

The Effect of Multidomain Lifestyle Interventions on Kidney Disease Progression: The Finger Randomized Controlled Trial

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INTRODUCTION

Lifestyle interventions may help slow the progression of chronic kidney disease (CKD), but evidence remains inconsistent, and most trials have focused on single interventions. The Finnish Intervention for the Prevention of Cognitive Impairment and Disability in Older Adults (FINGER) trial showed that a multidomain lifestyle intervention improves cognitive function and reduces cardiovascular risk [1,2].

AIM

To investigate whether a similar multidomain lifestyle intervention could slow CKD progression.

METHOD

In the FINGER trial (clinicaltrials.gov NCT01041989), 1,255 participants aged 60-77 years had baseline eGFR measurements. Participants were classified as having CKD (eGFR <60 mL/min/1.73 m²; n = 109) or without established CKD (eGFR ≥60 mL/min/1.73 m²; n = 1,146). Participants were randomized 1:1 to a 2-year multidomain intervention (diet, exercise, cognitive training, and vascular risk monitoring; n = 63 with CKD and n = 567 without CKD) or to a control group receiving General health advice (n = 46 with CKD and n = 579 without CKD). The outcome was changes in eGFR over time, and analyses followed the intention-to-treat principle.

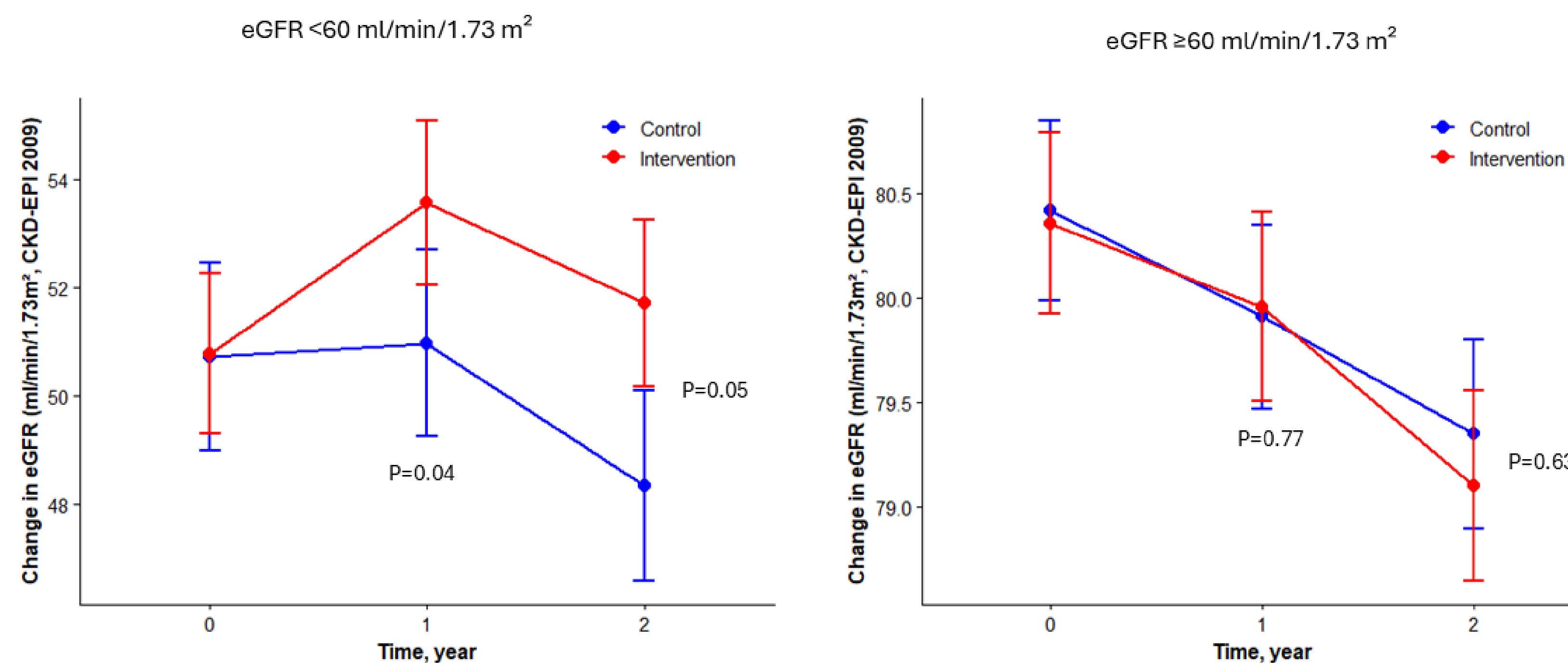


Figure 1 Changes in eGFR during the 2-year intervention

RESULTS

No differences in baseline characteristics were observed between the intervention and control groups among participants with and without CKD. Among participants with CKD, the intervention group showed improved eGFR from baseline, increasing by 2.79 mL/min/1.73 m² (95% CI: -1.24 to 4.34) at 12 months and by 1.05 mL/min/1.73 m² (95% CI: -1.39 to 3.49) at 24 months. In contrast, the control group showed a stable change at 12 months (0.24 mL/min/1.73 m²; 95% CI: -1.54 to 2.02) and a decline at 24 months (-2.64 mL/min/1.73 m²; 95% CI: -5.45 to 0.16). Between-group differences were 2.55 mL/min/1.73 m² at 12 months (95% CI: 0.18 to 4.91; p = 0.04) and 3.70 mL/min/1.73 m² at 24 months (95% CI: 0.00 to 7.41; p = 0.05). In contrast, among participants without CKD, eGFR declined similarly in both groups at 24 months (intervention -1.27 [-1.97 to -0.58] and control -1.03 [-1.71 to -0.35] mL/min/1.73 m²), with no significant between-group differences at 12 (0.10 mL/min/1.73 m²; 95% CI: -0.59 to 0.80; p = 0.77) or 24 months (-0.24 mL/min/1.73 m²; 95% CI: -1.21 to 0.73; p = 0.63). These findings were consistent in per-protocol analyses and across different eGFR equations.

CONCLUSIONS

A 2-year multidomain lifestyle intervention may offer meaningful benefits for older adults with CKD. Our results support the potential value of intensive, multidomain lifestyle interventions in the CKD Population.

REFERENCES

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ACKNOWLEDGEMENTS



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