

## **Interdialytic Fluid Weight Gain is Mainly Caused by Sodium Intake**

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Abstract based from: Rigby AL, Scribner BH, Ahmad S. Sodium, not fluid, controls interdialytic weight gain. *Nephrology News & Issues* 2000;14:21-2.

Conventionally hemodialyzed (thrice weekly, 3-4 hours for each session) patients almost always are in a state of fluid and sodium excess. The fluid excess is the major contributor to hypertension, congestive heart failure and perhaps malnutrition related to bowel wall edema. The cardiovascular impact of the fluid excess is perhaps the major cause of increased mortality. The adequate control of fluid excess requires limiting the interdialytic weight gain (IDWG) caused by fluid accumulation and dialysis treatment that is either long enough or frequent enough to remove all IDWG. The IDWG is primarily caused by excessive sodium intake that stimulates the thirst center forcing the patient to drink fluid leading to expansion of the extracellular volume (ICV) that in turn causes hypertension, congestive failure and generalized edema. Thirst is such a strong stimulus that educating the patient about sodium restriction is much more effective in limiting IDWG than continuous nagging about limiting fluid intake. In a prospective controlled trial we compared the effect of limited sodium and unrestricted water intake with the usual dietary and fluid restriction. It was found that with limited sodium diet the IDWG was significantly lower despite unrestricted water intake than using conventional dietary and fluid restriction. Moreover patients felt less thirsty and more comfortable with restricted sodium diet. The common practice of encouraging patients to restrict fluid as a means to limit IDWG is ineffective and causes unnecessary guilt and discomfort. Sodium restriction is what should be emphasized and patients and staff should be educated about the importance of this approach.

### **Commentary by Todd S. Ing, MD**

Dr. Ahmad and his colleagues suggested that sodium restriction rather than fluid restriction should be a crucial weapon against fluid excess in conventionally dialyzed patients. This assertion certainly makes sense (1) and has been given support by results from another study (2).

#### References

1. Guideline 5. Control of Volume and Blood Pressure. Clinical Practice Guidelines and Clinical Practice Recommendations 2006 Updates. Hemodialysis Adequacy, Peritoneal Dialysis Adequacy, Vascular Access. *Am J Kidney Dis* 2006;48(Suppl 1):S33-9.
2. Tomson CR. Advising dialysis patients to restrict fluid intake without restricting sodium intake is not based on evidence and is a waste of time. *Nephrol Dial Transplant* 2001;16:1538-42.