



Effects of 1-year self-administered exercise on physical performance in CKD stages 3-5 – RENEXC

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Aims

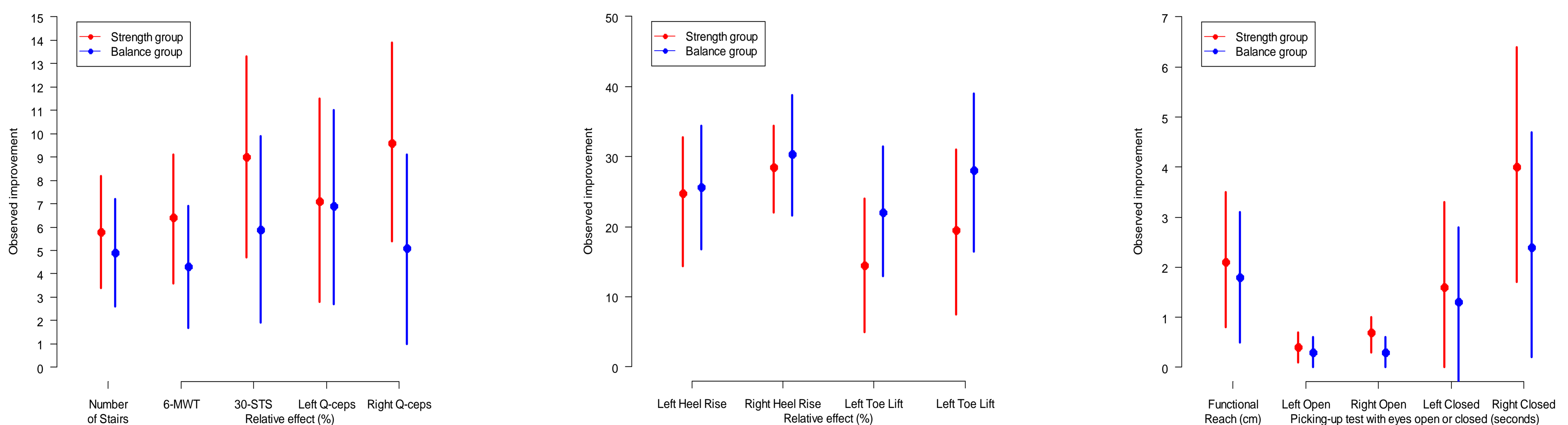
- To study whether patients with CKD 3-5 could improve and or maintain their physical performance by self-administered exercise training after 12 month in a representative CKD 3-5 population and in clinical routine.
- To study the effects of two different training modalities – endurance training in combination with either strength or balance training.

Patients and Methods

- RENEXC** – a randomized controlled trial – 150 minutes of exercise training per week – 1 year of intervention
- 151 adults** with eGFR ≤ 30 ml/min/1.73m² (53 women, 98 men); median age 70 years [range 19 – 87]; median m-GFR 22 [range 8 - 55] ml/min/1.73m² – randomized to endurance and strength (n=76) or endurance and balance (n=75) individualised exercise training, sustained exertion by Borg´s scale and physiotherapist support
- Physical performance - assessed at start and after 4, 8 and 12 months (**overall endurance** (6 Minutes Walk, Stair Climbing), **proximal and distal muscular endurance** (30 seconds Sit to Stand, Heel rises, Toe lifts), **strength** (Isometric Quadriceps Strength, Hand Grip Strength), **balance** (Functional Reach, Berg´s Balance Scale) and **fine motor skills** (Moberg´s Picking up Test)).

Results

1 year of exercise training with significant improvement in:



No changes in handgrip strength and Berg´s Balance scale.

Conclusions

1. 1 year of self-administered exercise training improved or maintained overall endurance, muscular endurance and strength, balance and fine motor skills in patients with CKD 3-5 regardless of age, comorbidity and training modality i.e. endurance and strength or endurance and balance training.
2. Prescribed exercise training of 150 minutes per week, self-administered by using Borg´s scale during 1 year was safe and practicable in everyday clinical routine and in a representative CKD 3-5 population.



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