

Eating Disorders:

Management in General and Family Practice



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Eating disorders are illnesses of eating behaviour that stem predominantly from an overvaluation of the desirability of weight loss resulting in functional, medical, psychological and social impairment. The two major categories of eating disorders are:

- Anorexia nervosa (AN)
- Bulimia nervosa (BN)

Lifetime prevalence estimates are 0.6% and 1% respectively, with the risk up to threefold higher in women than men.¹

AN

AN is characterized by self-induced starvation to a significant degree leading to a body weight of < 85% of chart average (BMI < 17.5), a relentless drive for thinness or a morbid fear of fatness, disturbances in body image and amenorrhea and include two subtypes: binge/purge and restricting.

BN

BN is characterized by episodes of binge eating, loss of control during episode and undoing behaviours (fasting, excessive exercise, vomiting, misuse of laxatives, diuretics, or enemas) that occur twice per week for three months and an

over concern with weight and shape. The two major subtypes that exist are purging and non-purging.

Median age of onset for both disorders is between 18- and 21-years-of-age¹ and both are relapsing and remitting conditions with severe psychosocial morbidity. In AN, approximately 30% recover, 30% improve and 30% remain chronically ill, with a mortality rate of 10% to 20% over 20 years. In BN, the mortality rate is approximately 5% to 10% and the ultimate recovery rate is unknown, but is likely to be in the range of 75% to 80%.

Early identification

Screening for eating disorders should be considered in the routine care of at-risk patients. Risk factors include:

- female gender,
- adolescence,
- family history of an eating disorder,
- weight concerns and/or dieting behaviour,
- involvement in activities that promote and value thinness and
- comorbid mood and anxiety disorders.

Early clinical features include dieting associated with:

- decreasing weight goals,

Table 1

Medical consequences of eating disorders¹⁻⁵

Disorder and system affected	Anorexia nervosa (starvation related symptoms)	Bulimia nervosa/anorexia nervosa (binge/purge type)
Metabolic	Dehydration, electrolyte imbalance, increased serum carotene, refeeding syndrome, vitamin deficiencies	Dehydration, electrolyte imbalance
Cardiac	Arrhythmias, bradycardia, conduction defects (e.g., QTc prolongation), ECG abnormalities (e.g., low voltage, T-wave inversions, ST-segment depression), hypotension, mitral valve prolapse, peripheral edema, sudden death	Arrhythmias, diet pill toxicity (e.g., palpitations, hypertension), emetine cardiomyopathy (ipecac syrup), peripheral edema
GI	Abnormal liver function tests, acute gastric dilatation, bloating, constipation, delayed gastric emptying, refeeding pancreatitis, slowed gastric motility	Acute gastric dilatation, cathartic colon, constipation, dental erosion, esophageal rupture, esophagitis, GERD, Mallory-Weiss syndrome, parotid gland swelling, post-binge pancreatitis
Endocrine	Amenorrhea, hypercholesterolemia, hypercortisolemia, hypoglycemia, impaired temperature regulation, diabetes insipidus, thyroid abnormalities, osteopenia/osteoporosis	Amenorrhea, hypoglycemia, irregular menses, osteopenia, mineralcorticoid excess
Musculoskeletal	Osteoporosis	Muscle cramps, tetany
Renal	Increased BUN, renal stone	Increased BUN, renal stones
Neurologic	Cognitive impairment, pseudoatrophy (e.g., enlarged ventricles), seizures	Cognitive impairment, cortical atrophy, enlarged ventricles, peripheral neuropathy
Hematologic	Anemia, decreased ESR, thrombocytopenia, leucopenia with lymphocytosis	None commonly associated
Pulmonary	Decreased pulmonary capacity	Aspiration pneumonitis, pneumomediastinum (vomiting), pneumothorax, rib fractures

QTc: Corrected QT interval
 GERD: Gastroesophageal reflux disease
 BUN: Blood urea nitrogen
 ESR: Erythrocyte sedimentation rate

- increasing criticism of the body,
- social isolation,
- amenorrhea and
- evidence of purging.

Other presenting complaints include significant starvation-related medical symptomatology listed in Table 1.

Assessment and treatment strategies

A routine general medical and psychiatric assessment should be done at the time of diagnosis and periodically thereafter as clinically indicated. Baseline blood work including complete blood count, electrolytes, calcium,

magnesium, phosphorous, creatinine, urea, liver function tests, TSH, vitamin B12, ferritin, folate and lipid profile and EKG should be completed. It is important to differentiate between the management and treatment of eating disorders. Management is the provision of urgent medical interventions to acutely ill patients, in which the goal is the stabilization and maintenance of the patient in the least invasive intervention possible to achieve the goal. Treatment, on the other hand, is the provision of comprehensive care in which the goal is the facilitation of recovery from the illness, ideally with the aid of a GP, psychiatrist, psychologist, registered dietician and social worker. To determine appropriate delivery of care, assessing motivation for change is crucial, noting that individuals may be at different stages of change for different aspects of their illness.

Median age of onset for both disorders is between 18- and 21-years-of-age and both are relapsing and remitting conditions with severe psychosocial morbidity.

In primary care, monitoring weight changes, vitals, nutritional intake, electrolytes, EKG changes and psychological signs of suicidal ideation or impulsive or compulsive self-harm behaviours is necessary. Indications for emergency medical or psychiatry in-patient assessment and treatment include medical instability with a heart rate < 40 bpm, corrected QT interval

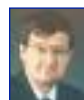
> 0.48, PR > 0.20, BMI approaching 10 for women (11 for men), potassium < 2.5, uncontrolled diabetes, hepatic, renal or CV organ compromise and acute suicidality.

Pharmacotherapy

Pharmacotherapy alone will not successfully treat AN or BN, rather it is often employed as part of a comprehensive treatment plan. For AN, olanzapine has been shown to be effective from preliminary data to promote weight gain and maintenance and to manage psychological-associated symptoms of preoccupation with food, distorted body image and pre-meal anxiety, but randomized control trials are still necessary to firmly establish a role in treatment.² As well, many AN patients will not take olanzapine once they understand that it causes weight gain and the use of olanzapine requires rigorous monitoring of blood sugar and lipids. The authors do not recommend the routine use of olanzapine in outpatient practice. Fluoxetine (e.g., 60 mg q.d.) has a role in the treatment of BN, decreasing the rates of binges and purges.³ Supplementation with a multivitamin, iron, potassium, vitamin D and calcium (as clinically indicated) for nutritional rehabilitation in addition to a balanced meal plan can be used in both AN and BN.



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Take-home message

- Eating disorders are rare and have a high morbidity and mortality
- Screen for disordered eating in at-risk populations
- Establish whether medical and/or psychiatry comorbidities are present
- Do baseline lab work-up, vitals, physical exam and EKG to assess medical status
- Assess motivation for change
- Manage acute medical conditions and treat when patient is ready
- Treatment is multidisciplinary including GP, psychiatrist, nutritionist, social worker and psychologist

Specific interventions

Psychoeducation is an important aspect of management in eating disorders, to inform patients and their families on the nature, course and treatment options of the illness. Behavioural interventions are implemented to help individuals change aspects of their illness that they may find undesirable (*e.g.*, bingeing, food restriction, purging behaviours, negative body image, negative self evaluation and perfectionistic thinking). Motivational interviewing is important at this point to enhance a patient's desire to change when ambivalent.

Patients with AN typically require treatment in specialized tertiary inpatient settings, with comprehensive care plans including nutritional rehabilitation, pharmacotherapy and multiple behavioural interventions (individual therapy, cognitive behavioural therapy [CBT] and family therapy). Adolescents with AN may be managed as outpatients, using the Maudsley family therapy technique, if there are no compelling

acute health concerns. The Maudsley Approach involves the family from the outset of treatment and relies heavily on parent involvement in the refeeding of the child with an eating disorder.

BN can usually be managed in an outpatient setting. CBT has been shown to be the most effective psychotherapy in the treatment of BN to normalize eating and combat cognitive distortions associated with the illness. A systematic review of randomized control trials of behavioural interventions, particularly CBT, showed more significant reductions in binge and purge frequencies and psychological features in BN than controls.⁴

Referrals

For more information regarding eating disorder resources, please visit the National Eating Disorder Information Centre at www.nedic.ca.



References

1. Hudson JI, Hiripi E, Pope HG Jr, et al: The Prevalence And Correlates Of Eating Disorders In The National Comorbidity Survey Replication. *Biol Psychiatry* 2007; 61(3):348-58.
2. Dunican KC, DelDotto D: The Role of Olanzapine in the Treatment of Anorexia Nervosa. *Ann Pharmacother* 2007; 41(1):111-5.
3. Goldstein DJ, Wilson MG, Ascroft RC, et al: Effectiveness Of Fluoxetine Therapy In Bulimia Nervosa Regardless Of Comorbid Depression. *Int J Eat Disord* 1999; 25(1):19-27.
4. Shapiro JR, Berkman ND, Brownley KA, et al: Bulimia Nervosa Treatment: A Systematic Review Of Randomized Controlled Trials. *Int J Eat Disord* 2007; 40(4):321-36.
5. Yager J, Devlin M, Halmi K, et al: Practice Guideline for the Treatment of Patients with Eating Disorders. Third Edition. Washington, DC: American Psychiatric Association; 2006. http://www.psychiatryonline.com/pracGuide/pracGuideChapToc_12.aspx. Accessed: June 27, 2008.