

Magnesium and Phosphorus Testing

12 24.305
Mg
Magnesium
[Ne] 3s²
Alkaline Earth Metal

- Excessive testing exposes patients to risk of anemia (due to extra blood draws) and unnecessary treatment (chasing numbers)
- Testing for Magnesium (Mg; **LAB103**) and Phosphorus (Phos; **LAB113**) in stable patients is rarely indicated
- Currently, frequent and repetitive Mg and Phos testing is ordered on many Upstate in-patients

15 30.974
P
Phosphorus
[Ne] 3s²3p³
Nonmetal

- For patients requiring Mg or Phos testing (for issues such as refractory hypocalcemia, refractory hypokalemia, or cardiac arrhythmias), a single Mg/Phos level may be helpful to determine if the patient has hypomagnesemia/hypophosphatemia

- Some patients **may** require repeated Mg/Phos testing. Common indications and ideal frequencies are indicated below:
 - Patients on total parenteral nutrition: **Once daily** Mg/Phos level is sufficient to track supplementation
 - Obstetric patients on IV magnesium: Mg levels should be drawn **once every 12 hours while the IV Mg is active**
 - Patients with atrial fibrillation or ectopy: **Once daily** Mg testing may be appropriate **when a deficiency is identified**
 - Patients at acute risk for tumor lysis: Repetitive Phos testing may be required.
 - Patients with specific cardiac arrhythmias (Torsades, Ventricular Tachycardia, etc): Testing more frequent than once daily may be indicated **when a deficiency is identified**
 - Patients with malnutrition and risk of refeeding syndrome, in alcohol withdrawal, and diabetic/fasting ketosis: Mg/Phos level **once per day and once after supplementation is given.**
 - Patients with severe kidney disease: Frequent/repetitive Mg/Phos testing is generally **not** required, including patients on dialysis
- When in doubt, consultation with the appropriate specialist service to determine the appropriate frequency is recommended