Editor's key points

- Binge eating disorder (BED) is the most prevalent eating disorder but often goes undetected, despite being added to the *Diagnostic and Statistical Manual of Mental Disorders*, 5th edition, in 2013.
- Given the potential medical morbidity, the economic repercussions, and the chronic and debilitating impact on patients, it is important for BED to be accurately diagnosed and managed.
- Based on their relationships with patients, primary care practitioners can play critical roles in the screening, diagnosis, and management of BED. Primary care practitioners can also provide education and support to patients as well as collaborate with other health care professionals (eg, dietitians and therapists with eating disorder experience) to help improve the lives of patients with BED.

Binge eating disorder

Updated overview for primary care practitioners

Aaron Keshen MD FRCPC Allan S. Kaplan MD MSc FRCPC Philip Masson PhD CPsych Iryna Ivanova PhD CPsych Barry Simon MD FRCP Richard Ward MD CCFP FCFP Sarrah I. Ali BA Jacqueline C. Carter MA DPhil RPsych

Abstract

Objective To provide an updated overview of binge eating disorder (BED) that includes recommendations relevant for primary care practitioners.

Quality of evidence PubMed, Google Scholar, and PsycInfo were searched with no time restriction using the subject headings *binge eating disorder, treatment, review, guidelines, psychotherapy, primary care,* and *pharmacotherapy*. Levels of evidence for all treatment recommendations ranged from I to III.

Main message Binge eating disorder is associated with considerable patient distress and impairment, as well as medical and psychiatric comorbidities, and was added to the *Diagnostic and Statistical Manual of Mental Disorders,* 5th edition, in 2013. Primary care practitioners are well suited to screen, diagnose, and initiate treatment for BED. A stepped-care approach to treatment starts with guided self-help, adding or moving to pharmacotherapy or individual psychotherapy as needed. The psychotherapies with the most research support include cognitive behaviour therapy, interpersonal therapy, and dialectical behaviour therapy. In terms of pharmacotherapy, evidence supports the use of lisdexamfetamine, antidepressant medications, and anticonvulsant medications.

Conclusion This overview provides guidance on screening, diagnosis, and treatment approaches based on the currently available evidence, as well as expert opinions of a diverse group of experts to help guide clinicians where evidence is limited.

In 2013 the new diagnosis *binge eating disorder* (BED) was added to the *Diagnostic and Statistical Manual of Mental Disorders,* 5th edition (*DSM-5*).[1] Binge eating disorder is characterized by regular episodes of binge eating in the absence of regular compensatory behaviour, such as self-induced vomiting, fasting, excessive exercising, or misuse of laxatives. *Binge eating* is defined as consuming an abnormally large amount of food in a discrete period of time (eg, 1 to 2 hours) while experiencing a sense of loss of control.[1]

Binge eating disorder is the most prevalent eating disorder but frequently goes undiagnosed in primary care.[2] The lifetime prevalence of BED is between 0.85% and 2.8% in the community.[2,3] Binge eating disorder is more common in men compared with other eating disorders, and it has a female-to-male ratio of approximately 2:1.[4,5]

Individuals with BED are at an increased risk of a range of other medical conditions, including hypertension and type 2 diabetes.[6] Binge eating disorder has strong associations with obesity, with studies estimating a prevalence of 30% to 50% in patients seeking treatment for obesity.[7] Importantly, however, BED appears to increase the risk of physical disorders over and above the risk associated with obesity alone. Further longitudinal studies are needed to fully elucidate the nature of this relationship.[8]

Psychiatric comorbidities are common; 79% of people with BED also meet criteria for another psychiatric disorder,[9] with increased rates of depression,

bipolar disorder, anxiety disorders, substance use, and attention deficit hyperactivity disorder (ADHD).[3,10,11]

Binge eating disorder carries a substantial economic burden. A Canadian study found that each individual with BED results in average health care costs of $2759 per year related to physician visits, medication use (eg, antidepressant medication), and medical tests: this is 36.5% higher than published age- and gender-matched controls.[12]

Despite the debilitating nature of BED and its considerable medical and psychiatric comorbidities, an online survey found only 3.2% of individuals who met *DSM-5* criteria for BED had received a diagnosis from a health care provider.[4] This low diagnosis rate may be owing to clinicians' lack of awareness of BED or reluctance of patients to discuss their symptoms.

Objective

Given the low rate of screening for BED by health care professionals, and the association with obesity, mental health disorders, and metabolic disorders, it is important that primary care practitioners (PCPs) become aware of this underdiagnosed eating disorder. This article provides recommendations to highlight how PCPs are in a strong position to screen for, diagnose, and manage BED in a primary care setting.

Quality of evidence

A literature search was conducted in PubMed, PsycInfo, and Google Scholar with no time restriction using the subject headings *binge eating disorder, treatment, review, guidelines, psychotherapy, primary care,* and *pharmacotherapy*. References from selected articles were reviewed. The level of evidence for most treatment recommendations was level I. When level I or II evidence was not available, expert experience from key clinical and research opinion leaders in the Canadian eating disorder field was used as level III evidence.

Main message

Pathophysiology

An interaction between biological, psychological, and social factors contributes to the development and continuation of BED. Below, we briefly summarize the main conceptual models that have been proposed to explain BED. Each of these models examines unique factors that may apply to some patients and not others, creating a fuller understanding of the complex systems underlying BED, and thus may best be viewed as complementary as opposed to competing explanations.

The emotion-affect regulation theory of BED posits that individuals with BED have difficulties regulating their emotions and engage in binge eating to regulate aversive emotional states.[13] While binge eating provides temporary relief, the guilt and distress that follow tend to trigger further binge eating, perpetuating the disorder. The reason that some individuals with BED experience emotional dysregulation is not fully understood; however, there is evidence that supports causal factors related to genetics, epigenetics, and adverse childhood events (eg, childhood trauma).[14]

Neurobiological theories of BED focus on dysfunctional neural mechanisms in the brain's reward systems, including a low dopaminergic state, and resulting hyperreactivity to the hedonic properties of food.[15] In addition, executive functioning deficits (eg, inhibitory control) and impulse control difficulties have been implicated in BED.[16,17]

The cognitive behavioural model proposes that binge eating develops as a result of dietary restraint with the intention of suppressing weight. According to this model, rigid dietary restraint perpetuates a cycle in which restraint contributes to binge eating, which in turn exacerbates guilt and shame, further triggering binge eating and attempts to restrict food intake, and so on.[13]

Screening and diagnosis

One of the challenges of screening for BED is that individuals find the disorder difficult to discuss with their health care providers, in part because of the stigma and shame associated with binge eating[18,19] and obesity. **Box 1** contains recommendations for taking a history in a manner that mitigates shame and guilt.[1]

In primary care, PCPs can ask simple and direct questions to efficiently screen for BED (**Box 1**).[1] It is important to keep specific case-finding indicators for BED in mind, including weight gain in the year before seeking treatment, reluctance to discuss eating habits, metabolic syndrome, mood or anxiety disorders, childhood obesity, recurrent unsuccessful attempts to diet, exposure to traumatic life events or stressors, and familial eating problems (eg, family preoccupied with dieting, body shape, and weight).[19]

For those who have positive screening results for BED, the *DSM-5* diagnostic criteria should be used to confirm the diagnosis (**Box 2**).[1] Receiving a diagnosis of BED, when appropriate, can in itself be very helpful for patients. Many experience high levels of shame, stigma, and self-blame, and therefore it can be therapeutic for patients to understand that BED is a mental health disorder with a complex pathogenesis.

Treatment

General principles. Individuals with BED often present to their PCPs with a primary goal of weight loss; thus, failing to respond to these concerns may negatively impact the therapeutic alliance. However, it is important to highlight that the sequential goals of BED treatment should be to reduce or eliminate binge eating episodes

and then, over the long term, to work with patients to explore ways of achieving their physical health goals safely. To this point, it is critical to help the patient reduce their *overconcern* about weight as well as unrealistic weight-loss goals because these factors tend to perpetuate BED. This can also help reduce body shame that can serve as a maintaining factor for BED. Primary care providers can supply the patient with nutrition education (eg, Canada's Food Guide handout or consultation with a dietitian) on the importance of maintaining a normal meal structure and avoiding rigid dietary restraint as a means of quick weight loss. Importantly, PCPs should also be aware of their own implicit and explicit anti-fat biases and obesity stigma, which are pervasive in health care and can impact the care provided.[20,21]

Treatment options. Shared decision making with patients is recommended when choosing the evidence-based treatments outlined in this article. Outpatient treatment can be applied using a stepped-care approach with the decision on where to start and whether to combine or skip steps made on a case-by-case basis, taking into consideration patient preference, patient motivation, comorbidities, and availability of treatment options (**Figure 1**).

Guided self-help. Current research supports the efficacy (small to medium effect sizes) and cost-effectiveness of self-help treatment as the first step in the treatment of BED.[18] Self-help interventions (eg, via books, Internet, or smartphone apps; **Box 3**) have the advantage of overcoming accessibility-related barriers associated with traditional face-to-face psychotherapy. Limitations of self-help interventions can include low levels of patient adherence, which can be impacted by the lack of personal contact.[22] Therefore, while self-help interventions *can* be offered without professional guidance, some evidence suggests more favourable outcomes with *guided* self-help approaches.[23] It is also important for PCPs to be familiar with the self-help programs they are recommending when providing guidance. In this context, guidance is supportive, brief, and less intensive than individual psychotherapy and can be provided by a range of health care professionals, including PCPs. Effective guidance can consist of an initial meeting followed by shorter follow-up sessions (eg, brief weekly or biweekly face-to-face, telephone, or video sessions) to confirm adherence and provide support.[24,25]

Individual psychotherapy. In more complex cases where there is psychiatric comorbidity or when a patient does not respond to self-help interventions, a referral for individual psychotherapy may be warranted. There are several types of psychotherapy used to treat BED, with cognitive behaviour therapy (CBT), interpersonal therapy, and dialectical behaviour therapy having the strongest evidence base and accessibility.[26]

Box 1. Recommendations for taking a history to diagnose BED: *A) Approaches to help initiate a conversation about BED, and B) examples of BED screening questions.*

A)

Affirm that BED is a real mental health condition
- "BED is a real mental health condition and I'm here to help you with it"

Emphasize that patients are not alone
- "BED is the most common eating disorder"

Try asking permission
- "I recognize this is a sensitive topic. Is it OK if I ask you some questions about your eating?"

B)

Within the past 3 months have you ...
- Had episodes of eating substantially more than what most people would eat in a similar period and felt out of control while doing so?[1]
- Felt distressed about these episodes of overeating (eg, embarrassed or guilty)?[1]
- Continued eating during these episodes despite not being hungry?[1]

BED—binge eating disorder.

Box 2. *DSM-5* diagnostic criteria for BED

- Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
  - -eating, in a discrete period of time (eg, within any 2-hour period), an amount of food that is definitely larger than what most people would eat in a similar period of time under similar circumstances, and
  - -a sense of lack of control over eating during the episode (eg, a feeling that one cannot stop eating or control what or how much one is eating)
- The binge eating episodes are associated with 3 (or more) of the following:
  - -eating much more rapidly than normal,
  - -eating until feeling uncomfortably full,
  - -eating large amounts of food when not feeling physically hungry,
  - -eating alone because of feeling embarrassed by how much one is eating, or
  - -feeling disgusted with oneself, depressed, or very guilty afterward
- Marked distress regarding binge eating is present
- The binge eating occurs, on average, at least once a week for 3 months
- The binge eating is not associated with the recurrent use of inappropriate compensatory behaviour (eg, purging) and does not occur exclusively during the course of anorexia nervosa, bulimia nervosa, or avoidant or restrictive food intake disorder

BED—binge eating disorder, *DSM-5—Diagnostic and Statistical Manual of Mental Disorders*, 5th edition.
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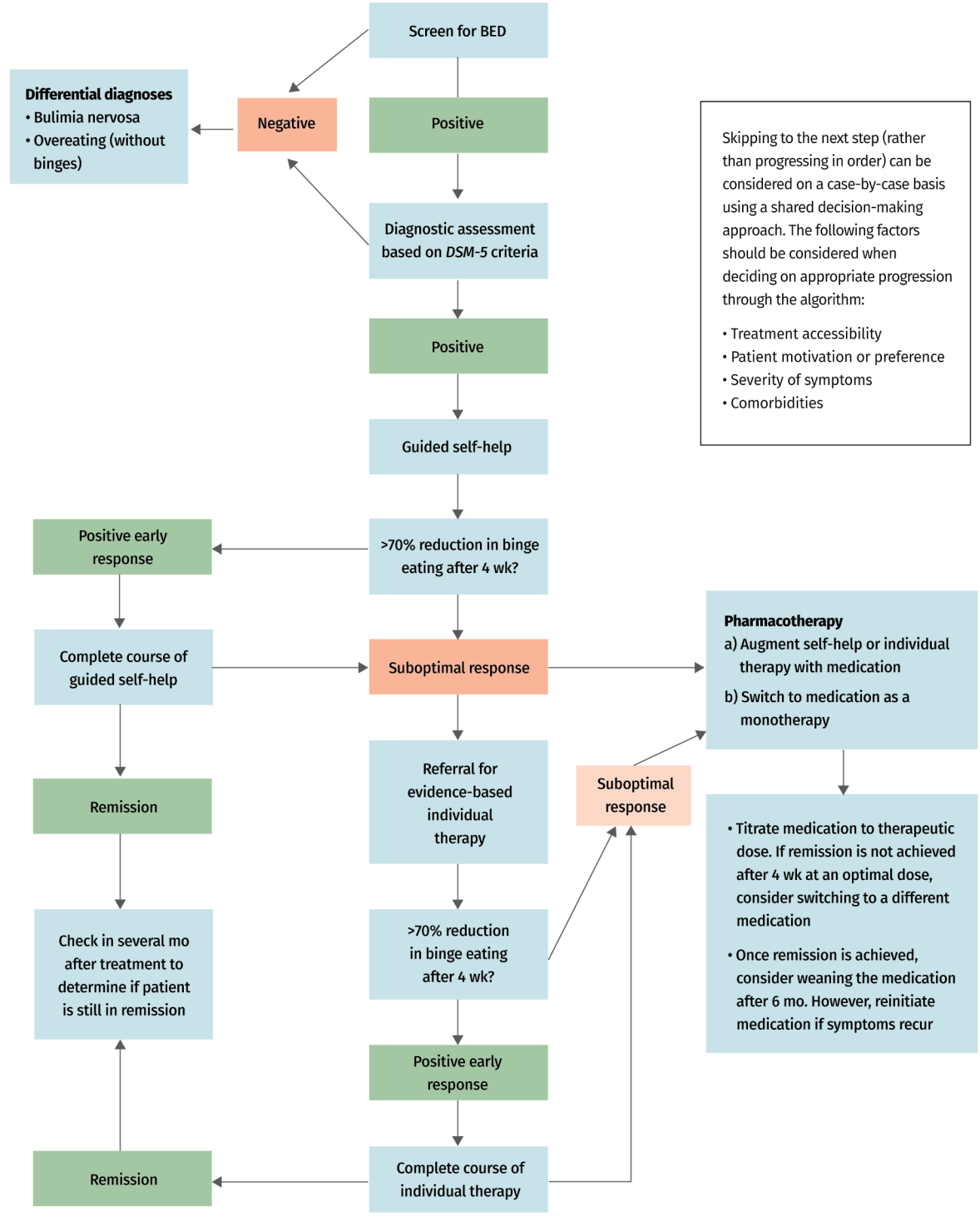
Figure 1. Treatment algorithm



BED—binge eating disorder, *DSM-5—Diagnostic and Statistical Manual of Mental Disorders*, 5th edition.

Box 3. Self-help treatment recommendations

Books
- Fairburn CG. *Overcoming binge eating.* 2nd ed. New York, NY: Guilford Press; 2013.
- Safer DL, Adler S, Masson PC. *The DBT solution for emotional eating.* New York, NY: Guilford Press; 2018.
- Agras WS, Apple RF. *Overcoming your eating disorder. A cognitive-behavioral therapy approach for bulimia nervosa and binge-eating disorder.* New York, NY: Oxford University Press; 2007.

Smartphone app as an add-on to books
- *Recovery Record*. Palo Alto, CA: Recovery Record; 2011. Available from: **https://www.recoveryrecord.com/**. Accessed 2022 May 3.

Recent meta-analyses have shown that, compared with wait list controls, CBT reliably helps patients achieve remission from binge eating (approximately 50% to 60% of patients) and reduces eating disorder psychopathology.[27,28] However, there have been few differences observed with CBT compared with other interventions in head-to-head trials.[29,30] Currently, there is little research identifying which patients respond best to CBT versus other methods, but expert consensus suggests that dialectical behaviour therapy may be particularly suitable for BED patients with high impulsivity and emotional dysregulation, and interpersonal therapy may be more suitable to individuals with interpersonal difficulties. When referring patients for therapy, ensure that the provider receiving the referral has been trained in the eating disorder–specific versions of these methods as opposed to, for example, general CBT. Of note, these individual therapies have also been studied in youth, although the evidence supporting their use in this demographic is limited.

Nutrition therapy. Across the continuum of care, dietitians with eating disorder training can play an important role in the multidisciplinary management of BED.[31] Specifically, dietitians can help patients normalize their daily food intake and ensure adequate nutrition to minimize binges.

General pharmacotherapy principles. Medication management of BED is most appropriate as an adjunct therapy, or as stand-alone treatment for individuals for whom psychotherapy is not available or whose symptoms are unresponsive to psychotherapeutic interventions.[32] Moreover, medication may be included as part of a first step when psychotherapeutic options are not available or are declined, or when there is a substantial psychiatric comorbidity that may concurrently respond to pharmacologic intervention (eg, mood or anxiety disorders, ADHD).

This overview focuses on pharmacologic agents that have the strongest evidence to date in the treatment of BED: lisdexamfetamine (LDX), second-generation antidepressants, and topiramate.[33] Of note, LDX is the only medication indicated for BED approved by the US Food and Drug Administration and Health Canada.

Lisdexamfetamine: Two multicentre, double-blind, placebo-controlled trials of LDX demonstrated that it was statistically significantly superior to placebo for global improvement in BED pathology and for reducing the frequency of binge eating days, BED-related obsessive-compulsive pathology, and relapse.[34] The long-term safety and tolerability open-label extension trial showed that the adverse events associated with LDX were consistent with those previously reported for other long-acting stimulants in the treatment of ADHD.[35]

Second-generation antidepressants: Multiple randomized controlled trials looking at the impact of second-generation antidepressants (eg, selective serotonin reuptake inhibitors, serotonin-norepinephrine reuptake inhibitors) in BED have demonstrated an increase in binge eating abstinence and a decrease in binge eating episodes per week and eating-related obsessions and compulsions.[36] Second-generation antidepressants may be especially worthy of consideration for BED in those individuals with comorbid anxiety and depression or with contraindications to LDX (eg, active substance issues, cardiac issues).[37]

Anticonvulsant medications: A large, multicentre randomized controlled trial and longer-term study have supported the effectiveness and safety of topiramate in BED.[38,39] Although the results supported the long-term effectiveness of topiramate, the high discontinuation rate indicated issues with its tolerability.[39] Expert opinion suggests that topiramate might be most helpful in those with comorbid mood instability or bingeing that occurs mostly late at night (owing to evening dosing).

Duration of pharmacologic treatment: Although there are limited data to guide the duration of treatment, expert opinion suggests medication discontinuation in patients who have been stable for 6 months. If symptoms relapse, additional 6-month intervals could be tried. However, these decisions should be made based on a shared decision-making approach with patients. Similar to treating mood disorders, some patients may prefer or require long-term treatment.

Conclusion

Primary care providers are well suited to screen for, diagnose, and initiate treatment for BED. In addition, given the first-line treatment role of self-help interventions, PCPs can treat patients without a psychiatrist or psychologist, and if first-line interventions are not an option or ongoing symptoms persist despite therapy, PCPs can also prescribe medications for BED.

Dr Aaron Keshen is Assistant Professor in the Department of Psychiatry at Dalhousie University in Halifax, NS. **Dr Allan S. Kaplan** is Senior Clinician/Scientist at the Centre for Addiction and Mental Health in Toronto, Ont; Professor in the Department of Psychiatry at the University of Toronto; and a full member of the graduate faculty of the Institute of Medical Science. **Dr Philip Masson** is an adjunct clinical psychology faculty member at Western University in London, Ont. **Dr Iryna Ivanova** is a clinical psychologist at Ivanova Psychology & Associates in Ottawa, Ont. **Dr Barry Simon** is a consultant in the

Leadership Centre for Diabetes at Mount Sinai Hospital in Toronto. **Dr Richard Ward** is Medical Director of Primary Care in the Calgary Zone of Alberta Health Services. **Sarrah I. Ali** is a doctoral student in the Department of Psychology at Florida State University in Tallahassee. **Dr Jacqueline C. Carter** is a psychologist in the Department of Psychology at Memorial University of Newfoundland in St John's, NL.

Contributors

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Correspondence

Dr Aaron Keshen; e-mail **Aaron.Keshen@nshealth.ca**

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