Identifying and Diagnosing Anorexia Nervosa and Bulimia Nervosa

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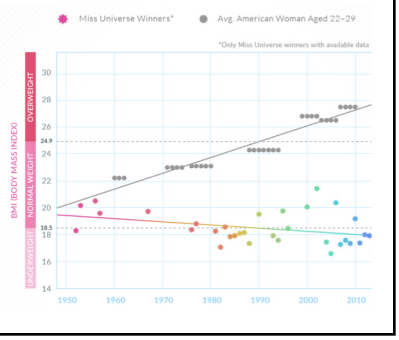
Body image

1940's and 1950's = only time pageant BMIs were same as average American woman



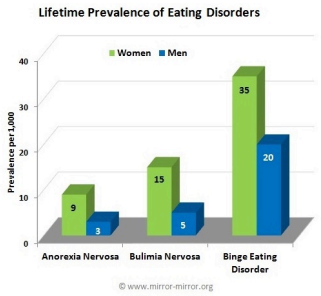
Media images may increase ED risk by

- Portraying thinness as associated with happiness, success, popularity (Steiner-Adair & Vorenberg, 2013)
- Emphasizing thinness as the beauty ideal → women objectify their bodies → LSE and disotorted body image (Basow, Foran, & Bookwala, 2007; Greenleaf & McGreer, 2006)
- Greater media exposure →stronger desire for thinness →LSE and poorer body image (López-Guimerà, Levine, Sánchez-Carracedo, & Fauquet, 2010)
- Media is more influential than family and friends in the development of negative body image (Kielpikowski, Jose, & Pryor, 2010)

Myths about Eating Disorders

- Anorexia is caused by wanting to look good in a bikini
- Eating disorders are a choice
- Parents are the cause of eating disorders
- Everyone has an eating disorder these days
- Eating disorders aren't really that serious
- Eating disorders don't affect men or boys
- Eating disorders only occur in young women

Prevalence of eating disorders



Every 62 minutes someone dies from an eating disorder

Eating Disorders

- Anorexia nervosa
  - **inability to maintain** a minimally normal **weight**
  - a devastating **fear of weight gain**
  - relentless **dietary habits that prevent weight gain**
  - disturbance in the way in which body weight and shape are perceived, **undue influence of body weight or shape on self-evaluation**, or persistent lack of recognition of the seriousness of the current low body weight

In young women, the risk of developing anorexia is 0.5 to 1 percent, and mortality is estimated at 4 to 10 percent.

- 2 Sub-Types of Anorexia
  - **Restricting**, in which severe limitation of food intake is the primary means to weight loss
  - **Binge-eating/purging type**, in which there are periods of food intake that are compensated for by self-induced vomiting, laxative or diuretic abuse, and/or excessive exercise

Risk Factors

- **Traits**
  - Perfectionism
  - Desire for academic success
  - Lack of age-appropriate sexual activity
  - Denial of hunger in the face of starvation
- **Psychiatric characteristics**
  - Excessive dependency
  - Developmental immaturity
  - Social isolation
  - Obsessive-compulsive behavior
  - Constricted affect
  - Comorbid depression and dysthymia

Eating Disorders

- Have one of the highest mortality rates of all psychiatric diagnoses
  - SMR = 11.6 for anorexia; 1.3 for bulimia
  - SMR for suicide in anorexia = 56.9
  - Severity of alcohol use was associated with increased risk for mortality
  - Hospitalization for an affective disorder was protective from mortality
    - Keel PK, et al. Arch of Gen Psych. 2/2003;60(2)
- 24.9% (for AN), 15.7% (for AN-R), **44.1% (for AN-BP)** for suicide attempts
  - Udo T, et al. 2019
- 1 in 5 of those who died with AN, died by suicide
  - Arcelus J, et al. 2011
- **Psychache vs. Interpersonal theory**
  - Shneidman (1996)

What you see

- Dramatic weight loss
- Dressing in multiple layers to hide size or stay warm
- Preoccupation with weight, food, calories, fat grams, dieting
- Refusal to eat certain food / categories (carbs, fat, etc.)
- Comments about feeling fat or overweight despite being underweight
- Multiple GI complaints – constipation, abdominal pain, bloating
- Food rituals – eating foods in certain order, moving food around on a plate
- Makes excuses to avoid mealtimes or eating with other people
- Excessive rigid exercise routine despite injuries, weather, fatigue, illness
- Isolates, not spending time with friends, family

Anorexia – Physical Signs and Symptoms

- GI problems – stomach cramps, bloating, constipation
- Trouble concentrating
- Labs: anemia, thyroid, electrolytes (if purging), increased Liver Function Tests, Low glucose, Low WBCC – often normal
- Dizziness, fainting
- Feeling cold all the time
- Sleep issues
- Menstrual irregularities – amenorrhea, irregular periods, or having periods on BCP
- Russel sign
- Dry skin and nails and hair
- Parotid gland swelling
- Lanugo
- Dental problems: enamel erosion, cavities, tooth sensitivity

Health Consequences

- Malnutrition →protein deficiency / deficiency in vitamins and minerals
- Cardiovascular = **most common Cause of Death** (10% Mortality rate)
  - Bradycardia (30-40 bpm), Low blood pressure (SBP of 70), Decreased left ventricular mass → abnormal systolic function
  - Increased incidence in mitral valve prolapse
  - Low potassium-dependent QT prolongation → increased risk of ventricular arrhythmia
  - EKG abnormalities: T-wave flattening, low voltage, ST-segment elevation, rightward QRS axis
  - **GREATEST RISK in first 2 weeks of refeeding** (keep daily weight gain to 0.2-0.4 kg)
- Endocrine and Metabolic
  - Low FSH and LH (despite low estrogen) → amenorrhea
    - Can persist in up to 44% despite weight restoration
  - Reduced fertility
  - Thyroid abnormalities: **Euthyroid Sick Syndrome**
    - Decreased T3 and T4
    - Increased reverse T3

Health Consequences

- Osteopenia – both cortical and trabecular bone are affected
  - Persists despite estrogen therapy
  - Supplementation with 1000-1500 mg/d of dietary calcium and 400 IU of vitamin D is recommended
- Neurologic and other
  - Cerebral atrophy and loss of brain volume
  - Generalized muscle weakness
  - Dry, scaly skin and lanugo type body hair
  - Increased BUN (dehydration) and decreased glomerular filtration rate
  - If vomiting, may have electrolyte imbalances
  - Disturbances of calcium, phosphorus and magnesium

Genetics of Anorexia Nervosa

Genetics

- The genetic basis of anorexia nervosa overlaps with other psychiatric disorders such as obsessive-compulsive disorder, depression, anxiety, and schizophrenia.
- Genetic factors associated with anorexia nervosa also influence physical activity, which could help explain the tendency for people with anorexia nervosa to be highly active.
- Intriguingly, the genetic basis of anorexia nervosa overlaps with metabolic (including glycemic), lipid (fats), and anthropometric (body measurement) traits, and the study shows that this is not due to genetic effects that influence BMI.
  - Watson, et al. 2019

Prognosis

- Morbidity rates = 10-20%
- 50% of patients make a complete recovery
- Of the remaining 50%: 20% remain emaciated and 25% remain thin
- 10% become overweight or die of starvation

Co-Morbidities

- Psychiatric co-morbidities in Anorexia Nervosa
  - Depression (15-60%)
  - Anxiety disorders (20-60%)
  - Substance abuse (12-21%)
  - Personality disorders (20-80%)

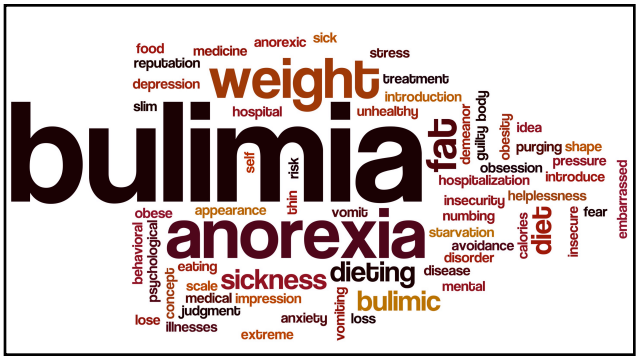
    - Nicholls et al.

Poor Outcomes

- Higher age at first presentation
- Co-occurring Substance Use Disorder
- Alcohol use disorder + lower BMI + older age at first presentation
- Cluster B personality disorders: include antisocial **personality disorder**, borderline **personality disorder**, histrionic **personality disorder** and narcissistic **personality disorder**.

Nutritional Deficiencies

- B-vitamins (Niacin, Folic acid, Thiamine, B6, B12)
- Calcium
- Vitamin D
- Vitamins C, E
- Essential fatty acids
- Copper



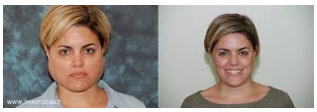
DSM-V Criteria for Bulimia Nervosa

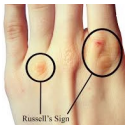
- Recurrent episodes of binge eating. Eating more than the average person in a 2-hour period, accompanied by a sense of loss of control.
- Repetitive inappropriate compensatory behaviors to avoid weight gain such as excessive exercise, fasting, laxative use, and diuretic use
- This eating behavior occurs at least once a week for a period of 3 months
- Body shape and weight influence self-evaluation
- This does not occur specifically with episodes of anorexia nervosa

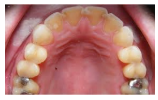
Signs and Symptoms

- Gastrointestinal symptoms: pain, pharyngeal irritation, blood in vomitus, esophageal tears, bloating, constipation, GERD, **Mallory Weiss tear**
- Dizziness, palpitations, dry skin, orthostatic hypotension
- Amenorrhea, irregular periods
- Electrolyte abnormalities
- Cardiac - Edema; EKG changes such as QT prolongation, increased PR interval, increased P wave amplitude, widened QRS, depressed ST segment

Signs and Symptoms







Screening – SCOFF Questionnaire

- Do you make yourself *Sick* because you feel uncomfortably full?
- Do you worry you have lost *Control* over how much you eat?
- Have you lost more than *One* stone* in a 3-month period?
- Do you believe yourself to be *Fat* when others say you are too thin?
- Would you say that *Food* dominates your life?

* One stone is approximately 14 lb, or 6.35 kg.

Screening Tool for ED

1. How many diets have you been on in the past year?
2. Do you think you should be dieting?
3. Are you dissatisfied with your body size?
4. Does your weight affect the way you think about yourself?

Anstine D et al. 2000

Co-Occurring Disorders with ED

Disorder	Anxiety Disorders	Mood Disorders	Impulse Control Disorders*
Anorexia	48%	42%	31%
Bulimia	81%	71%	64%
Binge Eating	65%	46%	43%

SAMHSA.gov

Bulimia Nervosa

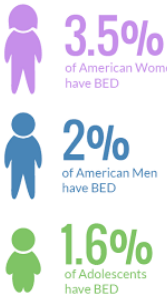
Prognosis

- 29.9% to 34.5% achieved abstinence
- 60% of those with BN fail to abstain from core behaviors

Pharmacotherapy

- Prozac
- Treatment of co-occurring mood and anxiety disorders

Jane Fonda



BINGE EATING DISORDER

Binge Eating Disorder (BED) Criteria (from DSM-V)

1. Eating, in a discrete period of time within any 2-hour period, an amount of food that is definitely larger than what most people would eat in a similar period under similar circumstances
2. A sense of lack of control over eating during the episode, the episodes occur on average at least once a week for at least 3 months,

- There is no compensatory purging
- Three or more of the following factors are also present:
  1. Eating much more rapidly than normal
  2. Eating until feeling uncomfortably full
  3. Eating large amounts of food when not feeling physically hungry
  4. Eating alone because of feeling embarrassed by how much is being eaten
  5. Feeling disgusted with oneself, depressed, or very guilty afterward

What you see

- Food disappearing, empty wrappers and containers
- Uncomfortable eating around others
- Fad diets, cutting out food groups
- Steals or hordes food in strange places
- Arranges lifestyle around binges
- Extreme concern with weight and shape
- Fluctuations in weight

Predictive Factors

- Female sex
- Being identified as "overweight" at age 10
- Eating, weight or shape concerns at age 14
- Hereditability
  - 41%–57%
- Asian Americans > Whites report binge eating
- Most common ED in African Americans

Complications

Suicide risk

- 1/3 had thought about suicide
- 22.9% had attempted suicide in their lifetime
- 10.1% with suicidality in the last year

Health consequences

- Cardiovascular disease
- Type 2 Diabetes
- Insomnia or sleep apnea
- Hypertension
- Gallbladder disease
- Muscle and/or joint pain
- Gastrointestinal difficulties
- Depression and/or anxiety
- Stomach rupture from binges
- Sleep Apnea

Medication

- Prozac – approved for binge eating and vomiting behaviors
- Vyvanse – approved for moderate-severe BED
- Dasotraline (Sunovion) – recently approved by FDA for new drug application (dopamine and norepinephrine) – for moderate-severe BED

Co-Morbidities

Binge Eating Disorder

- Major Depressive Disorder 49%
- Personality Disorders 21-97%
  - Cluster B most common with Bulimia / Binge Eating Disorder(dramatic/erratic)
- Substance Use Disorders 13.6%

Risk factors for Binge Eating Disorder

- Adverse childhood experiences
  - Sexual and physical abuse
- Parental factors:
  - Parental depression
  - Minimal affection, parental criticism
- Self-harm
- Vulnerability to obesity
- Repeated exposure to negative comments about shape, weight and eating from family members

Genetics – BED and Obesity

- Binge Eating Disorder
  - Binge-eating disorder is a familial disorder caused in part by factors distinct from other familial factors for obesity
  - Hereditability estimated at 57% (Javaras KN, et al. 2007)
- Obesity / Compulsive Overeating
  - Hereditability estimated at between 40-70% (Deckelbaum 2001)

PROGNOSIS: Eating Disorders

- 25-50-25
- Anorexia: Mortality 10-20%
  - Full weight restoration associated with lower relapse rates in anorexics
  - Age at onset > 11 but < 21 better
  - 50% fully recover, 20% remain emaciated, 25% are thin, 5-10% die of starvation
- Binge Eating Disorder –
  - After 6 years with treatment 50% improve, 30% intermediate outcome, 6% poor outcome, 1% die
- Treatment within the first five years is best for bulimia – 65-83% recovered; 36% abstinent
- Treatment by eating disorder professionals most successful

Other Specified Feeding and Eating Disorders – OSFED (formerly ED-NOS)

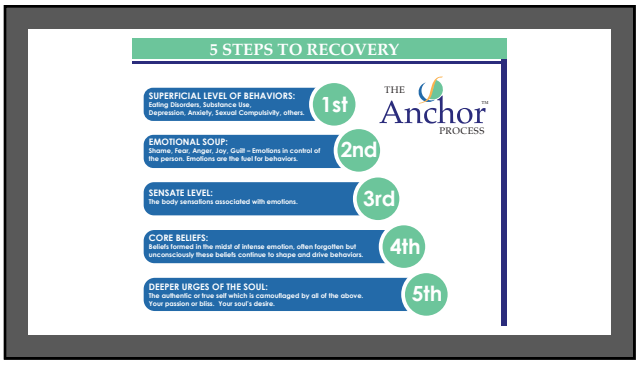
- **Atypical Anorexia Nervosa**: All criteria are met, except despite significant weight loss, the individual's weight is within or above the normal range.
- **Binge Eating Disorder (of low frequency and/or limited duration)**: All of the criteria for BED are met, except at a lower frequency and/or for less than three months.
- **Bulimia Nervosa (of low frequency and/or limited duration)**: All of the criteria for bulimia nervosa are met, except that the binge eating and inappropriate compensatory behavior occurs at a lower frequency and/or for less than three months.
- **Purging Disorder**: Recurrent purging behavior to influence weight or shape in the absence of binge eating.
- **Night Eating Syndrome**: Recurrent episodes of night eating. Eating after awakening from sleep, or by excessive food consumption after the evening meal. The behavior is not better explained by environmental influences or social norms. The behavior causes significant distress/impairment. The behavior is not better explained by another mental health disorder (e.g. BED).

Avoidant Restrictive Food Intake Disorder (ARFID)

- An eating or feeding disturbance (e.g., apparent lack of interest in eating or food; avoidance based on the sensory characteristics of food; concern about aversive consequences of eating) as manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with one (or more) of the following:
  - Significant weight loss (or failure to achieve expected weight gain or faltering growth in children)
  - Significant nutritional deficiency
  - Dependence on enteral feeding or oral nutritional supplements
  - Marked interference with psychosocial functioning
- The disturbance is not better explained by lack of available food or by an associated culturally sanctioned practice.
- The eating disturbance does not occur exclusively during the course of anorexia nervosa or bulimia nervosa, and there is no evidence of a disturbance in the way in which one's body weight or shape is experienced.
- The eating disturbance is not attributable to a concurrent medical condition or not better explained by another mental disorder. When the eating disturbance occurs in the context of another condition or disorder, the severity of the eating disturbance exceeds that routinely associated with the condition or disorder and warrants additional clinical attention.

ARFID – RISK FACTORS

- People with autism spectrum conditions are much more likely to develop ARFID, as are those with ADHD and intellectual disabilities
- Children who don't outgrow normal picky eating, or in whom picky eating is severe, appear to be more likely to develop ARFID
- Many children with ARFID also have a co-occurring anxiety disorder, and they are also at high risk for other psychiatric disorders



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