N17 - Phosphorus, Calcium, and PTH

When: Monthly mineral-bone review or a new binder, vitamin D, or calcimimetic order.

Do this

• Put calcium, phosphorus, and PTH trends together. Include albumin, alkaline phosphatase when available, medicines, and recent dose changes [1].

• Ask how binders are actually taken with food; check missed doses, pill burden, cost, and adverse effects before labeling the patient nonadherent.

• Review prescribed laboratory timing: stable G5D guidance suggests calcium/phosphorus every 1-3 months and PTH every 3-6 months, with more frequent checks when needed [1].

• If phosphorus falls with appetite, weight, or albumin, request nutrition and inflammation review; a lower result is not automatically a success.

Call / escalate

• Tingling with cramps or tetany, seizure, arrhythmia symptoms, or a critical calcium result: urgent clinical assessment under the unit protocol.

• Persistent phosphorus elevation, a marked PTH change, out-of-range calcium, or a falling phosphorus/nutrition pattern: report the trend and current treatment plan.

Don't

• Do not change binder, calcimimetic, vitamin D, or calcium-bath settings without an order or an authorized protocol.

• Do not escalate treatment for one PTH value or advise severe protein restriction just to lower phosphorus.

Evidence numbers refer to the sources on the reverse.

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Why

• KDIGO bases decisions on serial calcium, phosphate, and PTH assessed together. Trends and treatment effects matter more than a single isolated result [1].

• PTH varies by assay and clinical context; a laboratory reference range for people without kidney failure is not a dialysis treatment order [1].

• The nursing task is to identify the pattern, practical treatment barriers, and symptoms so the prescriber and dietitian can make a coordinated decision.

Bring this to the review

Last three calcium/phosphorus values; PTH trend and assay range; albumin and intake/weight change; current binder, vitamin D, and calcimimetic; actual use; symptoms and the requested review.

Sources - click to open

1. KDIGO 2017 CKD-MBD guideline update. PMID: 30675420

2. KDIGO 2017 guideline, monitoring and treatment recommendations.

Full reviews and navigation

CKD-MBD Monitoring in Maintenance Hemodialysis

Nutrition and Protein-Energy Wasting on Hemodialysis

Complete screening and health maintenance white paper

All nursing cards | HD section home | Main homepage

Adapted from the linked Clinical Mastery reviews. Updated September 27, 2026. Andrew Bland, MD, FACP, FAAP - Urine Nephrology Now.