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Key Inforbits

- Introduction to Eating Disorders
- Clinical Presentation
- Health Consequences
- Prevention
- Treatment Strategies
- Ways to get help

February 23rd – March 1st is…

EATING DISORDER AWARENESS WEEK

INTRODUCTION TO EATING DISORDERS

More than 20 million women and 10 million men in the United States suffer from an eating disorder at some point in their lives.[1] In today's society, social pressure and obsession with perfection and being thin have led to an ever increasing prevalence of eating disorders. Peak onset of eating disorders is between ages 16 and 20; however, even by age 6, girls especially begin to have concerns about their weight or shape, and 40-60% of elementary school girls worry about their weight and becoming too fat.[1,2,4]

Eating disorders are complex, devastating conditions that can have serious health, productivity, and relationship consequences. The exact cause of eating disorders is unknown but may be triggered by social stress and pressure, low self-esteem, depression or anxiety, troubled relationships, or dysfunctional family issues. Also, biologic factors such as abnormalities in the hypothalamic-pituitary axes or imbalance in serotonin/norepinephrine/dopamine neurotransmitter systems may lead to eating disorders. Occupations such as athletes, actors, or models, also contributes to a greater risk for developing eating disorders.[1,2]

The 3 most common types of eating disorders include anorexia nervosa, bulimia nervosa, and binge eating disorder. **Anorexia nervosa** is characterized by failure to maintain an adequate body weight, body image disturbance, and excessive dietary restriction, resulting in self-starvation and excessive weight loss.[1,3] It occurs predominately in girls and young women (90%), with most cases being diagnosed in the late teens; it is rarely diagnosed after age 40. It is estimated that anorexia affects approximately 0.3% of the general female population and continues to rise; there has been an increase in the incidence of anorexia in women age 15-19 each decade since the 1930s.[1,4] Anorexia may also be accompanied by periods of binge eating and purging, as anorexia and bulimia occur together in 30-64% of patients with eating disorders.[2,3]

Bulimia nervosa is characterized by binge eating, such as consuming large amounts of food while feeling out of control, and then using compensatory behaviors to prevent weight gain. These behaviors include self-induced vomiting, laxative, enema, or diuretic use, fasting, excessive exercise, or the abuse of certain medications such as insulin.[3] During binge eating there is a lack of control in which the patient does not stop eating until they have abdominal pain or are interrupted. After binging, the patient then feels guilt or shame, leading to the compensatory weight loss behaviors. Like anorexia, bulimia occurs predominately

in girls and young women (90%) and typically occurs in late adolescence or early adult life. About 1.5% of individuals are affected by bulimia over the course of their lives.[2-4]

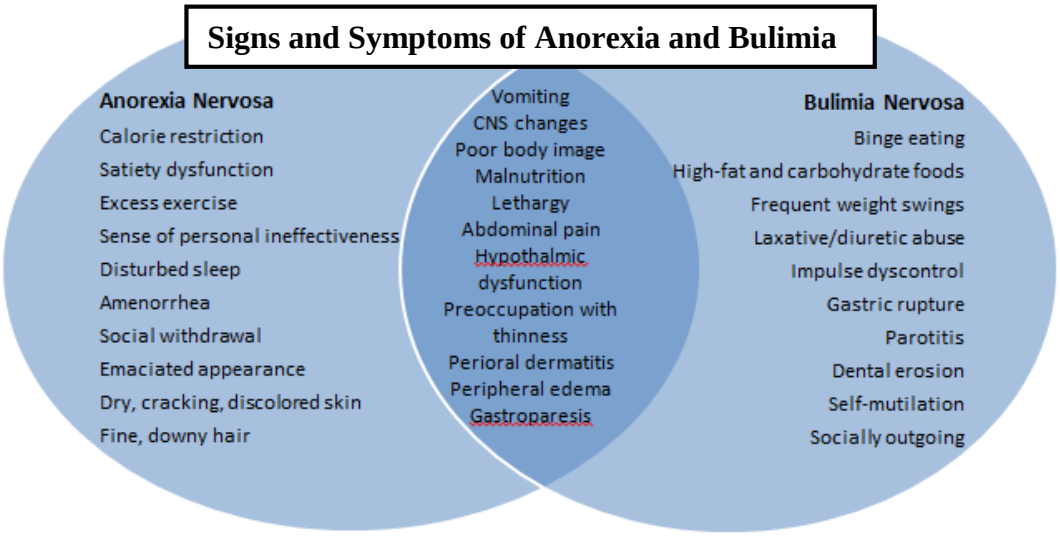
Binge eating disorder is characterized by recurrent binge eating without the compensatory behaviors for weight loss that are observed in bulimia.[3] Binge eating disorder presents later in life, with the typical patient being diagnosed after age 40. Binge eating disorder affects about 1-5% of the general population, with 40% being male.[4] People with binge eating disorder often use food as a coping mechanism and feel shame or guilt over their eating behaviors.[1] A typical binge eating session can consist of an intake of 5,000 to 20,000 calories typically within a 2-8 hour time period.[2]

1. National Eating Disorders Association: Feeding hope [Internet]. New York: NEDA; c2014 [cited 2014 Jan 17]. Available from: http://www.nationaleatingdisorders.org/.
2. Stoner SC. Eating disorders. In: DiPiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey LM, editors. Pharmacotherapy: A pathophysiologic approach. 8th ed. New York: McGraw-Hill Medical; c2011. p. 1101-1111.
3. AED: Eating disorders information [Internet]. Deerfield (IL): Academy for Eating Disorders; c2014 [cited 2014 Jan 17]. Available from: http://www.aedweb.org/Eating_Disorders_Information.htm#.UtldKdLnaP8.
4. Smink FRE, Van Hocken D, Hoek HW. Epidemiology of eating disorders: Incidence, prevalence and mortality rates. Curr Psychiatry Rep. 2012;14:406-414.

CLINICAL PRESENTATION

Anorexia nervosa has core features of not maintaining a body weight of greater than 85% normal or a body mass index (BMI) greater than 17.5 kg/m^2 and failure to make expected weight gain.[2] People who suffer with anorexia have an intense fear and obsession about weight gain or being "fat". The new Diagnostic and Statistical Manual of Mental Disorders Fifth Edition (DSM-V), made only a few changes from the DSM-IV regarding anorexia. One change is that 'refusal' has been replaced with restriction regarding caloric intake due to the difficulty of assessing an intention. Also, DSM-V no longer requires absence of at least three menstrual cycles for diagnosis of anorexia since this cannot be applied to males and menstrual activity has been reported. Warning signs include patient complaining of bloating even if eating a small amount, denial of hunger, avoiding mealtimes or situations involving food, and developing food rituals such as excessive chewing or rearranging food on their plate. Psychiatric comorbidity is common with a strong link to personality and anxiety disorders.[1-3]

Bulimia nervosa is diagnosed when binges and compensatory behaviors occur at least once a week for three months. This is a new change in DSM-V; previously behaviors had to occur twice a week. Warning signs of bulimia include frequent trips to the bathroom after meals, unusual swelling of cheeks or jaw, callus on dorsum of one hand and discoloration of teeth. Patients with bulimia may also have chaotic and troubled personal relationships and can have psychiatric comorbidities such as depression, anxiety, poor impulse control, and substance abuse.[1-3]



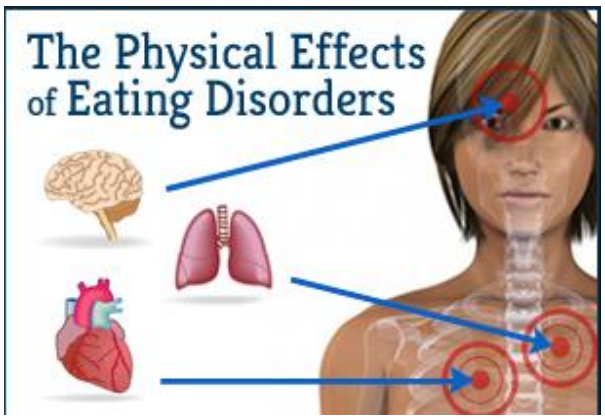
Adapted from DiPiro JT, et al, eds. Pharmacotherapy: A Pathophysiologic Approach, 2011[2]

Binge eating disorder has officially been considered an eating disorder as of the publishing of DSM-V. Previously, binge eating disorder was diagnosable under the category of Eating Disorder Not Otherwise Specified.[3] To be diagnosed with binge eating disorder, patients have to have recurrent and persistent episodes of binge eating "associated with three 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 being embarrassed by how much one is eating, and/or feeling disgusted with oneself, depressed or very guilty after overeating".[2] Binge eating is not followed by compensatory behaviors and must occur at least once a week over a period of three months. Patients who experience binge eating commonly experience anxiety and both current and lifetime major depression.[2,3]

1. National Eating Disorders Association: Feeding hope [Internet]. New York: NEDA; c2014 [cited 2014 Jan 17]. Available from: http://www.nationaleatingdisorders.org/.
2. Stoner SC. Eating disorders. In: DiPiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey LM, editors. Pharmacotherapy: A pathophysiologic approach. 8th ed. New York: McGraw-Hill Medical; c2011. p. 1101-1111.
3. ANAD: Important changes in eating disorder diagnoses in DSM-V [Internet]. Naperville (IL): National Association of Anorexia Nervosa and Associated Disorders; c2013 [cited 2014 Jan 17]. Available from: http://www.anad.org/news/important-changes-in-eating-disorder-diagnoses-in-dsm-v/.

HEALTH CONSEQUENCES[1]

Eating disorders can lead to a variety of health consequences due to the body lacking a consistent and well-balanced diet.



Ref #2

In **anorexia**, the body is forced to slow down to conserve energy due to lack of nutrients. Bradycardia and hypotension are common and can lead to changes in the heart muscle increasing risk of heart failure. Severe dehydration causes electrolyte imbalance as well as puts stress on the kidneys leading to acute and chronic kidney failure. If full nutritional support is given initially, complications such as arrhythmias and death can occur. This is called Refeeding Syndrome and occurs due to metabolism shifting from a catabolic to an anabolic state.[3] Other changes include skin/hair loss, brain atrophy, slow sexual development, cardiac changes signaled by QT interval prolongation, ST segment depression and U waves; hypercholesterolemia, tooth decay, and anemia.

In **bulimia**, electrolyte imbalance from compensatory behavior leads to irregular heartbeats. Patients with bulimia that partake in self-induced vomiting can inflame the esophagus and cause a possible rupture. Dependence on laxatives can cause internal organ damage such as a stretched colon, colon infection, Irritable Bowel Syndrome, and liver damage. Other consequences include dental complications, chronic irregular bowel movements, metabolic acidosis, ECG changes, anemia, and uncommonly gastric rupture.

Binge eating disorder can lead to other comorbidities such as hypertension, dyslipidemia, heart disease, diabetes mellitus, gallbladder disease, non-alcoholic fatty liver disease and musculoskeletal problems.[2]

1. National Eating Disorders Association: Feeding Hope [Internet]. New York: NEDA; c2014 [cited 2014 Jan 17]. Available from: http://www.nationaleatingdisorders.org/.
2. The effects of eating disorders on your body [Internet]. Tequesta (FL): Futures; c2014 [cited 2014 Jan 24]. Available from: http://www.futuresofpalmbeach.com/eating-disorder-treatment/the-effects-on-body/.
3. Manuel A, Maynard ND. Nutritional support: refeeding syndrome. Stud BMJ [Internet]. 2009 [cited 2014 Jan 24];9(4):b1567. Available from: http://www.medscape.com/viewarticle/703713_8.

TREATMENT STRATEGIES

For **anorexia nervosa**, cognitive behavioral therapy (CBT) and other nonpharmacologic interventions are first line treatment options .[1] Interventions such as interpersonal psychotherapy, family therapy, nutritional counseling, and behavioral management are most likely to improve patients' symptoms. The

current guideline recommends at least 6 months of psychotherapy.[2] Treatment goals are directed toward achieving appropriate healthy weight through oral refeeding with liquid formulas, treating food phobias, weight maintenance, and developing skills to prevent relapse. A slow titration of 10 kcal/kg/day to gain weight is important to decrease risks of medical and psychological complications caused by Refeeding Syndrome.[3] The goal is to achieve greater than 90% of normal weight for age-matched controls.[1] Use of antidepressants is only reserved for those with depression, anxiety, obsessions, and compulsion despite achieving healthy weight. Selective Serotonin Reuptake Inhibitors (SSRIs) are the preferred agents due to their tolerability and decreased effect on the cardiovascular system when compared with monoamine oxidase inhibitor (MAOIs) and tricyclic antidepressants (TCAs).[1] Fluoxetine is the most used SSRI and is started at low doses of 20 mg. Fluoxetine is the most studied drug among SSRIs for the treatment of anorexia. The dose of fluoxetine can be titrated toward an effective dose.[1] Typical and atypical antipsychotics require further studies to prove their effectiveness in treatment. Benzodiazepines can be used to treat eating disorders associated with anxiety. Also, Metoclopramide can be used to reduce bloating and abdominal pain associated with anorexia. [1]

When treating **bulimia nervosa**, baseline physical examination and laboratory work up are needed before starting pharmacological therapy. The main treatment approach includes a non-pharmacologic component such as CBT, nutritional counseling, planned meals, and self-monitoring combined with an SSRI for the best outcome.[1] The main goal of SSRIs during the acute and maintenance phases is to reduce depression, binge eating, purging, anxiety, and depression. It takes 6-8 weeks of treatment for a response to occur. Treatment duration lasts from 9 months to a year. Mood stabilizers, such as benzodiazepines and antipsychotics, are reserved for patients with comorbid conditions.[1]

For patients with a **binge eating disorder**, CBT and interpersonal psychotherapy are the main treatment approaches. Pharmacologic therapies, such as SSRI, topiramate, and sibutramine, are usually used short term possibly due to conflicting data regarding their long-term benefits.[1]

1. Stoner SC. Eating disorder. In: DiPiro JT, Talbert RL, Yee GC, Matzke GR, Wells BG, Posey LM, editors. Pharmacotherapy: A pathophysiologic approach. 8th ed. New York: McGraw-Hill Medical; c2011. www.accesspharmacy.com
2. National Collaborating Centre for Mental Health. Eating Disorders: Core Interventions in the Treatment and Management of Anorexia Nervosa, Bulimia Nervosa and Related Eating Disorders. London: British Psychological Society and Royal College of Psychiatrists; 2004:1–36.
3. Manuel A, Maynard ND. Nutritional support: refeeding syndrome. Stud BMJ [Internet]. 2009 [cited 2014 Jan 24];9(4):b1567. Available from: http://www.medscape.com/viewarticle/703713_8.

Ways to Get Help

- National Eating Disorder Hotline: 1-800-931-2237
- Find treatment centers by going to: http://www.nationaleatingdisorders.org/find-treatment/treatment-and-support-groups
- Auburn University Counseling Services: 334-844-5123
- Auburn University Medical Clinic: 334-844-4422

The last "dose" …

"To lose confidence in one's body is to lose confidence in oneself"

-Simone de Beauvoir (1908-1986), French writer, feminist and existentialist philosopher

An electronic bulletin of drug and health-related news highlights, a service of …
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