position of the American Dietetic Association (now the Academy of Nutrition and Dietetics) that nutrition intervention, including nutrition counseling by a registered dietitian, is an essential component of the team treatment of patients with AN, bulimia nervosa, and other eating disorders during assessment and treatment across the continuum of care" (Ozier and Henry, 2011).

Registered dietitians act as an integral member of the team in the treatment of eating disorders at all levels of care. A dietitian who specializes in the treatment of eating disorders assists the multidisciplinary team, as well as the patient, in many ways, first by assessing calorie requirements based on typical metabolic needs and weight gain goals for AN patients. Next, dietitians use medical nutrition therapy to treat a patient's medical complications from malnutrition and weight loss, such as gastroparesis, SMA syndrome, or malabsorption. Finally, when necessary, the dietitian can prescribe enteral and parenteral nutrition support.

The dietitian can also help decipher a patient's readiness for change by using motivational interviewing. In addition, the dietitian can help the patient try new types of foods, whether by adding a macronutrient the patient is fearful of or adding a specific food, such as a dessert, into the patient's diet. The latter is especially relevant for those with Avoidant Restrictive Food Intake Disorder (ARFID). Dietitians can also assist patients in weaning off of enteral nutrition support while increasing oral nutrition and by challenging patients to make healthy, productive choices towards recovery by setting boundaries around mealtime behaviors, food flexibility and meal completion expectations to ensure adequate nutrient intake and weight gain trajectory.

It is also vital that the dietitian builds a productive rapport with his/her patient by working in an open and honest way, guiding a patient's choices away from what their eating disorder wants and individualizing their care as much as possible to build a foundation of trust and respect. Dietitians are often viewed as

an "enemy" or an "ally" to a patient as they upset the eating disorder by challenging a patient to interrupt behaviors while they assist in nourishing the patient, which helps him or her feel stronger and healthier.

Reminding a patient about the positive effects of renourishment, such as sharper cognitive skills, improvement in their physical condition, and being able to more successfully engage with loved ones, can help a patient to feel motivated, continue to make progress in treatment, and begin to place trust in their treatment team to achieve a sustained and full recovery.

About the Authors

Philip S. Mehler, MD, FACP, FAED, CEDS, is President of the Eating Recovery Center, and Founder and Executive Medical Director, ACUTE@ Denver Health. He is also Glassman Professor of Medicine at the University of Colorado School of Medicine.

Meghan Foley, RD, and Carrie Schimmelpfennig, RD, MS, are registered dieticians who work on the ACUTE unit at Denver Health with those patients suffering from extreme forms of eating disorders.

Suggested Reading

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Olanzepine and Weight Gain in Teens with AN

Side effects did occur in one-third of the young patients.

A group at the University of Ottawa, Canada, recently tested the efficacy and safety of olanzapine treatment for low-weight adolescents 11 to 17 years of age with anorexia nervosa (AN). In their non-randomized open-label trial conducted between 2010 and 2014, those receiving olanzepine had a higher rate of weight gain than did the comparison group. Although there were no serious adverse effects reported, one-third of the teens did discontinue the drug because of side effects (*J Canad Child Adolesc Psychiatry*. 2018; 27:197).The study is the largest trial to date to test the use of olanzapine for AN in adolescents.

Olanzepine, a second-generation antipsychotic (SGA), is believed to enhance the reactivity of the anterior cingulate cortex and the salience network (SN) in response to the reward value of food in persons with AN. Some of the drug's useful qualities for patients with AN include reducing anxiety and agitation and concerns about body shape and weight. Thus, when used among adults, teens and children with AN olanzapine has increased weight gain, reduced levels of agitation, decreased obsessionality, improved sleep and general function, as well as overall improved compliance with treatment (*Int J Eat Disord.* 2000; 27:363; *Eur J Child & Adolesc Psychiatry*. 2001; 10:151).

Dr. Wendy Spettigue and her colleagues noted that although the drug was generally well tolerated by the

subjects, and adverse effects were not serous, there was an increased likelihood of high triglyceride, total cholesterol, prolactin, and ALT/AST levels with olanzapine. The increase in abnormal lab values suggest that adolescents being treated with olanzapine be closely monitored, with emphasis on liver function tests and prolactin levels.

Rapid Refeeding and Anxiety among AN Patients

Swift weight gain did not increase anxiety or depression.

Traditionally, refeeding patients with anorexia nervosa (AN) has been cautiously done, mainly to avoid the refeeding syndrome. Metabolic disturbances from the refeeding syndrome can include abnormalities of glucose metabolism, low serum phosphate, potassium, and magnesium levels, deficiencies in thiamine, and sodium and fluid retention. If not treated, patients can face more serious complications, including delirium and seizures, cardiac arrhythmias and sudden death.

However, results of more recent studies have pointed out that the previous caloric prescription of approximately 1,200 kcal/day, increased by 200 kcal/day, may not be adequate for this patient population. [See also **Small Feedings and Current Nutrition Practices in Anorexia Nervosa,** elsewhere in this issue.] Dr. Sarah Kezelman and associates at the University of Sydney and Westmead Hospital, Sydney Australia, and the Neuropsychiatric Institute, Fargo, ND, point out that rigorous monitoring and additional nutritional supplements can avoid the refeeding syndrome. In addition, these measures can shorten inpatient stays for patients with AN (*Front Psychol.* 2018; 9:1097).

But, are there possible psychological repercussions from rapid refeeding and subsequent weight gain? Noting the lack of research into this area, Dr. Kezelman and colleagues designed a study to understand anxiety symptoms and other psychological experiences among AN patients during the acute states of nutritional rehabilitation. The study was conducted among 31 female adolescents who presented at a special adolescent medical unit in Sydney, where young, medically unstable patients with malnutrition are admitted to the unit to for nutritional rehabilitation. The mean body mass index (kg/m^2) for the group was 16.3 at admission.

On admission, patients are begun on continuous nasogastric feeding, at 2,400 kcal/day for the first 24 hours. Under careful monitoring, patients are started on phosphate and multivitamin supplementation. Once they are medically stable, they receive nasogastric feeding overnight only, and this is reduced as oral feeding increases. Each patient then progresses through a meal plan that increases by 5 steps, beginning at 1800 kcal/day, and leading to maximal oral intake of 3,800 kcal/day. As the authors explain, each refeeding plan is individually designed according to the patient's medical needs. The plan is reviewed three times a week, and all meals are supervised by trained nursing staff.

Sizeable changes in weight did not affect depression or anxiety

The authors could find no evince of a relationship between weight and anxiety and significant changes in weight. These findings were consistent with conclusions from an earlier study by the author and her colleagues (*J Eat Disord*. 2015; 3:7). The authors also noted that although two-thirds of the young patients were receiving an antipsychotic mediation, this did not interact with the observed reductions in anxiety. Their findings "may challenge the increasingly routine administration of antipsychotic medications within this population," according to the authors. They call for future search with a longer follow-up, to further investigate this finding.

Men in ED Treatment Facilities

A well-meant change in Britain didn't apply well to ED treatment facilities.

In 2010, the British Department of Health (DOH) established guidelines for all hospitals to eliminate mixed gender wards, in an effort to preserve privacy and dignity for patients. However, this posed a problem for patients in specialist eating disorder services, according to Dr. Akira Fukutomi and colleagues. Since there is a low prevalence of makes to females in eating disorder treatment settings, men may have difficulty finding an eating disorder bed under the DOH guidelines.

Dr. Fukutomi and fellow researchers designed a study to find out if mixed gender accommodations in eating disorder units are thought to be helpful or unhelpful for recovery, and if men were being discriminated against on the basis of the elimination of mixed gender units. The authors contacted all 32 inpatient eating disorder treatment units accredited on the Quality Network for Eating Disorders (*BJPsych Bulletin*. 2018. p. 1; doi:10.1192/bjb. 2018.51). Inpatients were also asked to give feedback on their experience of single of mixed gender environments.

Thirty-eight eating disorders professionals registered on the QED network responded from 26 different ED units across the UK. There was a general agreement that ED units should be mixed gender wards and it was easy to ensure safety and dignity in such wards. Most did not think that mixed gender units discriminated against women and they did not think that being a male patient was detrimental to that man's care.

What patients thought

Fifty-three patients (46 female, 7 males) from 7 ED treatment units responded to the authors' survey. Forty-one participants (92%) had experienced admission a mixed gender unit and 29 (56%) had been treated in single and mixed gender settings. The majority of patients who added comments in an optional free text box were in favor of having a mixed gender unit. Many noted that having a mixed unit reelected the outside world and that mixed units were healthy for the dynamics. Only 3 patients surveyed had negative feelings toward mixed units; 2 female patients and1 male patient. The male patient felt isolated and slightly intimidated as the only man cause he said, "Many groups were geared toward females."

As a result of the survey, the authors developed several guidelines for mixed gender wards, including:

- A risk assessment has been done to make certain that the male patient doesn't pose a risk to female patients.
- Male patients have single bedrooms with en-suite bathroom and toilet facilities, if possible.
- Patients do not have to walk through a sleeping area or a bathroom occupied by a person of another gender.
- A women-only day room is available.

TMS for Anorexia Nervosa

A pilot study shows promising benefits without the lasting effects of ECT.

Given the lack of highly effective treatments for adults with anorexia nervosa (AN), there is naturally interest in trying strategies used for other treatment-refractory conditions. One example is transcranial magnetic stimulation (TMS), which has been applied to depression. Rather than medications, it uses

noninvasive magnetic fields to stimulate brain cells in a way that reduces symptoms of depression. TMS differs from electroconvulsive therapy (ECT) in not requiring anesthesia, not involving a seizure, and being free from the lasting cognitive effects that may occasionally occur following ECT. A recent study by Dalton and colleagues (*BMJ Open.* 2018; 8:E021531) describes the results of a pilot trial of TMS in AN.

A comparison study shows the benefits and a few limitations of TMS

The study included 17 people who received active TMS and 17 people who were given sham or placebo-like TMS stimulation (a procedure not expected to provide any benefit). Measurements included changes in body mass index (BMI; kg/m2) over time, as well as measures of mood, eating disorder symptoms, and quality of life. Standard-of-care ED treatment was also provided. A total of 20 treatment sessions were administered over a month, and the treatment target was the left dorsolateral prefrontal cortex. Importantly, this is the brain region typically targeted in the treatment of major depression.

The results shows small effects for BMI and global Eating Disorder Examination scores, with slightly better improvement in the active than in the sham condition. Larger changes were seen in quality of life, and particularly in mood, with both favoring active treatment.

The authors correctly note that this is a pilot study, and that larger studies of TMS are certainly warranted based on these results. It's interesting to note that when an area usually tied to mood was targeted with TMS, the most prominent changes were seen in mood. This may not be surprising, and it is certainly something that can be seen with other treatments for AN, but the changes associated with TMS exceeded those associated with the sham condition. One limitation of TMS is that it cannot readily target treatments deep within the brain, and some logical targets in people with AN would be relatively deep. Nonetheless, this work clearly needs further exploration, as it holds some promise in augmenting with the treatment of anorexia nervosa.

Compulsive Exercise and Outcome in Adults with Eating Disorders

In one study, motives and quantity of exercise were comparable among patients and healthy controls.

Two recent studies in Sweden and Germany have taken another look at CE and its effects in eating disorder,

In the largest study to date of the effects of compulsive exercise (CE) and EDs, Swedish researchers have evaluated self-reported CE among more than 9,000 adult patients with eating disorders (*J Eat Disord*. 2018; 6:11).

Using data from the Stepwise database, a clinical database for the full range of specialized ED treatment in Sweden, and the *Structured Eating Disorder Review* and *Eating Disorder Examination* (EDE) questionnaire, Dr. Elin Monell and colleagues found CE as a transdiagnostic symptom in almost half (48%) of patients. Overall, those who had begun follow-up while using CE had much poorer remission rates than patients who had ceased CE by then or never used CE. Restraint was also greater among men and women who actively used CE. ED outcome was not tied to the presence of CE, a surprise to the authors.

A second study: Marked differences between controls, patients

Dr. Sandra Schlegl and colleagues at the University of Munich recently designed a study of 226 female inpatients and 109 healthy controls to evaluate motivation and factors that could help predict patients at

risk for CE (*J Eat Disord*. 2018; 6:17).

The authors found that both patients with anorexia nervosa (AN) and bulimia nervosa (BN) exercised significantly more hours per week and showed higher CE than did the healthy controls, and so differences were noted between the two types of eating disorders. Motivations differed between the two groups: patients were motivated by enjoyment of the exercise, challenge, the recognition by others, and weight management. In contrast, healthy controls used exercise to avoid illness and to make friends.

The authors suggest that future research on CE focus not only on AN patients but also those with BN.

Questions and Answers: Overlooked Eating Disorders in Young Children

Q. We have been reading about ever-earlier cases of eating disorders in children. Are there any good general guidelines to help clinicians in general clinics identify these young patients? (**DN, Austin, TX**).

A. The rarity of anorexia nervosa in young patients makes the diagnosis elusive, particularly among primary care physicians, as shown in a recent report by Dr. Emel A. Berksoy and clinicians (*Nutr Hospitalaria*. 2018; 35:499).

The researchers describe the case of an 8-year-old boy with AN whose diagnosis was missed by several pediatricians and family physicians before the true cause for his symptoms was found. He was admitted to the hospital after extreme fatigue and lack of appetite. He was cachetic and could not stand. His body mass index was found to be 11.2 mg/kg^2. Celiac and other gastroenterological test results were normal.

The breakthrough came on the third day, when the boy was seen in the adolescent psychiatric clinic. The patient had a high level of anxiety, did not want to leave his mother and would not speak without being prompted. The young patient struggled with his body image and would not eat in the evening, for fear of "getting fat."

Based on the *DSM-5*, he was eventually diagnosed with AN, childhood depression, and separation anxiety disorder. He was prescribed 10 mg fluoxetine and 2.5 mg of olanzapine per day, and on this regimen began to take liquid nourishment again. His weight reached 18 kg. He eventually attended school again and was playing the games he had once enjoyed. Our colleagues working outside of the ED field can struggle with diagnosing ED, especially if the presentation is unusual or unexpected (in this case, and 8-year-old and a male). Ruling out medical issues is very reasonable, but this case reminds us of the need to counsel colleagues to inquire as we would regarding ED behaviors and thoughts.

— SC

In the Next Issue

What's New in Eating Disorders

A lot has been happening in our field. Just like new approaches to refeeding very ill patients, new discoveries and techniques are improving diagnosis, treatment, and outcome.

PLUS

- **Inpatient Care for ARFID Patients**
- **Narcissism and Self-Esteem in Patient with Bulimia Nervosa and Anorexia Nervosa**

- **Special Assessment and Treatment Track for Men with EDs**
- **Dealing with Pro-Anorexia Websites**

And much more...

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