

MS-*fit*: a comprehensive, two-month circuit training in people with multiple sclerosis - adherence and satisfaction

I. Lehmann^{1*}, I. Thaler¹,
M. Verra¹, G. Luder¹, U. Damm², C. Wälti²,
S. Steinheimer³, T. Nyffeler²,
T. Vanbellingen^{2,4}, C. P. Kamm^{2,3}

MS-*fit* 

¹Department of Physiotherapy, Inselhospital, Bern University Hospital, Bern, Switzerland

²Neurology and Neurorehabilitation Center, Luzerner Kantonsspital, Lucerne, Switzerland

³Department of Neurology, Inselhospital, Bern University Hospital and University of Bern, Bern, Switzerland

⁴ARTORG Center for Biomedical Engineering Research, Gerontechnology and Rehabilitation Group, University of Bern

BACKGROUND

Exercise therapy in people with multiple sclerosis (MS)

- Might improve strength, aerobic capacity, fatigue, balance and manual dexterity
- Circuit training poorly investigated
- Exercise adherence and patient satisfaction rarely investigated

PURPOSE

Study aims

- **Adherence** of people with MS to structured circuit training
- Determine overall **satisfaction** with the program

Ethical approval obtained by local Research Ethics Committee

Funded by the Swiss Multiple Sclerosis Society

No conflicts of interest to declare

METHODS: PARTICIPANTS

Included

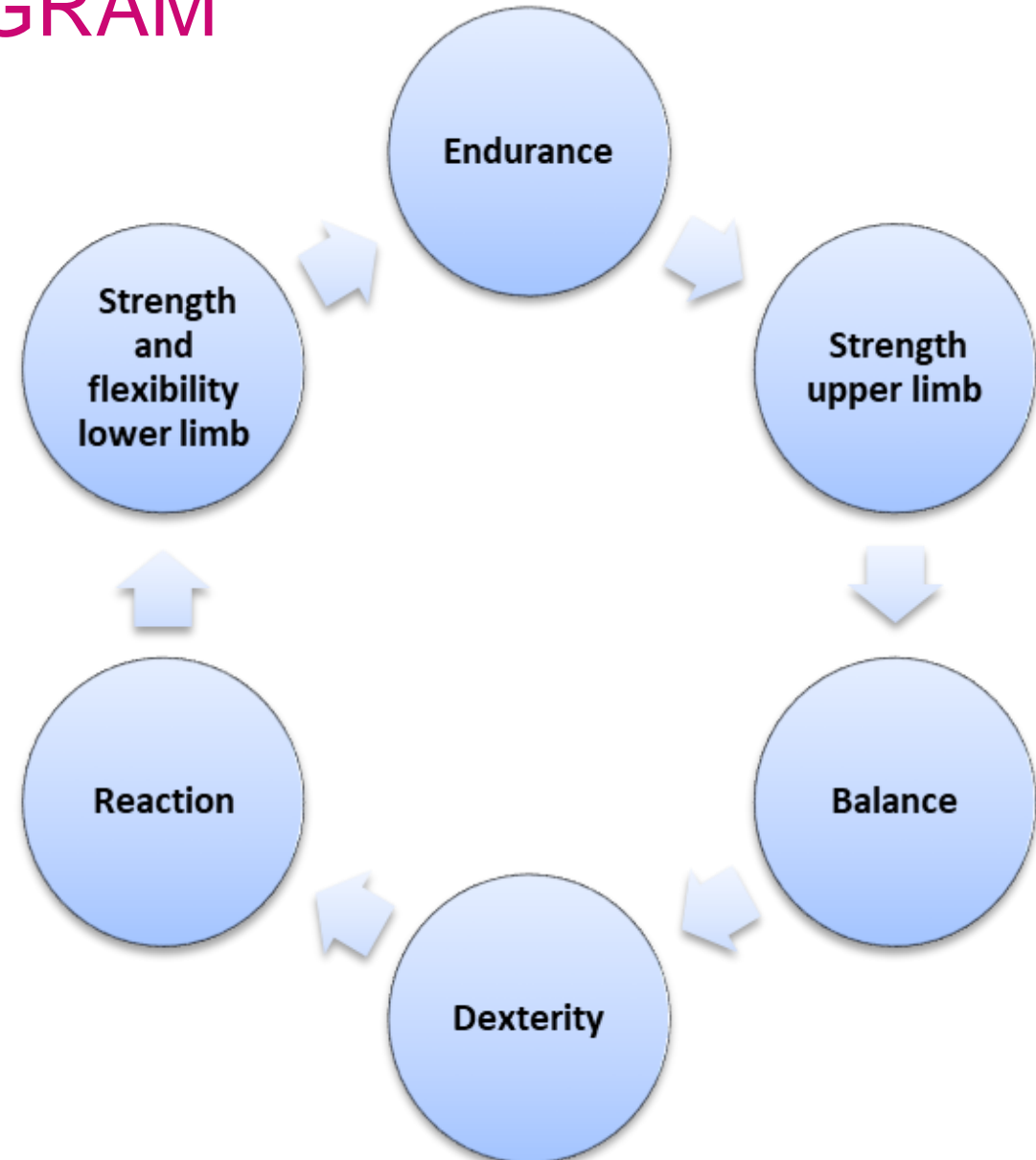
- People with MS-related disability affecting activities of daily living and/or quality of life
- Age between 18-75 y

Excluded













- Relapse within 60 days prior to screening
- Rapidly progressive disease
- Additional neurological condition
- Medical conditions limiting training capacity or completing the study

METHODS: TRAINING PROGRAM

- 2-6 participants
- 2x2 hours weekly
- 2-month duration
- Supervised by an experienced PT






METHODS: TRAINING PROGRAM

Skalenwert nach Borg	Anstrengungsgrad	% der max. Beanspruchung/ Leistung	Trainingsbereich	Emoticon
6	Überhaupt keine Anstrengung	20%	Aufwärmen/ Regeneration	
7	Extrem leicht	30%		
8		40%		
9	Sehr leicht	50%		
10		55%		
11	Leicht	60%	Grundlagen-/ Zielzone	
12	Optimaler Trainingsbereich	65%		
13	Etwas schwer	70%		
14		75%		
15	Schwer	80%		
16		85%	Intensives Training/ Stehvermögen	
17	Sehr schwer	90%		
18		95%		
19	Extrem schwer	100%		
20	Grösstmögliche Anstrengung	Übersäuerung		

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Workstation 4 Dexterity

			
Vorgabe	60 Sek	60 Sek	60 Sek
Woche 1			
Woche 2			

20-point Borg's scale (RPE) (Borg, 1998)

METHODS: ASSESSMENTS

Study design: randomized-controlled cross over study

Adherence

- Number of attended training session (%)
- Maximal session 16
- Reason for drop out

The program quality

- Face-validated questionnaire
- 10-Items -> 5-point-Likert-scales
- Sum score
- Overall program satisfaction (Likert scale 0-10)

RESULTS: PARTICIPANTS

51 people with MS eligible



14 (7 women) did not exercise




- Mean age 44.9 (SD 12.7)
- EDSS: 4.0 (min 3.0 to 6.5)

37 (27 women) exercised

- Mean age 52.7 (SD 10.3)
- EDSS: 3.5 (min 2.0 to 6.5)



sent the Questionnaire back

MS-fit   

Name/Vorname: _____
 Datum: _____

Wir danken Ihnen für die Beurteilung des MS-fit Programmes

Administration

	schlecht	mässig	gut	sehr gut	ausgezeichnet
Waren Sie mit der ersten Kontaktaufnahme (Telefon und Aufgebot) zufrieden					
Studienaufklärung					

Programmbeurteilung

Allgemeine Punkte Wie fanden sie...	schlecht	mässig	gut	sehr gut	ausgezeichnet
die Dauer des Programms					
die körperliche Belastung					
die Dauer der Pausen					
die Übungsauswahl					
die Information					
das Begleitbroschür / Trainingsbuchlein					
die Organisation					

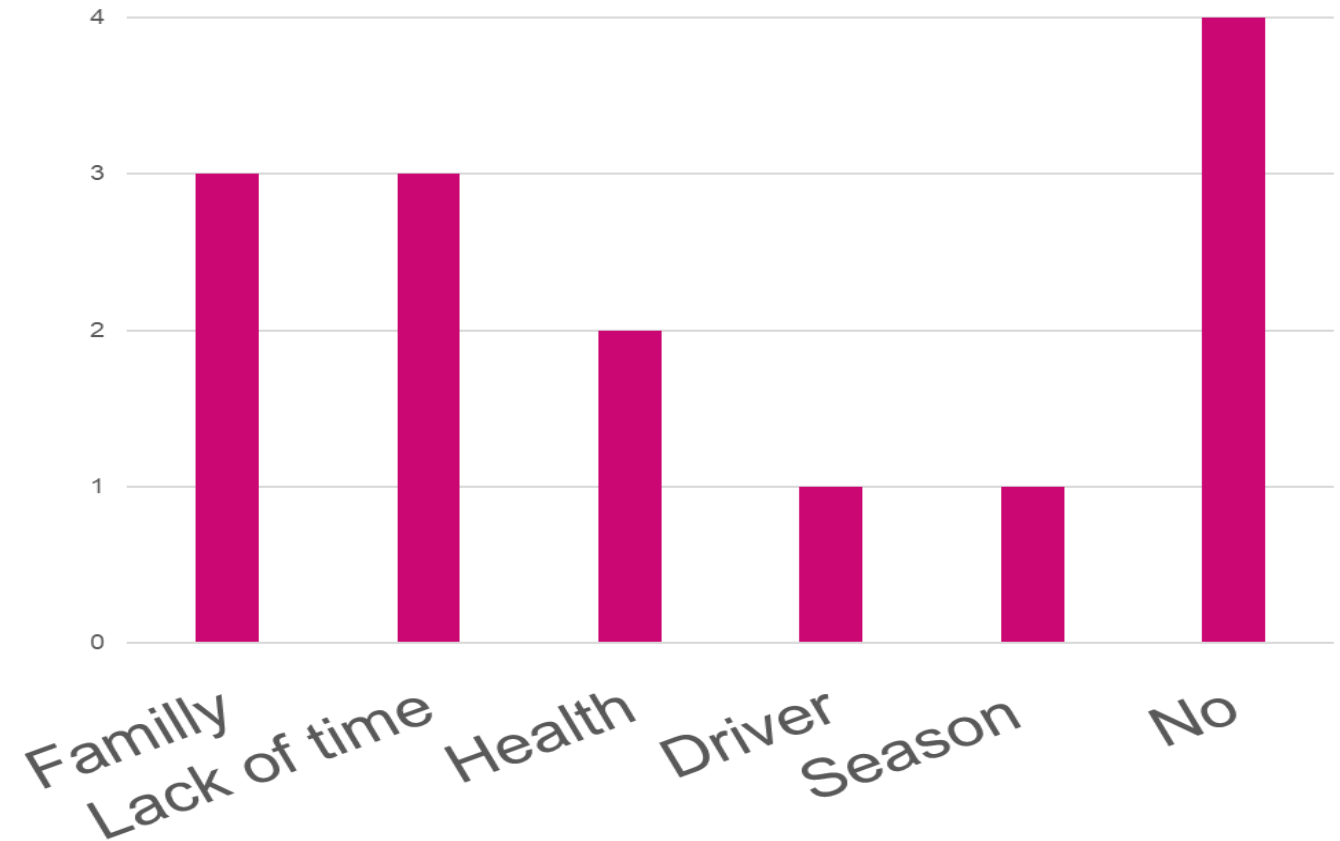
Betreuung

	schlecht	mässig	gut	sehr gut	ausgezeichnet
Trainingsleitung / Physiotherapie					

RESULTS: ADHERENCE

All 37 participants achieved >80% (mean 90.5%±8.2) of attendance rate

Reason for drop out
(n=14)



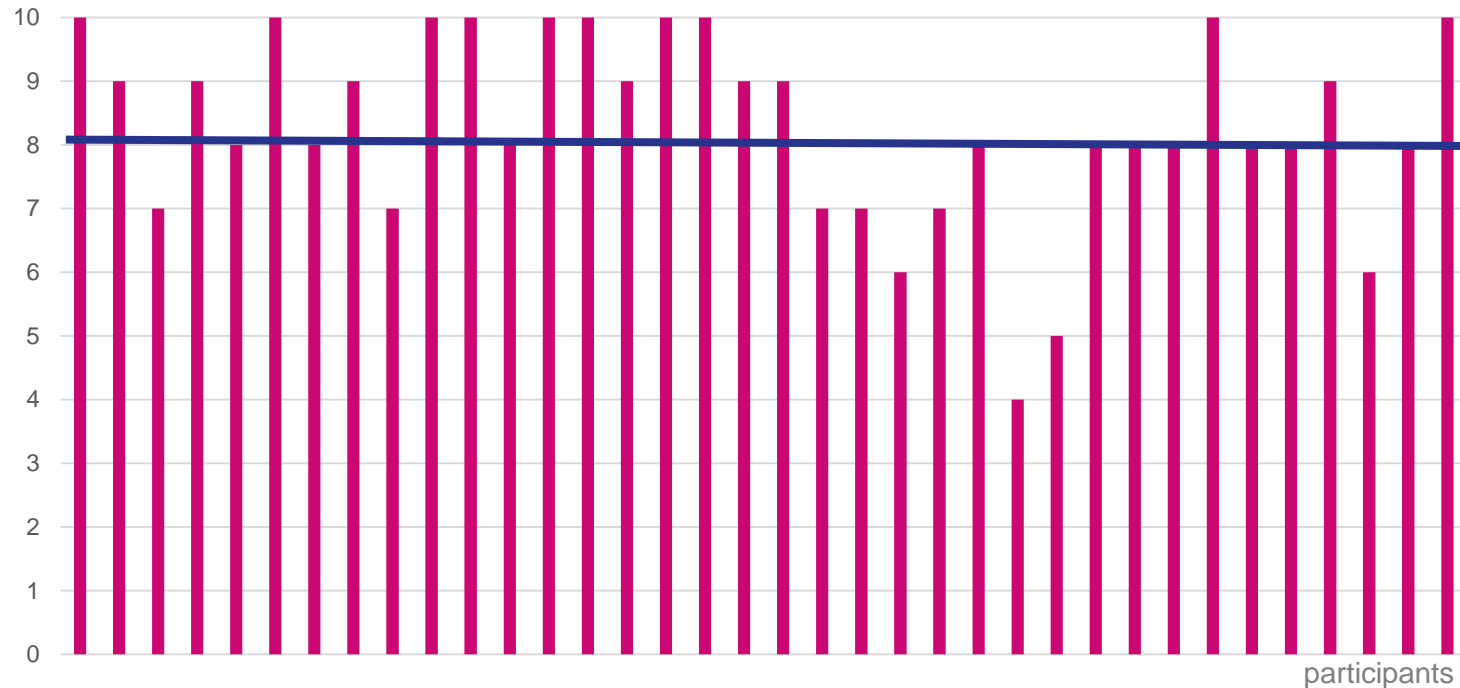
RESULTS: PROGRAM QUALITY

Program quality: good with an overall median score of 39/50
(min 26, max 50)

	Excellent	Good	Fair	Poor	Very poor
Program duration	4 (11%)	17 (46%)	15 (41%)	1 (2%)	0
Exercise intensity	4 (11%)	21 (57%)	10 (27%)	2 (5%)	0
Booklet	4 (11%)	9 (24%)	13 (35%)	11 (30%)	0
Exercises choices	7 (20%)	16 (43%)	13 (35%)	0	1 (2%)
Physical strain	4 (11%)	21 (57%)	10 (27%)	2 (5%)	0

RESULTS: OVERALL PROGRAM SATISFACTION

95% of participants would recommend the program to others
Overall program satisfaction median 8



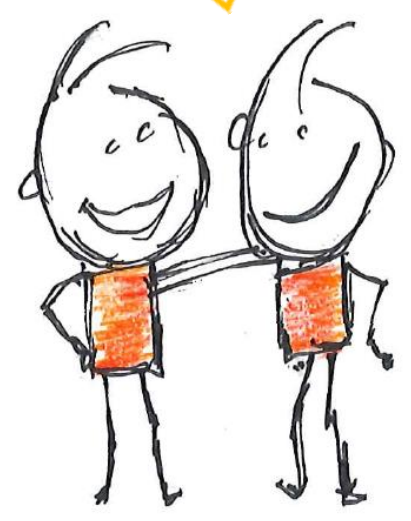
CONCLUSIONS AND RECOMMENDATIONS

- MS-*fit* circuit training highly appreciated
- Exercising 2x /week over 2 months is acceptable
- Time and family issues

Recommendations

- Further research is needed to evaluate the functional, mental and physical effects of the program

It is important to me to exercise with peers



Family/work and exercise are real challenges



MS-fit as a permanent option ?



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Contact: isabelle.lehmann@insel.ch