

Bernard Charra, MD

Synopsis from the article: Charra B, Chazot C. The neglect of sodium restriction in dialysis patients: A short review. *Hemodialysis International* 2003; 7: 342-7.

The overwhelming cardiovascular morbidity and mortality in spite of significant technical advances in dialysis are at least in part due to the lack of extracellular fluid volume control (i.e., also the lack of control of the sodium content of the body) leading to hypertension, left ventricular hypertrophy, and congestive heart failure. The shortened dialysis session time and relatively high dialysate sodium concentration used in the last two decades explain in part such unsatisfactory outcomes. The neglect of sodium restriction (with resultant excessive interdialytic weight gain) also plays a pivotal role in bringing about hypertension and other cardiovascular complications. The relationship between sodium intake and hypertension in end-stage renal failure patients is reminiscent of that in patients with essential hypertension. A reasonable reduction of dietary sodium chloride intake to 5 - 6 grams/day (i.e., 85 - 102 mEq of sodium/day) is rather easy to achieve and maintain. It is an inexpensive, non-aggressive, universally available, common-sense approach to the problem that nephrologists should not forget.

Commentary by Todd S. Ing, MD

The modern urban diet contains 100-300 mEq of sodium/day¹. The higher reaches of the above sodium intake are often regarded by many experts as excessive and unnecessary (actually harmful in individuals who are prone to develop hypertension). As a matter of fact, the American Heart Association recommends that the daily sodium intake should not be more than 105 mEq (2.4 g)². What Drs. Charra and Chazot recommend is not too far from what the American Heart Association suggests for normal individuals and should not be too difficult to achieve. In most dialysis patients, sodium restriction is strongly indicated and should be strictly followed. Rigorous observation of sodium restriction in fluid-overloaded ESRD patients should help to reduce mortality and morbidity.

Reference

¹Eaton SB, Konner M. Paleolithic nutrition. A consideration of its nature and current implications. *N Engl J Med* 1985; 312: 283-9.

²Krauss RM, et al. A statement for health professionals from the nutrition committee, American Heart Association. *Circulation* 1996; 94:1795-800.