Anorexia Nervosa

A. Restriction of energy intake relative to requirements, leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health. Significantly low weight is defined as a weight that is less than minimally normal or, for children and adolescents, less than that minimally expected.

B. Intense fear of gaining weight or of becoming fat, or persistent behavior that interferes with weight gain, even though at a significantly low weight.

C. Disturbance in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight.

Specify whether:

Restricting type: During the last three months, the individual has not engaged in recurrent episodes of binge eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas.) This subtype describes presentations in which weight loss is accomplished primarily through dieting, fasting, and/or excessive exercise.

Binge-eating/purging type: During the last three months, the individual has engaged in recurrent episodes of binge eating or purging behavior (i.e., self-induced vomiting or the misuse of laxatives, diuretics, or enemas.)

Bulimia Nervosa

A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:

1) Eating, in a discrete period of time (e.g., within any two-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances.

2) A sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating).

B. Recurrent inappropriate compensatory behavior to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications; fasting; or excessive exercise.

C. The binge eating and inappropriate compensatory behaviors both occur, on average, at least once a week for three months.

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

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

Specify current severity: The minimum level of severity is based on the frequency of inappropriate compensatory behaviors (see below). The level of severity may be increased to reflect other symptoms and the degree of functional disability.

Mild: An average of 1 to 3 episodes per week.
Moderate: An average of 4 to 7 episodes per week.
Severe: An average of 8 to 13 episodes per week.
Extreme: An average of 14 or more episodes per week.

Other Eating & Feeding Disorders

Includes:
Pica, avoidant/restrictive food intake disorder, binge eating disorder, rumination disorder, other specified feeding or eating disorder & unspecified feeding or eating disorder (See DSM-V for criteria for other disorders.)
## Physical Exam Findings & Complications

<table>
<thead>
<tr>
<th>System</th>
<th>Anorexia Nervosa</th>
<th>Bulimia Nervosa</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Fatigue, weakness, malaise, cold intolerance, hypothermia, cachexia, low BMI</td>
<td>Hypochondreic metabolic alkalosis (vomiting), hyperchondreic metabolic acidosis (laxative abuse), fluid retention from laxative withdrawal,</td>
</tr>
<tr>
<td>Fluids &amp; Electrolytes</td>
<td>Hypocalcemia, hypokalemia, hyponatremia, hypophosphatemia, hypomagnesemia, dehydration</td>
<td>Hypocalcemia, hyponatremia, hypokalemia, hyponatremia, hypomagnesemia, dehydration</td>
</tr>
<tr>
<td>HEENT</td>
<td>Temporal wasting, angular stomatitis</td>
<td>Dental caries, enamel erosion, palatal scratches, infection of the salivary glands, parotid hypertrophy</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td>Bradycardia, hypotension, murmur, acrocyanosis, peripheral edema, prolong QTc, increased PR interval, first degree heart block, ST/ T wave abnormalities, arrhythmia, decrease ventricular wall thickness, postural orthostatic tachycardia and/ or syncope, mitral valve prolapse, pericardial effusions, heart failure</td>
<td>Ipecac cardiomyopathy and myositis</td>
</tr>
<tr>
<td>Pulmonary</td>
<td>Decreased pulmonary capacity, Respiratory failure, pneumothorax, pneumomediastinum</td>
<td>Aspiration pneumonia</td>
</tr>
<tr>
<td>Gastrointestinal</td>
<td>Early satiety, epigastric tenderness, stool mass LLQ, superior mesenteric artery syndrome, delayed gastric emptying, impaired GI tract motility, constipation, pancreatitis, abnormal hepatic function results, hypercholesterolemia, gallstones</td>
<td>GER, esophagitis, epigastric tenderness, hematemesis, esophageal tears, gastric or esophageal rupture</td>
</tr>
<tr>
<td>Endocrine</td>
<td>Hypoglycemia, hypothalamic hypogonadism, sick euthyroid syndrome (euthyroid hypothyroxinemia), growth retardation, delayed puberty, ↑ cortisol</td>
<td></td>
</tr>
<tr>
<td>Genitourinary</td>
<td>Amenorrhea, Breast atrophy, atrophic vaginitis, testicular atrophy, infertility, pregnancy complications, sterile pyuria, acute renal failure, pre-renal azotemia, nephrogenic diabetes insipidus</td>
<td></td>
</tr>
<tr>
<td>Musculoskeletal</td>
<td>Low bone density/ osteoporosis, fractures, myositis</td>
<td></td>
</tr>
<tr>
<td>Hematologic</td>
<td>Anemia (normocytic, microcytic or macrocytic), leukopenia, thrombocytopenia, impaired cell mediated immunity</td>
<td></td>
</tr>
<tr>
<td>Dermatologic</td>
<td>Xerosis, poor wound healing, Hair loss, lanugo, pallor, bruising/ abrasions on vertebrae, mottling, carotenoderma</td>
<td>Russell’s sign (finger joints being callused or discolored from using fingers to induce vomiting)</td>
</tr>
<tr>
<td>Neurological</td>
<td>Cortical atrophy, seizures, syncope, peripheral neuropathy, cognitive impairment (attention, concentration, problem-solving, visual associative learning, planning ability, etc.)</td>
<td></td>
</tr>
<tr>
<td>Psychiatric</td>
<td>Isolation of affect, anxiety, Cluster C personality traits, obsessive-compulsive traits, psychomotor and cognitive slowing with malnutrition, suicidal thoughts</td>
<td>Cluster B personality traits, emotional lability, feeling of a loss of control, possible cuts from non-suicidal self-injury (NSSI)</td>
</tr>
</tbody>
</table>

(Both columns may be present in either disorder depending on behaviors. The separation is there to help identify findings.)
How to identify “significantly low weight”
BMI less than 5th percentile OR drop off weight or BMI curve

How to determine degree of malnutrition
Percentage of estimated ideal body weight (% eIBW)
\[
\text{Malnutrition Reference} \quad \frac{\text{current weight}}{\text{estimated ideal body weight}} \times 100
\]

Malnutrition Reference
- Normal: 90-110%
- Mild: 80-89.9%
- Moderate: 70-79.9%
- Severe: <70%

**Indication for Hospitalization**

< 75% eIBW
Vital sign instability
- HR < 50 bpm daytime, <45 when asleep
- Hypotension: blood pressure <80/50
- Orthostatic instability/ POTS with symptoms
  - HR increases by >30 bpm or to >120 bpm
  - SBP decrease by 20, DBP by 10
- T < 96.5 F
Electrolyte abnormalities
Cardiac arrhythmias
Failure of outpatient management (no improvement after 3 visits)
Acute food refusal
Hematemesis
Suicidal ideation (psychiatric hospitalization)
Acute mental status changes (e.g. psychosis, mania, severe depression—psychiatric hospitalization s/p medical stabilization)

**Evaluation & Treatment**

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Necessary:</td>
<td>ESR, Thyroid function panel, hepatic function panel, CBC, Chem 10</td>
</tr>
<tr>
<td>Additional Studies as Indicated:</td>
<td>Vitamin levels (Zinc, Vitamin D, B12, B6, A), Electrocardiogram (bradycardia, moderate malnutrition), DEXA Scan (if no menses for 6 month or males with weight loss for 1 year), Echocardiogram (if EKG abnormal), and Brain MRI (rarely)</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Refer to a multidisciplinary team (physician, registered dietitian and therapist (individual and family))</td>
</tr>
<tr>
<td>Treatment by PCP</td>
<td>PCP should see every 1-2 weeks for weight and vitals until care is established with experienced provider (Remember: referral ≠ established care)</td>
</tr>
<tr>
<td></td>
<td>If malnourished, nutritional supplement (e.g. Boost, Ensure, etc.) daily</td>
</tr>
</tbody>
</table>

**Recommended References**