Anorexia Nervosa 101 for Care Advocates

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Anorexia Nervosa — 2 Subtypes:

- **Restrictive type:** patient maintains low body weight secondary to dietary restriction.
- **Binge Eating/Purging Type:** patient engages in self-induced vomiting or diet pills, laxatives, diuretics.
- Ratings are based on BMI – mild greater than or equal to 17.
  - Moderate = 16 – 17.
  - Severe = 15 – 16.
  - Extreme = less than 15.
- Symptoms:
  - **Criteria A** = refusal/inability to maintain minimal normal body weight (< 85% IBW/BMI < 17.5)
  - **Criteria B** = intense fear of weight gain, body image distortion, denial of seriousness of low body weight.

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Anorexia Nervosa — Overview:

- Of all psychiatric disorders, anorexia nervosa has the highest mortality rate: > 50% of all deaths in anorexia nervosa patients are caused by starvation-related medical complications.
- Rarely begins before puberty or after 40 years old.
- Often associated with stressful life events.
- Majority are female with increasing incidence in males noted.
- Family history:
  - Check for anorexia nervosa, bipolar disorder, depressive disorders
  - Check for disordered eating and PTSD
- Can see association with fibromyalgia, anemia, osteoporosis, and cancer.
- Axis II pathology shows obsessive-compulsive and avoidant traits more than other personality disorders.
- Those with greater intellect and higher motivation do better overall.

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Symptoms and Medical Findings:

- **Symptoms** include low weight, fears of eating in public, low blood pressure, bradycardia, edema, cold intolerance, lanugo, anemia, amenorrhea, depression symptoms, OCD features, G.I. distress, constipation, anxiety, body image distortion.
- **Laboratory findings** can include leukopenia (low WBC count), mild anemia (low hemoglobin/hematocrit), thrombocytopenia (low platelets), dehydration, elevated cholesterol, elevated liver function tests, elevated amylase, low magnesium, low zinc, low phosphate, low T4 and elevated T-3, low broad pressure, sinus bradycardia, increased QTc interval on EKG nonspecific ST and T wave changes.
- Low blood pressure, hypoglycemia with blood sugar < 50 mg/dL.
- Can see mitral valve prolapse in approximately 30% of patients.
- Can see decreased potassium and chloride with laxative use.

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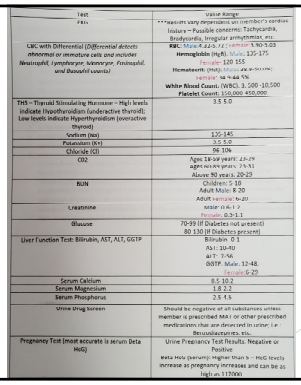
Lab Values



Test	Value Range
EKG	***Measure vary depending on member's cardiac history – Possible concerns: Tachycardia, Bradycardia, irregular arrhythmias, etc.
CBC with Differential (Differential detects abnormal or immature cells and includes Neutrophil, Lymphocyte, Monocyte, Eosinophil, and Basophil counts)	RBC: Male 4.2-5.4 / normal 3.90-5.03 Hemoglobin (Hgb): Male: 135-175 Female: 120 155 Hematocrit (Hct): Male: 40.0-51.0% Female: 36.0-44.5% White Blood Count: (WBC): 3, 500 -10,500 Platelet Count: 150,000 450,000
THS – Thyroid Stimulating Hormone – High levels indicate Hypothyroidism (underactive thyroid); Low levels indicate Hyperthyroidism (overactive thyroid)	3.5 5.0
Sodium (Na)	135-145
Potassium (K+)	3.5 5.0
Chloride (Cl)	96 106
CO2	Ages 18-59 years: 16-29 ages 60-69 years: 19-31 Above 90 years: 20-29
BUN	Children: 5-18 Adult Male: 8-20 Adult female: 6-20
Creatinine	Male: 0.6-1.2 Female: 0.5-1.1
Glucose	70-99 (If Diabetes not present) 80 130 (If Diabetes present)
Liver Function Test: Bilirubin, AST, ALT, GGTP	Bilirubin: 0.1 Alt: 10-40 ast: 7-56 GGTP. Male: 12-48 Female: 9-29
Serum Calcium	8.5 10.2
Serum Magnesium	1.8 2.2
Serum Phosphorus	2.5 4.5
Urine Drug Screen	Should be negative of all substances unless member is prescribed MAT or other prescribed medications that are detected in urine: i.e. Benzodiazepines, etc.
Pregnancy Test (most accurate is serum Beta HcG)	Urine Pregnancy Test Results. Negative or Positive Beta Hcg (serum): Higher than 5 – HcG levels increase as pregnancy increases and can be as high as 117000

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More Medical Findings:

- Comorbidities include depression, OCD features, impulsivity, features of social anxiety disorder.
- Most cases experience remission within five years of presentation.
- If weight loss is more acute, may see positive changes in lab values and symptoms more quickly.
- If weight loss is more chronic and patient is able to function (i.e., walk without dizziness in spite of orthostatic blood pressure changes), some signs and symptoms may improve less quickly.

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Refeeding Syndrome:

- A condition with complex findings that increases the risk for cardiac complication/death.
- Symptoms include: significantly decreased heart rate, decreased phosphorus, and edema.
- Occurs in severely malnourished individuals and is related to issues with glycogen, fat, protein and fluid, potassium, phosphorus, and magnesium shifts.
- Risk of refeeding syndrome is greatest in the first 2 weeks of treatment.
- Facility will report findings or you can ask them if any signs and symptoms at the first review.
- If they report refeeding syndrome, they will typically be checking labs every few days for the first 1-2 weeks and then weekly. They will monitor and correct phosphorus, magnesium, and potassium.
- Bed rest and compression stockings are often used for edema.
- Actual risk of refeeding syndrome may be overblown according to various studies. Therefore, one can likely safely re-feed an individual to gain 2-4 pounds per week at a 24-hour level of care, and approximately 1 pound per week at a lower level of care.

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Concurrent Reviews:

- Get the member's height and weight on admission and at all follow-up reviews.
- Weight should be done at the same time of day (usually a.m.) in a hospital gown after voiding.
- Ask about signs of dehydration, purging, or water loading (BUN, creatinine, urinalysis specific gravity)
- Weight loss often occurs in the first week due to shift from catabolic to anabolic state.
- Always ask about functionality:
  - Is member able to walk to groups independently?
  - Is member doing ADLs?
  - Is member able to attend action-oriented groups?
  - Is member able to do schoolwork on the unit?

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Labs:

- Facility reporting "abnormal labs" is "normal" for anorexia nervosa – most of the lab values do not correct quickly but will correct with time and weight restoration.
- The more acute labs to watch for (regarding refeeding syndrome and risk) include phosphate, magnesium, calcium, potassium, and blood sugar.
- If abnormal labs are reported, always ask the reviewer "what acute changes in the orders or follow-up did the MD order in the chart to address the abnormal lab findings? When will the MD see the patient again?"

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Vital signs:

- Check for orthostatic vital signs
- With improvement, the gap in the orthostatic changes should decrease.
- This does not happen quickly
- Always ask if the member is able to ambulate to groups/classes independently versus needing assistance/wheelchair if the individual does have clinically significant orthostasis.

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Treatment for Anorexia Nervosa — Part I:

- The best medicine for anorexia nervosa is food, so nutritional support is essential.
- Start with 1500-1800 cal/day fluid retention if > 3 pounds of weight gain/week.
- Look for increased calorie counts by 200-400 cal/every 1-2 days, until desired weight gain.
- Usually will need to go up to 2800-4000 cal daily.
- If not gaining weight/less than 85% IBW and not eating — ask about NG tube feedings. Continuous 24-hour feeding is often better tolerated than bolus feedings.
- Monitor eating and interrupt abnormal eating behaviors.
- Monitor for one hour after eating and monitor bathroom.
- If member not gaining weight:
  - Increase calories and/or decrease physical activity
  - Ask about signs of purging/hiding food; ask about percent of the meal as food versus supplement/Boost/Ensure.
- Ask about positive reinforcements = telephone/electronic privileges, visiting with a pt, family, off-unit privileges, increased meal choices, etc.

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Treatment for Anorexia Nervosa — Part II:

- Ask about negative reinforcers = bedrest, no off-unit privileges, no movement.
- If possible, involve family in behavioral reinforcement planning.
- Look for 2-4 pounds of weight gain/week in a 24-hour setting and 1 - 2 pounds/week in a lower level of care.
- Watch for tachycardia, water loading, and edema.
- Patients often report increased anxiety and resistance when they weight restore. Especially when going from two-digit numbers (i.e., 99 pounds) to triple digit numbers or their preconceived goal weight.
- If this is occurring, ask the facility what they are doing differently to address this and to help member further weight gain.
- Facilities will often say that anorexia nervosa recovery is more successful if > 100% IBW and/or that this helps compensate for weight loss when member goes to the next lower level of care. However, the goal of refeeding is > 90% IBW (also look at level of functioning).
- Improved mood, condition, and functioning will occur with weight gain.

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Therapy:

- All types of psychotherapy have been used. Supportive, CBT, family therapy, family-based therapy/Maudsley method for adolescents. Cognitive remediation therapy has also been used; a modified CBT.
- Most providers say they use a combination of psychodynamic with behavioral strategies.
- Family therapy and family group psychoeducation are typically necessary.
- Anorexia nervosa patients are often perfectionistic, sensitive, have control issues, OCD issues, and family issues.

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Medications:

- Providers often prefer to first use weight gain/nutrition to treat not only the anorexia nervosa but also depression and cognitive issues. This is due to the thought that lack of serotonin stores are available for the medications to work.
- Often utilized:
  - Calcium and vitamin D supplementation for osteopenia
  - Zinc supplementation
  - PRN medications to treat constipation
- Olanzapine (Zyprexa) has shown mixed results. Some studies show olanzapine had modest therapeutic effect on BMI but not on psychological symptoms. However, some studies show benefit of atypicals likely for the effects on depression, anxiety, and typically used with anxiety and obsessive-eating-related ruminations and treatment resistance.
- SSRI medications are often used for OCD/anxiety issues. However, need to check for safety secondary to potential cardiac issues (bradycardia, elevated QTc interval) when using psychotropic medications in anorexia nervosa.

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TABLE 8. Level of Care Guidelines for Patients With Eating Disorders

	Level 1: Outpatient	Level 2: Intensive Outpatient	Level 3: Partial Hospitalization (Full-Day Outpatient Care)[a]	Level 4: Residential Treatment Center	Level 5: Inpatient Hospitalization
Medical status	Medically stable to the extent that more extensive medical monitoring, as defined in levels 4 and 5, is not required			Medically stable to the extent that intravenous fluids, nasogastric tube feedings, or multiple daily laboratory tests are not needed	*For adults:* Heart rate <40 bpm; blood pressure <90/60 mmHg; glucose <60 mg/dl; potassium <3 mEq/L; electrolyte imbalance; temperature <97.0°F; dehydration; hepatic, renal, or cardiovascular organ compromise requiring acute treatment; poorly controlled diabetes *For children and adolescents:* Heart rate near 40 bpm, orthostatic blood pressure changes (>20 bpm increase in heart rate or >10 mmHg to 20 mmHg drop), blood pressure <80/50 mmHg, hypokalemia,[b] hypophosphatemia, or hypomagnesemia
Suicidality[c]	If suicidality is present, inpatient monitoring and treatment may be needed depending on the estimated level of risk				Specific plan with high lethality or intent; admission may also be indicated in patient with suicidal ideas or after a suicide attempt or aborted attempt, depending on the presence or absence of other factors modulating suicide risk
Weight as percentage of healthy body weight[d]	Generally >85%	Generally >80%	Generally >80%	Generally <85%	Generally <85%; acute weight decline with food refusal even if not <85% of healthy body weight

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TABLE 8. Level of Care Guidelines for Patients With Eating Disorders *(continued)*

	Level 1: Outpatient	Level 2: Intensive Outpatient	Level 3: Partial Hospitalization (Full-Day Outpatient Care)[b]	Level 4: Residential Treatment Center	Level 5: Inpatient Hospitalization
Motivation to recover, including cooperativeness, insight, and ability to control obsessive thoughts	Fair-to-good motivation	Fair motivation	Partial motivation; cooperative; patient preoccupied with intrusive, repetitive thoughts[a] >3 hours/day	Poor-to-fair motivation; patient preoccupied with intrusive repetitive thoughts[a] 4–6 hours a day; patient cooperative with highly structured treatment	Very poor to poor motivation; patient preoccupied with intrusive repetitive thoughts[a]; patient uncooperative with treatment or cooperative only in highly structured environment
Co-occurring disorders (substance use, depression, anxiety)	Presence of comorbid condition may influence choice of level of care				Any existing psychiatric disorder that would require hospitalization
Structure needed for eating/gaining weight	Self-sufficient	Self-sufficient	Needs some structure to gain weight	Needs supervision at all meals or will restrict eating	Needs supervision during and after all meals or nasogastric/special feeding modality
Ability to control compulsive exercising	Can manage compulsive exercising through self-control	Some degree of external structure beyond self-control required to prevent patient from compulsive exercising; rarely a sole indication for increasing the level of care			
Purging behavior (laxatives and diuretics)	Can greatly reduce incidents of purging in an unstructured setting; no significant medical complications, such as electrocardiographic or other abnormalities, suggesting the need for hospitalization			Can ask for and use support from others or use cognitive and behavioral skills to inhibit purging	Needs supervision during and after all meals and in bathrooms; unable to control multiple daily episodes of purging that are severe, persistent, and disabling, despite appropriate trials of outpatient care, even if routine laboratory test results reveal no obvious metabolic abnormalities

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