Endurance exercise improves function in individuals with Parkinson’s disease: a Meta Analysis Article Link


INTRODUCTION:
Current evidence has shown that exercise can reduce symptoms of Parkinson’s disease (PD). However, previous studies indicated mixed results, possibly because of variability in terms of the nature of the exercise interventions. The purpose of this study was to perform a metaanalysis of current evidence from endurance exercise intervention studies for effects on the United Parkinson’s Disease Rating Scale (UPDRS) in individuals with PD.

METHODS:
A systematic literature search in six electronic databases was performed and two independent reviewers screened the title and abstract of 1106 records captured by the initial search. Of the full-text articles reviewed 7 articles were included in our meta-analysis, 238 were excluded. The d index was used to calculate the difference between means of different groups within individual studies, and a weighting factor or w was used to calculate the effect size across studies.

RESULTS:
Overall, d index was found to be −0.32 with 95% confidence interval, CI (−0.09, −0.56) found to be statistically significant indicating a positive effect of endurance exercise in UPDRS scores.

CONCLUSION:
This meta-analysis supports integrating endurance exercise training, as defined by ACSM, into treatment of PD.

CONCLUSIONS and CLINICAL IMPLICATIONS:
Endurance exercise has a positive effect on function in Parkinson’s Disease. Optimal dose of endurance exercise has yet to be determined. Efforts to determine neuroprotective effects of endurance exercise are warranted.