Fractures of long bones in dialysis and renal transplant patients: incidence and complication rate. LA.J.M. Breeders, R.J. Hene, Middengre and Chn van der Werken, Departments of Surgery and Nephrology, University Hospital Nijmegen, The Netherlands. The reported effects of calcium channel blockers on UPE are quite equivocal. It has been suggested that the short-acting dihydropyridine calcium channel blocker, nifedipine, in increases UPE by interference with tubular protein reabsorption. In a randomized controlled trial, ten patients with renal disease (UPE 5.0 ± 1.1 mg/day, mean ± sem) were treated with a dose of 10 mg nifedipine o.d. during one week. The acute effects on renal and systemic hemodynamics and on urinary albumin, IgG and β2-microglobulin (β2-m) excretion were investigated during a clearance study in supine position after the first dose. After one week of treatment UPE rates were measured in 24-hour urine samples collected ambulatory in consecutive fractions of four to eight hours during normal daily activities. After the first dose nifedipine lowered mean arterial blood pressure in supine position by 7 ± 1 mm Hg (P < 0.01), attenuated proximal tubular sodium reabsorption [fractional excretion (FE) of sodium 3.48 ± 0.49 vs. 2.62 ± 0.35% during control, P < 0.02], but did not affect proximal tubular protein reabsorption (FE of β2-m 0.97 ± 0.30 vs. 0.98 ± 0.32% during control, NS). The decrease in blood pressure was not accompanied by decreases in urinary albumin or IgG excretion rates. The selectivity index as well as GFR, RPF and filtration fraction did not change. Continued treatment for one week with nifedipine did not influence 24 hour UPE. However, we observed an effect when comparing the urine collected during daily activities in the first four hours after drug intake with the urine collected at the start of the study when supine. During control measurements there was a slight increase in UPE. During nifedipine the increase in albuminuria was more marked and correlated with the selectivity index (r = −0.82, P < 0.01). In conclusion: (1) nifedipine 10 mg orally did not impair tubular protein reabsorption; (2) nifedipine had no immediate antiproteinuric effect despite the observed blood pressure reduction; and (3) nifedipine increased UPE in ambulatory urine collections. This latter observation might explain the seemingly different effects of dihydropyridine calcium channel blockers as reported in previous studies.