

IMPROVED NUTRITION DURING NOCTURNAL HEMODIALYSIS

Sikkens M.E., Weijts P.J.M., Doezie I., Hoogenstraaten A., Kooistra M.P.

Nocturnal home hemodialysis (NHHD, 6x8 hours/week) is a most effective treatment, resulting in better clinical outcome than standard 3 x weekly hemodialysis. We studied the effects of NHHD on nutritional intake.

Fifteen stable dialysis patients completed a food diary for 5 days while on standard hemodialysis (base line), and for 3 days 3, 6 and 12 months after starting NHHD. Three patients received a renal transplant during the study period and one did not complete the diaries. Therefore, data in 11 patients could be analysed using an ANOVA. During one year NHHD, body weight increased from 70 ± 4.6 to 75 ± 5.2 kg ($M \pm SEM$) ($p < 0.001$) and energy intake by 6% (NS). Relative energy intake remained constant (33 ± 3.5 kcal/kg). Protein intake increased by 25% ($p = 0.001$) to 1.34 ± 0.13 g/kg. Phosphate (P) intake increased by 24% ($p < 0.001$), while serum P normalised despite the cessation of phosphate binding agents in all but 2 patients. Calcium intake from food sources increased by 29% ($p < 0.001$), but calcium intake from phosphate binding agents decreased significantly. Potassium intake increased by 24% to 3200 ± 960 mg/d ($p = 0.002$) and water intake by 29% to 2.0 ± 0.6 liter ($p < 0.001$). The intake of dairy products was increased by 41% ($p = 0.042$), meat and fish by 47% ($p = 0.015$) and potatoes, vegetables and fruit by 41% ($p = 0.04$). The adequacy of dialysis, measured by Kt/V, increased from 2.58 ± 0.23 to 8.30 ± 0.79 , $p < 0.001$.

During NHHD, body weight and intake of protein, P, Ca, K and water as well as dairy products, meat and vegetables increase, suggesting an improved nutritional state.