**DISORDERED EATING:** anorexia nervosa (AN); bulimia nervosa (BN); binge-eating disorder (BED); other specified eating disorder

| Condition | Disordered eating | Typical age of onset | Occurrence in males | SSRIs effective in acute/active? | 1st degree relatives with anxiety, MDD, SUD |
|---|---|---|---|---|---|
| AN | Restriction predominant | Adolescence | 0.3% | No | Increased |
| BN | Binge/purge | Adolescence – early adulthood | 0.5% | Yes | Increased |
| BED | Binge only | Later in life (> 40) | 25% | Yes | No link |

## AN & BN:

### GENERAL COMMENTS:
- Increasing prevalence in post-industrialized, high-income countries
- > 90% female
- Typically begin in adolescence or early adulthood
    - Older age of onset for males
- BN associated with disinhibition (impulsivity), AN with inhibition
- Ambivalence or lack of interest in change is an expected part of the illness

### TREATMENT:
- Therapy largely psychological (CBT, family systems)
- Small role of pharmacological therapy
- Focuses on normalizing eating behavior
- Low success rates

### AN & BN: ETIOLOGY UNKNOWN:
- Likely a combo of genetic, developmental and environmental factors

| | |
|---|---|
| GENETIC | • 5-HT dysfunction<br>• Increased rates of anxiety disorders, depression and substance use disorders in 1st degree relatives |
| DEVELOPMENTAL | |
| ENVIRONMENTAL | • Social pressure<br>• Dysfunctional family relationships<br>  ○ Insecure attachment styles common<br>• Athletes |

### CBT AND EATING DISORDERS:
1. Overcome distorted thinking
2. Teaches strategies besides using food to cope with stressors
3. Provides positive reinforcement for weight gain

## BULIMIA NERVOSA:

### DIAGNOSTIC CRITERIA (DSM-V):
- Recurrent episodes of binge eating characterized by both of:
    - Eating in a discrete period of time an amount of food that is definitely larger than "normal"
    - A sense of lack of control over eating during this episode
- Recurrent inappropriate compensatory behaviors to prevent wt gain
- Binge eating & compensatory behaviors occur at least once per week for 3 months
- Self-evaluation is unduly influenced by body shape & weight
- Does not occur exclusively during periods of AN

### PRESENTATION: THE BINGE-PURGE CYCLE:



- Normal BMI or overweight (18.5 – 30 in adults)
- May have frequent body weight fluctuations
- Can go undetected for years

### CO-MORBIDITIES:
- Primary mood disorders common
    - Depression (up to 80%), anxiety or bipolar disorder
    - Often following development of BN
    - May remit with effective treatment of BN
- Personality disorders common
- Poor impulse control
- Sexual promiscuity
- Kleptomania frequent
- Substance abuse common (30-37%)

### EPIDEMIOLOGY:
- Predominantly females
- Mid adolescence to early adulthood (between 16-22 years of age)
- Population prevalence: 1.5% females, 0.5% males

### ETIOLOGY:
- Unknown
- Childhood temperament (overanxious)
- Childhood obesity & early pubertal maturation
- ↓ 5-HT function (↓ 5-HIAA levels)

### COMMON COMPLICATIONS:
- Related to self-inducing vomiting/chronic regurgitation of acidic gastric contents
    - Cheliosis, pharyngeal soreness, oral-dental problems ((dental erosion, cavities, periodontal disease, enamel erosion), esophageal complications (esophagitis, erosions, ulcers, bleeding/rupture)
- Russell's sign (marks on hand due to self-induced vomiting)
- Menstrual irregularity or amenorrhea common
- Electrolyte disturbances (due to purging)
    - ↓ potassium & chloride, ↑ bicarbonate
- Esophageal tears, gastric rupture, cardiac arrhythmias (rare)

### SEVERITY: based on inappropriate compensatory behaviors

| | |
|---|---|
| MILD | 1-3 episodes/week |
| MODERATE | 4-7 episodes/week |
| SEVERE | 8-12 episodes/week |
| EXTREME | ≥ 14 episodes/week |

### PROGNOSIS:
- Total absence of symptoms uncommon
- 5 year recovery rate ~ 50%
- Better outcomes associated with decreased severity, greater motivation to recover, fewer comorbidities, better interpersonal functioning and family relationships

### TREATMENT:
- Psychological therapy critical to success
- Antidepressants useful (acute and remission)
    - SSRIs preferred (tolerability, most evidence)
        - Reduce binge-eating episodes by > 50% in 2/3 of pts
        - Relapse during remission common
    - Bupropion CONTRAINDICATED (risk of seizures)
- BZDs (low-dose, short acting) helpful if anxiety associated with eating

## ANOREXIA NERVOSA:

**DIAGNOSTIC CRITERIA (DSM-V)**: requires all of:

- Restriction of energy intake leading to significantly low body weight
- Intense fear of gaining weight or becoming fat
- Disturbance in the way in which one's body weight or shape is experienced

**SEVERITY:** based on low body weight (BMI)

| | |
|---|---|
| MILD | ≥ 17.5 |
| MODERATE | 16 – 16.99 |
| SEVERE | 15 – 15.99 |
| EXTREME | < 15 |

NORMAL = 18.5 – 24.9 kg/m$^2$

**PRESENTATION MAY INCLUDE:**

- Preoccupation with calories, meals, recipes, etc
- Highly avoidant of certain foods
- Preparing/serving elaborate meals for others
- Denial of symptoms, denial of hunger
- Rituals before and during eating
  - May become cpmpulsions

**AN TYPES:**

- Restricting
- Binge-eating/purging type

**COMMON COMPLICATIONS:**

- Electrolyte abnormalities
  - ↓ potassium & choride, ↑bicarb
- Leukopenia
- Hypocholestrolemia
- Anemia
- Hypotension
- QT interval prolongation
- Bradycardia
- Low bone mineral density
- Hypothermia
- Amenorrhea
- Growth of fine hair all over body
- Hair things, becomes brittle

**POTENTIAL LONG-TERM CONSEQUENCES:**

- Brain atrophy (↓ in grey matter)
- Delayed sexual development
  - HPG suppression
- Estrogen suppression
  - Osteopenia, osteoporosis
  - Infertility

**COGNITIVE PROCESSES:**

- Self esteem highly dependent on <u>perception</u> of body shape and weight
- Weight loss = impressive achievement, extraordinary self-discipline
- Weight gain = unacceptable failure of self-control

**COMORBIDITIES:**

- Up to 75% have a primary mood disorder (MDD, BP)
- OCD (40% prevalence vs. 2.5% in gen population)
- Substance abuse is common
- Personality disorders
- Social phobia

**EPIDEMIOLOGY:**

- Predominantly female; early to late adolescence (between 15-19 years of age)
- Population prevalence: 0.9% females, 0.3% males (less common than bulimia)
- Longitudinal management is difficult as often resistant to weight restoration plans
  - Relapse requiring hospitalization within 1 year > 30%
  - Mortality rates ~ 10% (highest of any psychiatric disorder)
  - Societal promotion of the virtues of being thin has potentially negative impact

**ETIOLOGY:**

- Unknown
- Childhood temperament & personality traits may predispose
  - Rigid, competitive, perfectionistic
  - Compulsive & obsessive
  - Hyperactive
  - Anxious, depression
- ↑ 5-HT function (↑ 5-HIAA levels)

**TREATMENT:**

- Psychological treatment is key
- Treating psychiatric comorbidit(ies) is necessary for long-term remission
- Drug therapy is secondary and may not be safe until BMI is normal

| | |
|---|---|
| ANTIDEPRESSANTS | SSRIs not effective when condition active<br>▪ May be beneficial after weight restored<br>Bupropion CONTRAINDICATED (risk of seizure) |
| ANTIPSYCHOTICS (2nd gen) | Early in treatment to ↓ sx of depression, OCD, anxiety and paranoid thoughts concerning weight gain<br>Efficacy/use controversial (evidence lacking) |
| BZDs | Low-dose, short acting<br>Helpful when anxiety associated with eating |
| PRO-KINETIC AGENTS | Domperidone, metoclopramine<br>Reduce feeling of fullness caused by ↓intestinal motility |

**PROGNOSIS:**

- More favourable with longer follow-up care and younger age of onset
- Poorer prognosis:
  - Chronic disease
  - Lower initial weight
  - Presence of builimia or purging behavior
  - Poor family relationships
  - OCD personality symptoms