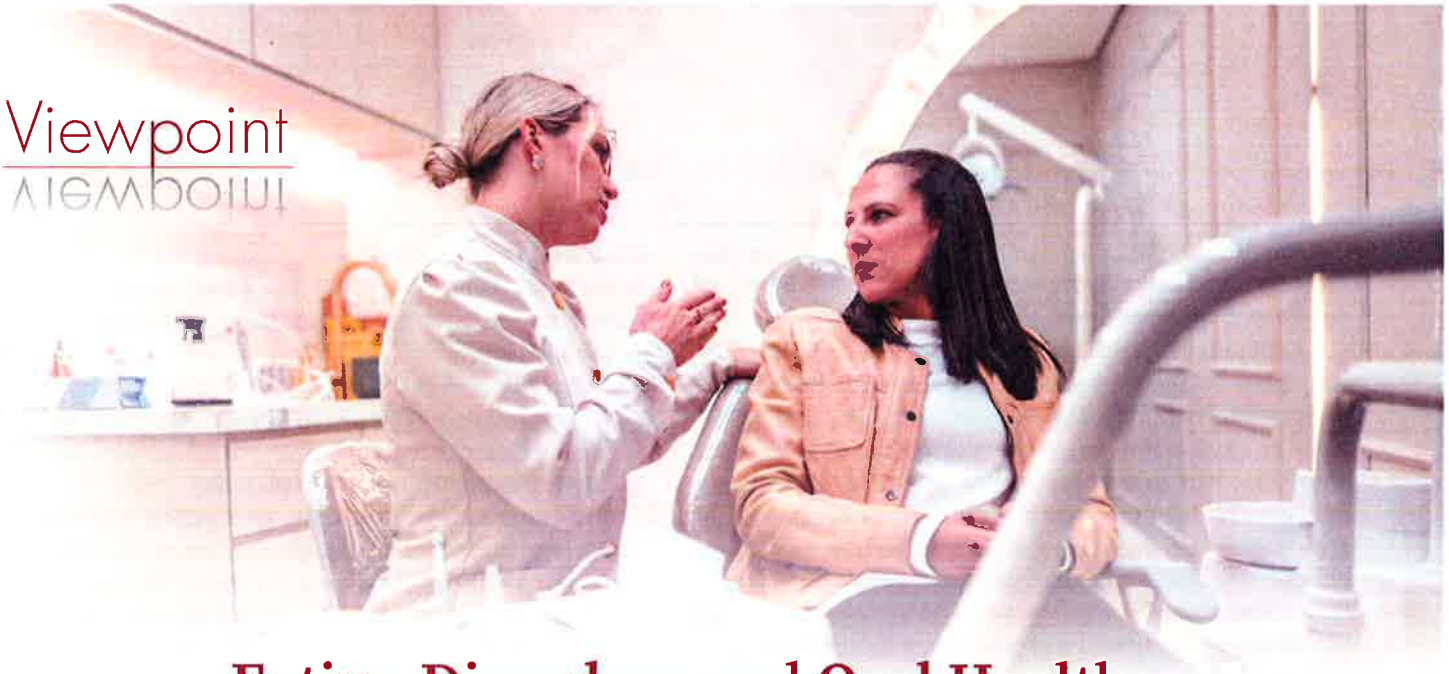

Eating Disorders and Oral Health
A Dental Professional's Role

Author speaks from experience when she encourages dentists to be cognizant of signs their patients may be engaged in harmful eating behavior and be prepared to intervene.

Bree Zhang

I am a dental student who has struggled with an eating disorder.

A reason why I chose to enter dentistry was because dentists can play a huge role in working with patients with eating disorders. Eating disorders are more common than we think, affecting 9% of the world's population and increasing in prevalence each year. They are not just a "phase" and, in fact, they can cause irreversible and even life-threatening health problems, such as heart failure, permanent bone loss, stunted growth, infertility, kidney damage and more.[1] In fact, eating disorders have one of the highest mortality rates of all psychiatric illnesses, second only to opioid overdoses. About 26% of people with eating disorders attempt suicide.[2]

Research shows early intervention provides a greater chance of recovery. As dental professionals, we often see patients every six months, and we sit in a space where conversations easily flow to topics about food, diet, nutrition and more. Furthermore, the mouth is a window to the health of the body and the first place to reflect signs of nutritional deficiencies and imbalances.[3] It is also a place that hides signs of purging that are not easily visible to other medical providers—but in plain sight for dental providers. [4]

We can serve as a point of early detection if we notice habits, mindsets or oral health manifestations that point towards eating disorders. In fact, approximately 28% of patients suffering from bulimia are first diagnosed during a dental exam, according to the National Institute of Dental and Craniofacial Research.[5]

Be Proactive and Prepared

Currently, while dental professionals are often the first healthcare providers to examine and recognize patients with eating disorders, most dentists do not take action out of fear of losing the patient, insufficient confidence in their suspicion, failure to initiate conversation due to uncertainty about how to broach the issue, and lack of office protocol and practice policy.[6]

Familiarize Yourself with Risk Factors

There are many biological, psychological and social risk factors at play. Biologically, having a history of dieting or negative energy balance can predispose one to an eating disorder. People with food allergies, gastrointestinal conditions (IBS, celiac disease, etc.) or diabetes are more predisposed to eating disorders due to the reality in which they

are required to focus on food, labels, numbers (weight, blood glucose, A1c) and control.[7] In fact, one-fourth of people with diabetes develop an eating disorder.[8]

Additionally, psychological risk factors of perfectionism, body image dissatisfaction, behavioral inflexibility and co-occurring psychological conditions like anxiety, depression, substance use, obsessive-compulsive disorder and PTSD, can predispose one to an eating disorder. In fact, two-thirds of those with anorexia showed signs of an anxiety disorder, including generalized anxiety, social phobia and obsessive-compulsive disorder, before the onset of their eating disorder.[7,10]

Societal expectations and popular media also contribute to development of eating disorders, leading to weight stigma, teasing or bullying, appearance ideal, internalization, limited social networks, historical trauma/intergenerational trauma, and acculturation. In particular, people from racial and ethnic minority groups, especially those who are undergoing rapid Westernization, may be at increased risk for developing an eating disorder due to complex interactions between stress, acculturation and body image.[7]

Establish a Protocol and Plan

How do we become prepared? As a dental team, we can establish in-office protocol for our dental team so that we are prepared to know:[6]

1. What to look for.
2. What to do/say when encountering a patient with an eating disorder.
3. How to approach treatment planning.

We can publicize familiarity with eating disorders on our website and office so that patients know our office is a safe space and helpful resource for them. We can also improve early detection by adding eating disorder screening questionnaires with medical history to offer patients more options for disclosure if they do not feel comfortable with an upfront conversation.[6]

Know What to Look For

Physical Signs

When appraising a patient, we should be observant of any recent changes in their general demeanor, gait and facial symmetry.[5]

Physically, patients with anorexia may present with:[9]

1. Fluctuations in weight.
2. Hair thinning/hair loss.
3. Lanugo, a layer of soft, downy hair over their body.
4. Edema—swelling in legs/ankles.
5. Brittle nails and nail clubbing, jaundice—yellowish skin and eyes.

Patients with bulimia may look like they have a more normal weight, but they might present with:[9]

1. Acute sialadenosis—"Chipmunk cheeks," that is, puffy, swollen cheeks.
2. Parotid gland swelling.
3. Russell's sign—abrasion on knuckles from self-induced vomiting.

Conversational Signs[9]

Warning signs in conversation can include:

1. If the patient talks about frequent dieting or engagement with fad diets (keto, no carbs, no dairy, vegetarianism/veganism).
2. If they show a preoccupation with weight, dieting, food, calories.
3. If they mention their refusal to eat certain food categories.
4. If they have obsessive compulsive tendencies towards oral hygiene routine.
5. If they complain about being cold all the time.
6. If they make any mention of loss of period (for female patients).

Oral Signs

There are many dental complications for both eating disorders, often resulting from nutritional deficiencies or acid regurgitation. Patients with anorexia can develop:[4-6,15]

- Canker sores.
- Chronic dry mouth.
- Angular cheilitis.
- Candidiasis.
- Glossitis.
- Enamel erosion.
- Dry, cracked lips.
- Tooth decay from dry mouth and impaired saliva buffering.

Patients with bulimia may develop:[4-6,15,22]

- Dental erosion on the palatal surfaces of maxillary anterior teeth.
- Parotid gland swelling.
- Cuts/ulcerations on the soft palate and oropharynx—from insertion of objects to induce vomiting.
- Globus sensation.
- Incisal fractures and chipping.
- Peri-mylolysis in posterior teeth.
- Hypersensitivity + temperature sensitivity.
- Loss of bone density, increasing the risk of jaw fracture during extractions.

In addition to these complications, patients with eating disorders may also develop degenerative arthritis within the temporomandibular joint, creating pain in the joint area, chronic headaches and problems chewing and opening/closing the mouth.[17]

Establishing a Safe, Nonjudgemental Space

When you talk to patients, try to ask questions using general terminology.

- Instead of "Do you purge?" you can ask, "Do you ever feel guilty after you eat?"[12]
- Instead of "do you have an eating disorder," you can ask, "do you struggle with issues around food, eating and exercise?"[12]

You can also ask patients about their current challenges, either healthwise or in general, to get to the root cause of any disordered eating patterns. If you suspect your patient does have an eating disorder, don't let your hesitation of being wrong stop you from potentially helping a patient with an eating disorder. Always approach the conversation in a nonthreatening, nonjudgemental manner: [11,12,13]

1. Discuss the problem privately, without others around.[11]
2. Use "I" statements ("I have noticed") rather than "you" statements ("you may have XYZ"). [13]
3. Focus your language on your observations, rather than the diagnosis. For instance, if there is dental erosion, we can mention some probable causes (acid reflux or frequent vomiting) and give patients an opportunity for disclosure. "There are several problems with your teeth, including x, y, z. These problems can be associated with vomiting or a lack of nutrients in your diet."[11]
4. Give your patient dignity but stand firm with what you observe and what you know.
5. Reassure the patient that they are not alone and that eating problems are common.[14]
6. Commend the patient if they are willing to talk about their problem (e.g., "I understand how difficult this is" or "I'm really glad you are talking to me").[11] Reference the facts. Patients may not realize the severity of the health problems that can arise from their eating disorders. As a dental provider, you are in a unique position to educate your patients about the potential dental complications of eating disorders and nutri-

tional deficiencies (mouth sores, bad breath, cracked lips, swollen gums, receding gums) and complications of frequent vomiting/purging (erosion, brittle teeth, discoloration). Make sure your patients are informed about their oral health.[11]

7. Be prepared for resistance and denial. You should speak the truth about what you see and the facts you know. However, if your patient does not want to hear them, do not push them.[11]
8. Avoid being critical, suggesting quick fixes or commenting on the patient's weight, appearance or health in general.[11-13]
9. If the patient denies they have an eating issue, accept their answer and focus on maintaining or restoring their oral health.[11]
10. Provide the patient with information on how to improve or maintain their dental health overall.[12]

Throughout this process, you should keep in close communication with other medical providers, as patients may be prescribed new medications (antidepressants) that could affect their oral health (xerostomia) and dental treatment plan.

Managing Dental Care

ED patients need regular dental visits for continuing care and support; they should also be regarded as medically compromised due to the risk of dangerous medical complications, which can include cardiac arrhythmias and cardiac arrest from electrolyte imbalances, risk for osteoporosis and jaw fracture during extractions, and gastric bleeding. Blood pressure should be monitored. A comprehensive medical history should be taken and reconfirmed at every visit, and a thorough intraoral and extraoral exam should be performed.[5]

In-office Dental Care

To remineralize enamel and reduce tooth sensitivity, you can introduce in-office fluoride varnish applications and fluoride mouthrinses. Essential restorative work should be done to limit tooth damage and relieve pain, but more permanent dental restorations, such as crowns, should not be completed while a patient is purging regularly (acid erosion will shorten the life of the restorations).[5]

Home Care + Oral Hygiene Routine

The patient should be encouraged to brush three times a day with a soft brush and fluoridated toothpaste. They should be reminded to clean interproximally daily, and also clean their tongue, to remove biofilm and acid residue. To remineralize enamel, patients can use self-applied neutral fluoride and calcium + phosphate products. To relieve dry mouth, patients can take saliva substitutes during the day. Xylitol products (toothpaste, gum, candies) are beneficial for salivary flow, reducing caries and acidity.[5]

It's important to remember that patients may still be purging throughout their recovery process. The patients can wear a mouthguard to protect teeth during purging episodes. Due to the high acidic content in the stomach, the patient should not brush directly after vomiting because it can scrub acids deeper into the tooth enamel and may cause more loss in tooth structure. After purging, patients can first neutralize their oral pH by adding a spoon of baking soda to a cup of water and rinsing their mouth or rinsing with a product with calcium and phosphate ions. They should wait at least one hour before brushing.[5]

Working with a Support Team

You can also remind your patient that they are not alone, and that there are many people who can be on their support team, including:[18,19]

- Primary care physician (PCP).
- Psychiatrists for medication prescription and management.
- Nutritionists/registered dieticians to provide education on nutrition and meal planning.
- Psychologists/counselors for psychological therapy.
- Partner, parents, other family members, friends.
- School nurse/counselor (if attending school).
- Medical and dental specialists to treat other underlying health issues.
- Eating disorder support group.

Throughout this process, you should keep in close communication with other medical providers, as patients may be prescribed new medications (antidepressants) that could affect their oral health (xerostomia) and dental treatment plan. Patients may also undergo refeeding syndrome that should be monitored carefully, and they may need to

see other specialists to address additional health complications, especially as eating disorders often lead to multi-organ damage. Elective dental procedures should get medical clearance before you perform them.[3,5,20]

If patients are looking for an eating disorder support group, you can encourage them to ask their doctor or therapist for a referral, call local hospitals and universities, call local eating disorder centers and clinics, or visit their school's counseling center.

Continuous Learning

While for this article, I mostly covered symptoms of anorexia and bulimia nervosa, it is important to note that there are various dimensions of eating disorders, such as Binge Eating Disorder (uncontrolled, binge eating and no purging), Avoidant/Restrictive Food Intake Disorder (restrictive food intake, but lacking the psychological consequences of AN), Rumination Disorder (regurgitation of ingested food), and more.[21]

Your job is not to diagnose but to help support your patient and get them the proper help for recovery. Let us work together as a profession to support our patients through this journey.

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