

The effects of aerobic exercise for persons with migraine and co-existing tension-type headache and neck pain. A randomized controlled clinical trial.

L. S. Krøll^{1,2}, C. Sjødahl Hammarlund¹, M. Linde³, G. Gard¹ and R. H. Jensen²

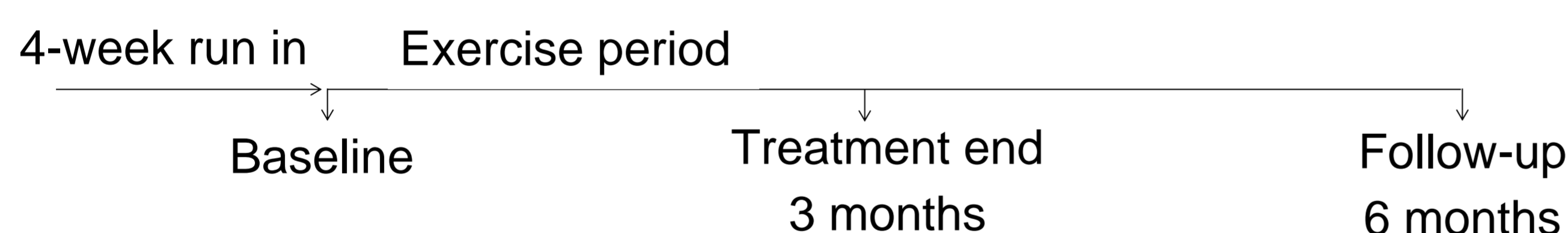
¹Department of Health Sciences, Lund University, Sweden. ²Danish Headache Centre, Department of Neurology, Rigshospitalet-Glostrup, University of Copenhagen, Denmark. ³Department of Neuromedicine and Movement Science, Norwegian University of Science and Technology, Norway

BACKGROUND

- In a specialised headache centre, 67% of persons with migraine suffer from co-existing tension-type headache (TTH) and neck pain (NP).
- The prognosis of migraine may worsen with co-existing TTH, and NP has been found to be a predictor of increased disability in persons with migraine.
- There is increasing evidence of the effectiveness of physical activity in migraine.
- This has not yet been studied for migraine and co-existing TTH and NP.

METHODS

- Prospective, single-centre, open-label, randomised and controlled clinical trial.



- 70 persons with migraine and co-existing TTH and NP were recruited and randomised into an exercise group or control group.
- Exercise lessons were bike/cross-trainer/brisk walking for 45 minutes, 3 times/week for 3 months.
- Controls continued their usual daily activities.
- Primary endpoint was difference in number of migraine days.
- Primary and secondary endpoints were measured from baseline to the end of treatment and from baseline to follow-up.

AIM

To evaluate the effect of aerobic exercise for persons suffering from co-existing migraine, TTH and NP.

CONCLUSION

There was no difference between groups regarding migraine frequency. However, a significant reduction was found for exercise group for migraine frequency, pain intensity and duration; migraine burden, physical fitness and well-being.

Aerobic exercise improved the ability to engage in physical activity because of TTH and NP compared to controls.

Aerobic exercise significantly reduced migraine burden and increased physical fitness compared to controls, and can be recommended as a supplement to medical treatment of migraine.

RESULTS

- 52 persons completed the study.

Clinical characteristics of the participants who completed the study (n=52)

	Exercise (n=26)	Control (n=26)
Sex		
Women	23 (88%)	23 (88%)
Men	3 (12%)	3 (12%)
Age (years)	42 ± 10.9	36 ± 10.1
Migraine duration (years)	20.4 ± 11.5	19.3 ± 14.5
Tension-type headache duration (years)	17.8 ± 12.0	19.3 ± 12.9
Neck pain duration (years)	15.2 ± 13.4	15.6 ± 15.7

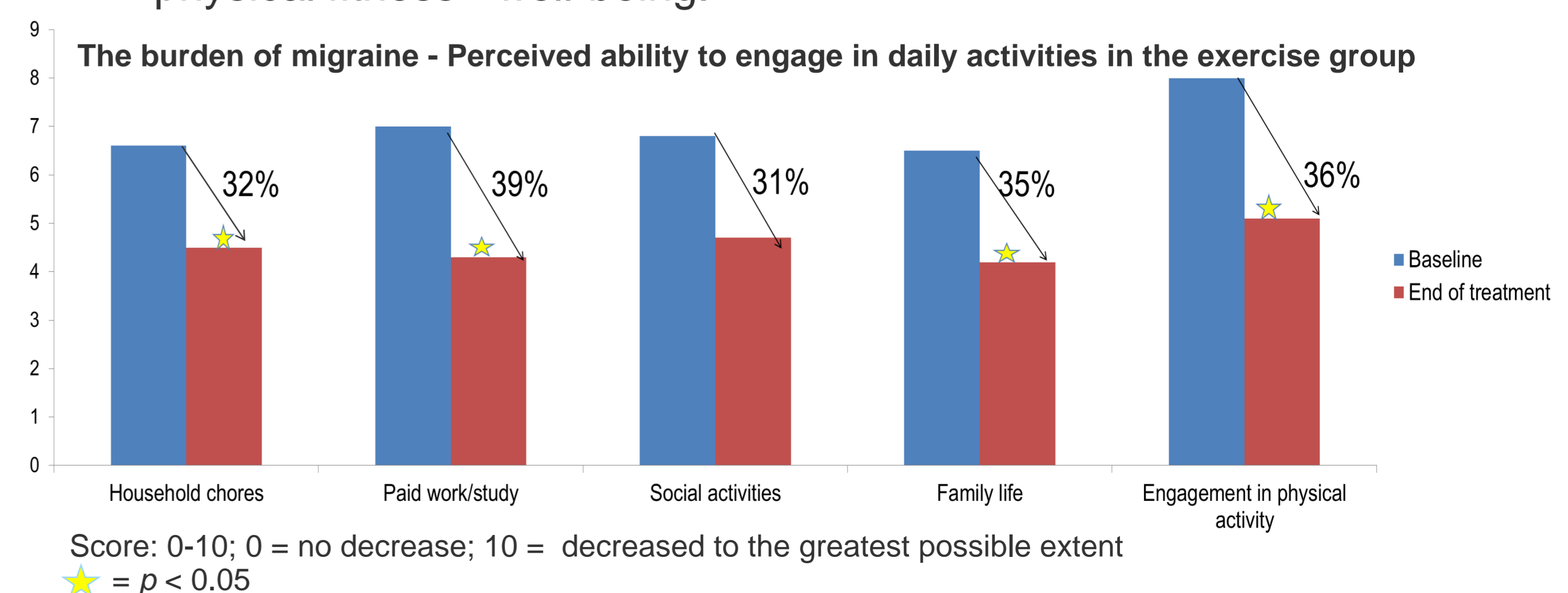
Numbers are presented as mean ± SD or number (%)

Primary endpoint

- Exercise group
migraine days: 9.2 → 7.2 ($p = 0.025$).
- Control group
migraine days: 8.3 → 7.7 ($p = 0.44$)
- No significant difference between groups.

Secondary endpoints

- Significant improvements for exercise group compared to control group for:
 - physical fitness - level of physical activity - migraine burden - the ability to engage in physical activity because of TTH and NP.
- Otherwise no differences for TTH and NP between groups.
- Significant improvements for exercise group:
 - migraine pain intensity and duration – migraine burden - physical fitness - well-being.



Original Article

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Contact information
Lotte Skytte Krøll, PT, MPH, PhD-student
E-mail: lotte.skytte.kroell@regionh.dk