

**Potassium Intake and 5-Year Mortality in Maintenance Hemodialysis Patients**

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**Background:** Serum potassium (K) is directly associated with mortality in maintenance hemodialysis (MHD) patients. We were unable to find evidence regarding a relationship between dietary K intake and survival. We therefore examined the association between K intake and death risk in MHD patients. **Methods:** This study was done in a 5-year cohort of 224 MHD patients, who were randomly selected in the NIED (Nutritional and Inflammatory Evaluation) Study using Cox proportional hazard models. Block’s food frequency questionnaires were used to assess dietary intake. **Results:** K intake was divided into quartiles of <867[reference], 897-1191, 1192-1741 and >1742 mg/d. The hazard ratio of death tended to be incrementally higher as the quartile of K intake rose in the unadjusted model as well as case mix (age, gender, race/ethnicity, comorbidity, vintage, insurance, marital status, smoking, & dialysis dose), case mix & nutritional status (predialysis serum creatinine, K, P, BMI, nPNA, and energy & phosphorus intake) and case mix, nutritional status & inflammation (serum CRP, IL-6 & TNF $\alpha$ ) adjusted models. The death risk usually was significantly higher in the highest quartile, and often also in the second highest quartile, as compared to the lowest quartile of K intake; the only exception was in the case mix nutrition model.

K Intake Quartiles	Unadjusted		Case Mix- Nutrition		Case Mix- Nutrition- Inflammation	
	HR(95% CI)	P	HR(95% CI)	P	HR(95% CI)	P
Q1	1.00(reference)		1.00(reference)		1.00(reference)	
Q2	2.33(1.15-4.75)	0.02	1.53(0.68-3.40)	0.29	1.33(0.60-2.97)	0.47
Q3	2.28(1.11-4.68)	0.02	1.75(0.72-4.20)	0.21	2.22(0.91-5.42)	0.08
Q4	2.86(1.45-5.62)	0.00	2.48(1.03-7.61)	0.03	2.41(1.01-7.52)	0.04

**Conclusion:** In MHD patients, dietary K intake is incrementally associated with increased all cause mortality risk even after adjustment for potential confounders including serum K.