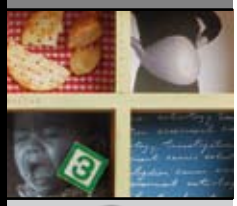
THEME

Nausea and vomiting



Understanding bulimia

BACKGROUND

Bulimia nervosa (BN) and related eating disorders such as binge eating disorder are common. General practitioners can play a key role in the identification and management of BN and related eating disorders.

OBJECTIVE

This article describes the presenting and associated features of BN and overviews evidence based treatment approaches.

DISCUSSION

Key features are recurrent episodes of binge eating, extreme weight control behaviours and over concern about weight and shape issues. By definition people are not underweight. Risk factors include being from a western culture, obesity, exposure to a restrictive dieting environment and low self esteem. People are more likely to present asking for help in weight control or a physical problem secondary to the eating disorder. Evidenced based therapies with good outcomes in current use are cognitive behaviour therapy (in full or guided self help forms), high dose fluoxetine, and interpersonal psychotherapy. It is important to convey optimism about treatment efficacy and outcomes.

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Case study – Jo

Jo, 20 years of age, is a student. When she was aged 15 her grandmother died. They had been very close and Jo missed her very much. She fell behind at school, lost interest in food and lost about 7 kg (she had previously regarded herself as 'chubby' but was never very overweight). When, after about 6 months, she was feeling better she decided she didn't want to regain the weight, as she liked her newly slim figure. She began a strict regimen of exercise (running 2–3 km/day) and dieting (eating no more than '1000 calories' per day). She lost further weight to her lowest of 40 kg. At this point her parents became alarmed and she saw a psychiatrist and family therapist. Jo reluctantly modified her regimen to ensure her weight increased and remained around 45 kg over the next 2 years. When she turned 18 years of age she left home and moved into a university hostel. She found she couldn't keep to her 'diet' and began binge eating and then vomiting afterward. She was able to keep to 45–50 kg but her weight and eating patterns continued to be unstable.

Jo's day was dominated by her eating disorder. She would wake up in the morning with her first thought 'I must not eat today'. She would recall the last afternoon of binge eating where, for example, at around 3.00 pm she sneaked into the kitchen and hurriedly ate five pieces of toast and jam and some leftover pizza. She then vomited twice and went for a 1 km run. She ate nothing more until 3 am when she got up and ate seven apples. Disgusted with herself, she couldn't sleep.

She had read a lot about bulimia and made sure she had regular dental checks. She sometimes wondered if her dentist suspected her of bulimia and avoided queries about herself. She had also seen a psychologist for four sessions of supportive psychotherapy and problem solving at the student counselling service. This was when she felt really miserable and had brief thoughts of suicide in her first student year, but she did not volunteer her eating disorder symptoms and was not asked about them. She liked the psychologist but stopped going as she thought she should concentrate on her studies instead of taking the time for therapy. When with her parents she refused to discuss her eating problems.

Jo finally got into treatment after she fainted in a class after a 5 km run and was persuaded by a friend to attend the university's health service. When asked to be weighed she burst into tears and this prompted the GP to ask her about eating disorder symptoms. After checking her physical state and blood electrolytes the general practitioner re-referred her to the psychologist who began cognitive behaviour therapy. After 6 months of therapy Jo improved and is no longer binge eating. She has regained a little weight and is now back to what she regards as a more 'chubby' appearance, albeit her body mass index is around 23.

Important features of bulimia nervosa (BN) include:

- **food, eating, and weight and shape issues dominate thinking, behaviour and self view. These issues are more important to patients self regard than other aspects of their life such as success at work or quality of relationships**
- **narrow daily routine with attempts to control weight through restrictive dieting and other extreme weight control behaviours such as self induced vomiting or use of laxatives and diuretics or intense exercise**
- **intermittent binge eating episodes where the quantity of food is unusually large for the context and over which they have a sense of loss of control**
- **by definition people with BN are of normal or above average weight.**

Comparison to other eating disorders

Binge eating and extreme weight control behaviours such as vomiting can occur in anorexia nervosa (AN) but by definition this is a disorder of weight loss to below normal levels. Patients who do not fulfil the DSM-IV criteria for diagnosis with AN or BN may come under the category of binge eating disorder (BED) or eating disorder not otherwise specified (EDNOS). All people with eating disorders have weight and shape concerns and associated anxieties such as fear of weight gain or weight escalation or being unable to control their weight and their eating behaviour. *Table 1* provides a comparison of DSM-IV criteria for eating disorders.

Onset and predisposing factors

The onset of the BN is often in late adolescence or young adulthood. It is more common in women with a prevalence ratio of men to women of around 1:10.[1,2] The pathway to this illness is individual but there are some common predisposing factors (*Table 2*).[3–6] The cycle of binge eating and extreme weight control behaviours becomes persistent and relentless, perpetuating the disorder. Mood disorders and substance use may co-exist and perpetuate the disorder. Common psychological comorbidities are listed in *Table 3*.[7]

How common is BN?

It is generally agreed that the point prevalence of BN is around 1% of young western women.[1,2] However, at any one time up to 3–5% may suffer related or similar eating disorders, and be given the diagnostic category of EDNOS in the DSM-IV.[7] In clinical practice and community studies, EDNOS is much more common a diagnosis than BN but there are many shared risk factors and features and the approach to treatment and management is similar.[4] In general practice, around one in 20 women and one in 100 men attendees will have an eating disorder diagnosis of BN or EDNOS.[8,9]

How do patients present?

Most patients do not present complaining of eating problems; they attend for an unrelated problem, for help with weight control (whether or not they are overweight, normal or underweight) or another mental health problem such as depression.

To help in identifying women with eating disorders, general practitioners should be alert to the possibility of an eating disorder in young women presenting with another mental health problem or with weight concern and request with help to lose weight (whatever their weight is). The SCOFF Questionnaire[10] is useful tool in screening for eating disorders in primary care (*Table 4*).

Patients with BN may present with physical problems such as infertility, oligomenorrhoea and nonspecific gastrointestinal symptoms. However, this is more common in AN. Physical complications of eating disorder vomiting and purging may be present (*Table 5*). Recent studies in young women with diabetes have found that the presence of an eating disorder is a very important risk factor for poor outcome in type 1 diabetes.[11] Some patients are identified by dentists because of the dental decay due to reflux of stomach contents.

Is there an epidemic of BN?

Bulimia nervosa is a relatively newly defined eating disorder compared to AN, which was first described in the 19th century. The definitive account of BN did not occur until 1979 in the classic paper of Russell.[12] Since then, other eating disorders have been identified, including BED and EDNOS. The best available evidence to date from cohort and clinical incident studies indicates an increase in BN in the decade following its description and inclusion in the DSM-III in 1980.[13] This increase appears to have plateaued as described in primary care incident studies from the United Kingdom[14] and student surveys in the United States.[15] However, more recent cohort studies from the USA[7] and cross sectional studies of prevalence in South Australia indicate that the rate of eating disorders in general, although not BN specifically, may have continued to increase in the 1990s and early part of this century.[16] Binge eating disorder and EDNOS also appear to occur in men more commonly than BN and AN.

The diagnostic criteria for eating disorders are currently being reviewed and it is anticipated that over this century these may well be revised with better definitions of both BED and EDNOS.

Is bulimia a culture bound syndrome?

Epidemiological studies indicate that while eating disorders occur most commonly in western countries, they do occur and are occurring in increasing numbers in developing countries, particularly those that have become more westernised such as Singapore and Japan. While there may be subtle differences in phenomenology across cultures, the core behaviours of eating disorders and associated features such as a need for a sense of control appear to be similar.[17] There is some dispute over whether Asian women experience a fear of fatness in the same way as European or caucasian women, but on balance the problem appears more similar than different and the approach to treatment is also similar. It is of interest that those who appear most at risk are young women who are first generation descendents of migrants from the developing to the developed world.[18]

What works in treatment?

There is now good level I and level II evidence for treatments in BN.[19,20]

Cognitive behaviour therapy

The leading therapy is cognitive behaviour therapy (CBT) – a manualised, structured psychotherapy as developed by Fairburn et al.[21] It has been translated into guided self help and self help forms[22,23] which can be readily applied in primary care and for which there is good evidence of efficacy in the Australian primary care setting.[24] Although most treatment trials are on adults, CBT has also been trialled in adolescents.[25] A Melbourne (Victoria) study found that primary care practitioners with minimal (one evening workshop) training and modest supervision with an interest in the area were able to provide CBT in a guided self help form with outcome rates as good as, if not better than, those found in randomised control trials of CBT applied by specialised practitioners.[24] This was very encouraging, however many health practitioners are unduly pessimistic about treatment outcomes.[26,27]

Antidepressants

The only substantive evidence is for fluoxetine in higher doses than usually prescribed, namely 60 mg/day. Efficacy is independent of effects on depressive symptoms.[19] There is a paucity of trials on the newer antidepressants.

Interpersonal psychotherapy

Interpersonal psychotherapy is a second line therapy that has also shown promise in randomised control trials, although it appears to take longer to bring about change than CBT.

Transdiagnostic therapy

Fairburn et al[28] have recently extended CBT to address comorbid and related features that perpetuate the

Table 1. Similarities and differences in diagnostic features of anorexia nervosa, bulimia nervosa, binge eating disorder and EDNOS

	Anorexia nervosa	Bulimia nervosa	BED	EDNOS
Clinical feature				
Undue influence of body weight/shape on self evaluation	Diagnostic	Diagnostic	Common	Common
Underweight for age and height, or failure to gain expected weight minimum (<85%) during growth	Diagnostic	Not present	Not present	Not present
Obesity or overweight	Not present	May occur	Common	May occur
DSM-IV defined binge eating episodes*	May occur	Diagnostic	Diagnostic	May occur
Subjective bulimic episodes**	May occur	May occur	May occur	May occur
Extreme weight control behaviours				
– self induced vomiting or other purging	Diagnostic subtype	Diagnostic subtype	Not present	May occur
– fasting, severe dietary restriction, excessive exercise	Diagnostic subtype	Diagnostic subtype	Not present	May occur
Sustained amenorrhoea (over 3 cycles)	Diagnostic	Uncommon	Uncommon	Uncommon

* ...eating, in a discrete period of time (eg. within any 2 hour period) an amount of food that is definitely larger than most people would eat during a similar period of time and 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.[34] In BN and BED the frequency and duration of binge eating and/or weight control behaviours are specified

** Eating episodes where loss of control is experienced but the quantities of foods are not large and do not meet DSM-IV criteria for a binge[35]

disorder. This is known as 'transdiagnostic therapy'. It incorporates modules on clinical perfectionism, interpersonal function, mood intolerance and low self esteem, one or more of which are added to enhance core elements of CBT. This is an interesting, but as yet 'unproven' development.

Management of comorbidities

It is important to address and treat any medical and psychological comorbidities and to recommend a dental review in patients who are vomiting. Depression that occurs as a consequence of BN often improves without specific treatment.[19]

Self help

Self help has become increasingly popular as a means of meeting the unmet needs for treatment of patients with BN and related disorders. There are a myriad of self help books about weight and eating problems, but few provide a treatment approach or program which is easy to apply. Some books do have evidence to support their use (see *Resources*). However, on the whole, pure self help approaches have been found to be less efficacious than guided self help or full therapy with a trained therapist.[22,23] They are useful as a first step approach and in areas where access to a therapist is problematic, but it seems that most patients prefer to have a therapist, even if that therapist may be at the end of a telephone or videoconference link.

In addition to self help books, there are many websites related to eating disorders, including pro-anorexia nervosa and pro-eating disorder websites! Around Australia there are a number of reputable websites well supported by expert advice and opinion (see *Resources*).

Outcome

Bulimia nervosa is not a benign disorder. Impact on quality of life is similar to or greater than other common medical and mental health disorders.[29] The majority of patients with BN make a good outcome in long term follow up studies, with up to 50% free of symptoms at 5 years or more.[30] Childhood obesity, substance use disorder and personality disorders are predictors of poor outcomes, although it has been difficult to confirm such predictors across studies.[31]

Common misconceptions

Patients are often aware of the symptoms of eating disorders and have read about them, however, not all information is accurate. There are a number of common misconceptions. These include that:

Table 2. Common predisposing factors for bulimia nervosa

Sociocultural
- Female gender
- Western background
- Migrants from developing world
- Metropolitan domicile

Biological
- Family history of an eating disorder
- Obesity – self and family history
- Family history of mood and substance use disorder
- Early menarche (controlling for body weight)

Psychological and social
- Self and familial dieting
- Childhood obesity and critical comments about weight
- Personality – perfectionism and low self esteem
- At risk occupations (eg. ballet, intensive sports)
- Nonspecific psychological risk factors (eg. child abuse)*

* Increased risk for eating disorders and other psychological disorders such as depression[3]

Table 3. Common psychological comorbidities found in bulimia nervosa[37]

- Depression
- Anxiety disorders
  - panic disorder
  - generalised anxiety disorder
  - post-traumatic stress disorder
- Alcohol and other substance use disorders
- Impulsive behaviours
  - bullying
  - truancy
  - excessive drinking
  - sexual disinhibition

Table 4. The SCOFF screening questionnaire*[10]

Do you ever make yourself **S**ick because you feel uncomfortably full?
Do you worry you have lost **C**ontrol over how much you eat?
Have you recently lost more than **O**ne stone in a 3 month period?
Do you believe yourself to be **F**at when others say you are too thin?
Would you say that **F**ood dominates your life?

* One point is given for every 'yes' answer. A score of two or more indicates possible AN or BN

Note: 1 stone is approximately 6.35 kg

- 'bulimia' refers simply to vomiting and purging behaviours. Therefore people with AN describe their problem as 'bulimia', where the primary disorder is AN with binge eating and/or purging behaviours

Table 5. Common adverse physical effects of bulimia nervosa[38]

- Self induced vomiting
- Erosion of dental enamel
- Dehydration*
- Hypokalaemia and cardiac dysrhythmias* (ECG may show T wave inversion and prominent U waves)
- Hypochloremic alkalosis
- Parotid and salivary gland enlargement (may have raised serum amylase)
- Abdominal pain
- Dorsal hand scarring (Russell sign)
- Laxative use
- Bowel irregularities and bloating
- Cathartic colon
- Hypomagnesium and hypophosphataemia*
- Dietary restriction
- Delayed gastric emptying
- Chronic constipation
- Fertility problems
- Binge eating
- Gastric rupture (rare but high lethality)*

* May require emergency admission

- binge eating is related to size and quality of food consumed. Research has found that it is the sense of loss of control that defines binge eating rather than absolute quantity of food.[32] Patients with AN may describe binge eating on very small amounts of food; their view of normal quantity is distorted
- BN is very difficult to treat, antidepressants are harmful and weight reducing strategies of people with eating disorders are desirable.[33]

Overcoming these misconceptions and helping patients engage in treatment is a challenging task. Once patients are identified and understand the problem, they are usually willing to accept help. In treatment the majority do well. (Use of the *Mental Health Act* to enforce treatment is rare in BN.)

Conclusion

Bulimia nervosa is a common disorder in young women. It is associated with significant morbidity and health related impairment, as well as important comorbidities such as weight disorders and obesity and other mental health problems. However, there is good evidence for treatment with specific psychotherapies that have been translated into the primary care setting area for delivery. These approaches are also helpful for those who suffer EDNOS and BED, which are becoming more common both in the community and in clinical treatment centres. There is some evidence that fluoxetine in higher doses than usually prescribed may improve outcomes.

Resources

- Eating Disorders Association of Queensland (www.uq.net.au/eda)
- Victorian Centre of Excellence in Eating Disorders (www.rch.org.au/ceed)
- Centre for Eating and Dieting Disorders (www.cedd.org.au)
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