

## **Abstract**

### **Title**

Physical activity during hemodialysis and its impact on physical performance at patients with end-stage renal disease (ESRD).

**Objective:** To verify efficiency of exercise training during hemodialysis with emphasis on improvement or preservation of physical performance in patients with ESRD.

**Methods:** 13 patients with ESRD on hemodialysis participated in exercise training programme during hemodialysis. Senior Fitness Test (SFT), dynamometry of hands and multifrequency bioimpedance analysis were used to evaluate physical performance before and after 12 weeks of exercise training programme during hemodialysis. 10 non-exercising patients with ESRD served as a comparison group.

**Results:** Physical performance in patients participating in exercise programme increased significantly ( $p < 0,05$ ) for SFT (by 16 % for chair stand test ( $p < 0,01$ ), by 53 % for 2-minute step test ( $p < 0,002$ ), by 11 % for up-go ( $p < 0,04$ )) and by 6 % for dynamometry test ( $p < 0,04$ ). No changes in body composition were noted in both groups after 12 weeks.

**Conclusions:** Twelve weeks of exercise training programme during hemodialysis can improve physical performance at patients with ESRD.

**Key words:** end-stage renal disease; hemodialysis; physical activity; physical performance