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## Nutritional Support During CRRT

**Ji In Park**

*Kangwon National University Hospital, Republic of Korea*

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Nutritional Support During CRRT Continuous renal replacement therapy (CRRT) profoundly influences nutritional needs in critically ill adults. Key considerations include energy balance, protein requirements, fluid and electrolyte management, and micronutrient supplementation:

1. Energy Provision Target ~25–30 kcal/kg/day based on metabolic phase. Account for ~200–500 kcal/day delivered via glucose-containing CRRT dialysate
2. Protein Requirements CRRT induces continuous amino acid losses (~15–20 g/day). Provide 1.5–2.5 g/kg/day protein to achieve a neutral nitrogen balance. Use high-protein enteral formulas or protein modulars; in PN, order custom high-amino acid solutions.
3. Fluid & Electrolyte Management CRRT allows liberalized fluid intake; standard 1 kcal/mL enteral feeds are acceptable. Monitor and replace sodium, potassium, phosphate, magnesium, and calcium daily: Phosphate and magnesium are prone to depletion—supplement as needed. Potassium may require replacement to prevent hypokalemia. Use citrate anticoagulation protocols to guide calcium infusion.
4. Micronutrient Supplementation CRRT removes water-soluble vitamins (B<sub>1</sub>, B<sub>6</sub>, C, folate) and trace elements (selenium, copper, zinc). Administer high-dose water-soluble vitamins (e.g., thiamine 100 mg, pyridoxine 50–100 mg, vitamin C 200–250 mg daily). Supplement selenium (100 µg/day) and copper (2–3 mg/day if CRRT >14 days); adjust zinc as needed.
5. Interdisciplinary Coordination Collaborate closely with nephrology, nutrition support teams, and pharmacy. Reassess nutritional prescriptions with changes in CRRT settings or patient conditions. By integrating these principles, clinicians can optimize the nutritional support of ICU patients receiving CRRT, supporting recovery and improving outcomes.

**Keywords:** CRRT, Calories, Protein, Fluids, Vitamins