### Eating Disorders

**AN & BN:**
- 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

#### 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

**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

**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)

**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

**ETIOLOGY:**
- 5-HT dysfunction
- Increased rates of anxiety disorders, depression and substance use disorders in 1st degree relatives

**ENVIRONMENTAL:**
- Social pressure
- Dysfunctional family relationships
  - Insecure attachment styles common
  - Athletes

**BULIMIA NERVOSA: (AN & BN):**

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

**GENERAL COMMENTS:**
- Likely a combo of genetic, developmental and environmental factors
  - Genetic
    - 5-HT dysfunction
    - Increased rates of anxiety disorders, depression and substance use disorders in 1st degree relatives
  - Developmental
    - Social pressure
    - Dysfunctional family relationships
    - Insecure attachment styles common
    - Athletes

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

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

**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

**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

**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
**ANOREXIA NERVOSA:**

**DIAGNOSTIC CRITERIA (DSM-5):** 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)

<table>
<thead>
<tr>
<th>Type</th>
<th>BMI Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>MILD</td>
<td>≥ 17.5</td>
</tr>
<tr>
<td>MODERATE</td>
<td>16 – 16.99</td>
</tr>
<tr>
<td>SEVERE</td>
<td>15 – 15.99</td>
</tr>
<tr>
<td>EXTREME</td>
<td>&lt; 15</td>
</tr>
</tbody>
</table>

NORMAL = 18.5 – 24.9 kg/m²

**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 compulsions

**AN TYPES:**
- Restricting
- Binge-eating/purging type

**COMMON COMPLICATIONS:**
- Electrolyte abnormalities
  - ↓ potassium & chloride, ↑ bicarb
- Leukopenia
- Hypocholesterolemia
- 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 perception 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

**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
  - May become compulsions
  - 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
  - Hyperactive
  - Compulsive & obsessive
  - Anxious, depression
  - ↑ 5-HT function (↑ 5-HIAA levels)

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

<table>
<thead>
<tr>
<th>AGENTS</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSRIs not effective when condition active</td>
<td>May be beneficial after weight restored</td>
</tr>
<tr>
<td>Bupropion CONTRAINDICATED (risk of seizure)</td>
<td></td>
</tr>
<tr>
<td>Early in treatment to ↓ sx of depression, OCD, anxiety and paranoid thoughts concerning weight gain</td>
<td>Efficacy/use controversial (evidence lacking)</td>
</tr>
<tr>
<td>Low-dose, short acting</td>
<td>Helpful when anxiety associated with eating</td>
</tr>
<tr>
<td>Domperidone, metoclopramine</td>
<td>Reduce feeling of fullness caused by ↓ intestinal motility</td>
</tr>
</tbody>
</table>

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