Objectives:

- Define DSM V criteria for Anorexia Nervosa and Bulimia Nervosa.
- Identify medical complications of anorexia and bulimia.
- Recognize when outpatient treatment is not enough.

Epidemiology

- Higher rates in children less than 12 years.
- Increase prevalence in boys and minorities.
- Increase in those with previous history of obesity.
- <12 y/o with eating disorder:
  - Incidence of premorbid psychopathology (depression, OCD, anxiety disorders)
  - Binge/purge behaviors
  - Males and females may be equally affected
  - May not meet diagnostic criteria because they do not articulate body image dissatisfaction
- Incidence:
  - 0.5% of US adolescent women have AN
  - 1-2% meet diagnostic criteria for BN
  - 5-10% of all cases occur in males
Etiology

Multifactorial
• Neurobiology
• Genetic predisposition
• Environmental
• Temperamental

DSM V Criteria
Anorexia Nervosa

1. Restriction of energy intake leading to low body weight
   • CDC BMI-for-age below the 5th percentile
   • Failure to maintain Growth trajectory
   • Consider body build, weight history and physiological disturbances

2. Intense fear of gaining weight or of becoming fat or persistent behaviors that interfere with weight gain, even though at a low weight.

Anorexia Nervosa

3. Disturbance in the way in which one’s body wt or shape is experienced, undue influence of body wt or shape on self-evaluation, or denial of the seriousness of current low body wt.

• ICD 10
  • F50.01 Restricting type – Dieting, fasting or excessive exercise.
  • F50.02 Binge-eating / purging type - in the last 3 months self-induced vomiting, misuse of laxatives, diuretics or enemas.
Bulimia Nervosa F50.2

1. **Recurrent** inappropriate episodes of binge eating
   - Eating a large amount of food in a discrete time period.
   - Lack of control over eating during the episode – feeling of not being able to stop or control what or how much one is eating.

2. Recurrent **compensatory behaviors** to prevent weight gain, such as self induced vomiting, laxative use, fasting or excessive exercise.

3. Binge eating and inappropriate compensatory behaviors both occur **at least once a week for 3 weeks**.

4. **Self-evaluation is unduly influenced** by body shape and weight.

5. The disturbance does not occur exclusively during episodes of anorexia nervosa.
Screening

**SCOFF**
- Do you make yourself sick because you feel uncomfortably full?
- Do you worry you have lost control over how much you eat?
- Have you recently lost >1 stone (6.3 kg or 14 lb) in a 3-mo period?
- Do you believe yourself to be fat when others say you are too thin?
- Would you say that food dominates your life?

PE – Anorexia Nervosa

- Decreased weight / subcutaneous body fat
- Lanugo
- Cool / discolored hands and feet
- Decreased bowel sound / palpable stool
- Decreased BP, decreased pulse, decreased temperature
- Irregular pulse

Bulimia

- Poor impulse control
- Binge / purge cycle—release of anxiety
  - Bulimia complicating anorexia nervosa
  - Bulimia with low self-esteem / depression
  - Bulimia with personality / character disorder
PE – Bulimia

• Average to above average weight
• Bite marks on hands
• Self-abusive scars
• Palatal abrasions
• Etching of dental enamel / sores in mouth
• Salivary gland enlargement / tenderness
• Petechiae on face / subconjunctival hemorrhages
• Orthostatic with BP +/- or pulse changes
• Bradycardia
• Poor peripheral perfusion – characterized by cold extremities, delayed capillary refill, cyanosis
• Constipation

PE - Bulimia

Labs – Eating Disorders

• CBC - normal or leukopenia / anemia
• UA - increased specific gravity
• ESR - very low
• Electrolytes:
  • Vomiting – decreased K & Cl; metabolic alkalosis
  • Laxatives – normal K, but decreased total body K; hyperchloremic metabolic acidosis (related to bicarbonate wasting)
  • Diuretics – decreased Na & K; metabolic alkalosis
  • Dilutional hyponatremia in patients who “water load”
• LFT's – elevated because of malnutrition
Labs – Eating Disorders

- Ca – decreased in laxative abusers
- BUN – increased with dehydration
- Cr – decreased with loss of muscle mass
- Mg – decreased from inadequate intake or laxative use
- P – decreased with laxative use
- TFT's- low to nl T4, nl TSH, decreased T3

- Cholesterol – increased in anorexia due to decreased catabolism of LDL
- EKG – decreased HR, low voltages, arrhythmias
- CXR – narrow cardiac silhouette / osteoporosis
- Albumin, pre-albumin, transferrin, & TIBC may be normal

Treatment Of Eating Disorders

- Early restoration of nutritional status
- Involvement of the family

- A three part approach:
  - Medical
  - Nutritional
  - Psychological

- Start with self-monitoring of behaviors
- Break binge / purge cycles
Criteria for Hospital Admission

- **Anorexia Nervosa:**
  - <75% ideal body weight or ongoing weight loss despite intensive management
  - Refusal to eat
  - Body fat <10%
  - HR <50 during daytime; <45 nighttime
  - Orthostatic changes: BP >10 mm Hg or pulse >20 bpm
  - Temp < 96°F
  - Arrhythmia

- **Bulimia Nervosa:**
  - Syncope
  - Serum K <3.2
  - Serum Cl <88
  - Esophageal tears
  - Arrhythmias including prolonged QTc
  - Hypothermia
  - Suicide risk
  - Intractable vomiting
  - Hematemesis
  - Failure to respond to out patient treatment

Prognosis in Eating Disorders

- **Good:**
  - Earlier age of onset
  - Shorter duration of symptoms
  - Stronger parent-child relationship

- **Poor:**
  - Purging behaviors
  - Physical hyperactivity
  - More significant weight loss
  - Disease chronicity
Refeeding Syndrome

- Constellation of metabolic, CV, neurologic, and hematologic complications primarily related to shifts of phosphate from extracellular to intracellular spaces, in setting of total body phosphorus depletion
- Most common during 1st week of hospitalization and those receiving supplemental enteral or parenteral nutrition

Eating Disorder Outcomes

- Anorexia nervosa:
  - 1/3 recover, 1/3 improved, ¼ or greater are chronic
- Bulimia:
  - 40 – 50% “cured”
  - Wide variety of figures depending on “complicating factors”
  - Significant risk for substance abuse and suicide