

In Brief

Registered dietitians and nurses who specialize in diabetes education are often in the position of identifying patients at risk for an eating disorder or those who have an undiagnosed eating disorder. Diabetes educators will find it helpful to establish relationships and communication with eating disorder specialists in their area to prepare a plan for caring for these individuals.

The Diabetes Educator's Role in Managing Eating Disorders and Diabetes

Patti Urbanski, MEd, RD, LD, CDE,
Ann E. Goebel-Fabbri, PhD, Maggie
Powers, PhD, RD, CDE, and Dawn
Taylor, PsyD, LP

Registered dietitians (RDs) and nurses specializing in diabetes are trained to assess patients' understanding of diabetes and their educational needs. The National Standards for Diabetes Self-Management Education include a standard that all patients with diabetes receive an individualized assessment, which includes, among other things, relevant medical history and health beliefs and attitudes assessment.¹ It is appropriate for diabetes educators to evaluate for eating disorders as part of this assessment and to review patients' medical history for signs that might lead to an eating disorder diagnosis.

The functions of diabetes educators include helping individuals identify barriers to diabetes self-management, facilitating problem-solving and coping skills, and helping patients to balance eating, physical activity, medication, and blood glucose monitoring routines.² While performing these tasks, diabetes educators may encounter patients with a diagnosed eating disorder, with an undiagnosed eating disorder, or at particular risk of developing an eating disorder. It is crucial that diabetes educators are alert to these possibilities. This article summarizes information about identifying patients with an eating disorder and establishing treatment teams.

Diabetes and Eating Disorders

It is important for diabetes educators to have a general understanding of eating disorders and diagnostic criteria to help identify patients with or at risk for developing them. (These criteria are

discussed in detail in the article on p. 143 of this issue.) Table 1 presents risk factors and warning signs related to eating disorders in patients with type 1 diabetes (ED-DMT1) with which educators should be familiar.

Because diabetes educators seek to understand patients' day-to-day lifestyle activities, they are often the first health care professional to identify potential eating disorders. Patients rarely openly state that they have an eating disorder. Rather, the signs and symptoms are visible once the educator is alert to them and include increases in A1C levels, recurrent diabetes ketoacidosis (DKA), great interest in body shape and size, and over-exercising. Patients may comment about advanced physical symptoms such as hair loss or thinning, fainting episodes, or abdominal pain, or specific symptoms such as not eating with family or friends (anorexia), excusing themselves to the bathroom right after eating (bulimia), or frequently not having their insulin available at mealtime (insulin omission). These comments can easily be overlooked and not appropriately addressed unless educators are aware that they could be signs of an eating disorder.

Educators should be concerned about the medical stability of patients with advanced symptoms. Hyperglycemia and ketosis are the most life-threatening, urgent issues. Educators will frequently have patients perform self-monitoring of blood glucose during a visit to assess their skill, review equipment, or determine

Table 1. Risk Factors, Management Factors, and Warning Signs Associated with ED-DMT1

Risk factors for eating disorders in the general population³

- Female sex
- Dietary restraint and dieting
- Weight gain and being overweight
- Early puberty compared to peers
- Low self-esteem
- Disturbed family functioning
- Disturbed parental eating attitudes
- Peer and cultural influences
- Range of personality traits: According to research, traits include perfectionism, and/or a childhood anxiety disorder diagnosed before the age of 8 years. For anorexia, traits include a preference for routine and orderliness, difficulty adapting to change, avoidance of risks, and perfectionism.

Diabetes management factors that increase the risk of ED-DMT1³

- Higher BMI, which may result from decreased glucosuria and other unidentified mechanisms caused by intensive insulin therapy
- Perceived dietary restraint and focus on eating and food choices
- Easy availability of deliberate insulin omission to control weight
- Effect of diabetes on self-concept, body image, and family interactions
- Family dynamics involving autonomy and independence concerning diabetes self-management

Warning signs of ED-DMT1

- Overall deterioration in psychosocial functioning (school attendance and performance, work functioning, interpersonal relationships)
- Increasing neglect of diabetes management
- Erratic clinic attendance
- Significant weight gain or weight loss
- Increased concerns about meal planning and food composition
- Depressive symptoms (sad mood, low energy, poor concentration, fatigue, disrupted sleep)
- Multiple episodes of DKA
- Poor or worsening metabolic control

postprandial glucose values. If there are symptoms of ketosis, a urine or blood ketone test is recommended. Organizational procedures should be followed for the presence of ketones, but when seeking the underlying cause, questions related to the possibility of an eating disorder should be included.

Often, patients' physical appearance is the simplest factor to assess to determine the need for further medical evaluation. These symptoms include pale appearance, flushed cheeks, dry lips, dehydration, and signs of poor nutrition including dull hair, red or puffy gums, and fatigue. Nutritional deficiencies resulting from lack of food intake or purging of food can cause other symptoms such as confusion, anxiety, diarrhea, and loss of appetite. Other red flags include electrolyte abnormalities (especially potassium abnormalities), tachycardia, abdominal pain, hypotension, dizziness, and fainting. In these situations, prompt

communication with the referring physician and a referral for a medical appointment with the physician is indicated.

Treatment Teams

The presence of an eating disorder without the coexistence of diabetes requires an intense multidisciplinary approach that minimally requires a psychologist, a physician, and an RD. Although there are limited published data concerning the treatment of patients with a dual diagnosis of diabetes and an eating disorder, it is clear that an expanded multidisciplinary team is required and should include the addition of a physician, an RD, and a nurse with diabetes expertise. Additionally, the RD and nurse should be trained in the treatment of eating disorders to fully understand their treatment and best support the combined treatment goals. This *Diabetes Spectrum* From Research to Practice section is the first comprehensive

description for treating this dual diagnosis and should serve to guide such multidisciplinary teams.

In many communities, there is no organized treatment program for those with an eating disorder, let alone for those with this dual diagnosis. Many diabetes educators may feel unprepared to work with patients with the dual diagnosis. Some make the decision to obtain further education and training in the area of eating disorders to better help their patients with diabetes who also have eating disorders. Table 2 offers a list of resources that can be helpful in this regard.

To be prepared for patients at risk for or having an eating disorder, diabetes health care professionals should identify resources in their community to support treatment efforts. RDs and diabetes nurses might consider doing the following:

- Determine if there are any eating disorder conferences or association meetings in your area. Attend such meetings to help identify resources in your community and to learn more about eating disorders. See Table 2 for websites of national eating disorder organizations that may have state or local chapters. Also, ask a psychologist or social worker for recommended meetings.
- Make a list of professionals (by credential) who you would want to have as part of your dual-diagnosis team. Identify one or two names for each profession you want to include. Ask colleagues or contact a university professional program for recommendations.
- Invite an eating disorders expert to speak at a local or state dietetic association or diabetes educator meeting. Ask him or her to address resources and the dual diagnosis. Offer to collaborate.
- Start a discussion group to support the development of a treatment team and to provide ongoing development. Consider an e-mail distribution list, Facebook page, or other social media group to coordinate the discussion group and share resources and experiences.
- If an eating disorder program exists in your community, reach out to its staff to help them understand the unique needs of patients with diabetes and to discuss collaborative care and treatment programs.

Table 2. Eating Disorder Resources for Diabetes Educators

Publications and Programs

- Cash TF: *The Body Image Workbook: An Eight-Step Program for Learning to Like Your Looks*. 2nd ed. Oakland, Calif., New Harbinger Publications, 2008
- Choate LH: Toward a theoretical model of women's body image resilience. *J Couns Dev* 83:320–330, 2005
- Dimeff LA, Koerner K (eds.): *Dialectical Behavior Therapy in Clinical Practice: Applications Across Disorders and Settings*. New York, Guilford Press, 2007
- Fairburn CG: *Cognitive Behavior Therapy and Eating Disorders*. New York, Guilford Press, 2008
- Fariburn C: *Overcoming Binge Eating*. New York, Guilford Press, 1995
- Melrose Institute: *How Did This Happen? A Practical Guide to Understanding Eating Disorders: for Teachers, Parents and Coaches*. 2nd ed. Minneapolis, Minn., Park Nicollet Health Services, 2006
- Melrose Institute: *Journey: Stories of Those Living Through an Eating Disorder*. Minneapolis, Minn., Park Nicollet Health Services, 2004
- Melrose Institute: *The Journey Toward Freedom: Rediscovering the Pleasure of Normal Eating*. Minneapolis, Minn., Park Nicollet Health Services, 2006
- Jessica Setnick's Eating Disorders Boot Camp: Workshop information available online from <http://www.understandingnutrition.com/home.htm>. Accessed 3 February 2009
- Kelly SD, Howe CJ, Hendler JP, Lipman TH: Disordered eating behaviors in youth with type 1 diabetes. *Diabetes Educ* 34:572–583, 2005
- Kelly AM, Wall M, Eisenberg ME, Story M, Neumark-Sztainer D: Adolescent girls with high body satisfaction: who are they and what can they teach us? *Soc Adolesc Med* 37:391–396, 2005
- Koenig KR: *The Food and Feelings Workbook*. Carlsbad, Calif., Gurze Books, 2007
- Kratina K, King NL, Hayes D: *Moving Away from Diets*. 2nd ed. Lake Dallas, Tex., Helm Publishing, 2003
- Linehan MM: *Cognitive Behavioral Treatment of Borderline Personality Disorder*. New York, Guilford Press, 1993
- Linehan MM: *Skills Training for Treating Borderline Personality Disorder*. New York, Guilford Press, 1993
- Lock J, Le Grange D: *Help Your Teenager Beat an Eating Disorder*. New York, Guilford Press, 2005
- Maine M: *Body Wars: Making Peace with Women's Bodies*. Carlsbad, Calif., Gurze Books, 2000
- Maine M, Kelly J: *The Body Myth: Adult Women and the Pressure to be Perfect*. Hoboken, N.J., John Wiley and Sons, 2005
- Mehler PS, Andersen AE: *Eating Disorders: A Guide to Medical Care and Complications*. Baltimore, Md., Johns Hopkins University Press, 1999
- Neumark-Sztainer D: *I'm Like, So Fat*. New York, Guilford Press, 2005
- Treasure J, Schmidt U, Van Furth E (Eds.): *Handbook of Eating Disorders*. 2nd ed. London, John Wiley & Sons, 2003
- Tribole E, Resch E: *Intuitive Eating: A Revolutionary Program that Works*. New York, St. Martin's Griffin, 2003
- Woolsey MM: *Eating Disorders: A Clinical Guide to Counseling and Treatment*. Chicago, Ill., American Dietetic Association, 2002

Websites

- Academy of Eating Disorders: www.aedweb.org
- Eating Disorders Research Society: www.edresearchsociety.org
- The Federal Government Source for Women's Health Information: www.4woman.gov/BodyImage/bodywise
- Gurze Books: bookstore and a resource for information about eating disorders: www.bulimia.com
- International Association of Eating Disorders Professionals: www.iaedp.com
- International Diabetes Center: Patient education and professional ED-DM materials under development. Information available online from www.internationaldiabetescenter.com.
- Multiservice Eating Disorders Association: www.medainc.org
- National Eating Disorders Association: www.nationaleatingdisorders.org
- National Association of Anorexia Nervosa and Related Disorders: www.anad.org
- Remuda Ranch Programs for Eating & Anxiety Disorders: www.remudaranch.com
- Renfrew Center Foundation: www.renfrew.org
- Source for programs and support for a lifestyle without diets: www.hugs.org

When diabetes educators identify a potential eating disorder in a patient with diabetes and communicate this to the referring physician, it is not unusual for them to be asked to help coordinate treatment. Completing the above steps and having a plan ready for these situations can be useful.

Once a treatment team has been established, it is important for all members to have frequent and open communication to share information concerning patients' progress, treatment plans, and treatment goals. RDs and nurses may need to have patients sign release forms to communicate

with health care professionals outside of their immediate health care network. Check with your medical records department for specific policies concerning communication with other health care professionals.

The frequency of individual and group sessions depends on patients'

Table 3. Potential Research Topics Related to the Dual Diagnosis of Diabetes and Eating Disorders

- Who develops an eating disorder?
 - What are early indicators that someone with diabetes could potentially develop an eating disorder?
 - What risk factors make someone with diabetes vulnerable for developing an eating disorder?
 - What are characteristics of people with diabetes and eating disorders?
 - Is there a means of preventing ED-DMT1?
- What are the best therapy options for people with diabetes and an eating disorder?
 - Is there a specific approach to MNT that provides the best results?
 - Should usual diabetes self-care behavior expectations be adjusted if someone has an eating disorder?
 - How frequently should therapy sessions be held?
- Are there specific criteria for inpatient eating disorder treatment for patients with diabetes or is initial treatment for eating disorders and diabetes inpatient management the same for everyone?
 - What is the optimal length of stay for people with diabetes in inpatient eating disorder treatment?
 - How can inpatient treatment be tailored to better meet the needs of this subpopulation?
 - How much hands-on experience should patients have and how soon should they be able to dose their own insulin in the inpatient setting?
 - Can insulin pumps be used safely in the inpatient setting?
- How quickly should exercise be integrated into the treatment for patients with eating disorders and diabetes with issues of compulsive exercise?

needs and the resources available. Some programs have patients meet weekly with an RD and a psychologist, whereas others have patients meet 5 days a week with various professionals. Details of recommended treatment plans and goals are discussed in detail in the article on p. 147 of this issue. The intensity and frequency of visits is a crucial component of therapy, and diabetes educators should reinforce the need for them.

Setting small, incremental goals such as reestablishing appropriate insulin doses and normalizing eating patterns to maintain patient safety is the initial treatment focus. All members of the treatment team should keep in mind that past diabetes experiences with extreme focus on glycemic control, managing food intake, and managing body weight affects patients' current diabetes management and disordered eating behaviors.

Research Needs

There is a dearth of information about identifying and treating people with diabetes and an eating disorder. Research has focused on the prevalence of eating disorders, A1C levels,

and prevalence of complications, with a few studies describing characteristics in select populations.³⁻⁹ Additional research is needed to increase understanding about this medical condition, who it affects, and how best to treat it. Potential research topics could include the questions shown in Table 3. Diabetes educators may be able to help facilitate such research by connecting with staff who conduct research at a university or national program.

Conclusion

Diabetes educators play an integral role in helping patients manage their diabetes and the aspects of their lives that diabetes affects. Because eating disorders have an enormous impact on patients' ability to manage diabetes, it is crucial that diabetes educators be familiar with the identification and treatment of these conditions and seek out resources to further their ability to care for this dual diagnosis.

References

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⁴Crow SJ, Keel PK, Kendall D: Eating disorders and insulin-dependent diabetes mellitus. *Psychosomatics* 39:233-243, 1998

⁵Colton PA, Olmsted MP, Daneman D, Rydall AC, Rodin GM: Five-year prevalence and persistence of disturbed eating behavior and eating disorders in girls with type 1 diabetes. *Diabetes Care* 30:2861-2862, 2007

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Patti Urbanski, MEd, RD, LD, CDE, is a clinical dietitian and diabetes educator at the Duluth Family Medicine Residency Program in Duluth, Minn. Ann E. Goebel-Fabbri, PhD, is a psychologist at the Joslin Diabetes Center, Behavioral and Mental Health Unit, in Boston, Mass. Maggie Powers, PhD, RD, CDE, is a research scientist at the International Diabetes Center at Park Nicollet in Minneapolis, Minn. Dawn Taylor, PsyD, LP, is a psychologist at the Melrose Institute at Park Nicollet in Minneapolis, Minn.