

Results of a RCT demonstrate that an evidence based Physical Activity Program for Seniors with Intellectual Disabilities is effective

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PURPOSE

The aim of this study was to evaluate the effectiveness of a day-activity program for improving physical activity (PA), fitness and health in adults older than 45 years with mild or moderate intellectual disabilities (ID).

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METHODS

RCT

- Ten participating day-activity centers of three health-care organizations were randomized.
- 81 older adults with moderate or mild ID participated in the program three times a week during eight months.
- 70 older adults with ID participated as control and received care as usual.
- After baseline, the level of physical activity and other health outcome measurements were performed after 8 months.

Analyses

- The program's effectiveness was evaluated using generalized estimated equations adjusting for baseline differences.

PROGRAM

Physical activity program

AIM: increasing physical activity level and maintenance or improvement of endurance, balance, strength and flexibility
CONTENT: based on guidelines of the American College of Sports Medicine and American Heart Association, 2007



FITNESS COMPONENTS

Endurance, Strength, Balance, Flexibility

ACTIVITIES

Walking, Gymnastics, Wii®, Dancing to music, Race track

BEHAVIORAL CHANGE TECHNIQUES

Education, Tailoring, Grading, Modeling/instruction, Mirroring, Feedback, Reward

RESULTS

- 66 participants and 65 controls completed the study.
- The program was applicable and feasible according to the program's executors.
- Drop out (20 out of 151) was mostly caused by factors not related to the program's content.
- Program participants significantly improved with respect to physical activity, strength, diastolic blood pressure and cholesterol, whereas controls declined.
- Cognitive functioning deteriorated in both groups, but got significantly worse in the control group.

Differences pre-post intervention:

significant outcomes or outcomes with $\beta > .25$ (moderate effectsize)

	Participants			Control			beta
	n	diff.	sd	n	diff.	sd	
Physical activity (steps/day)	14	836	2385	24	-368	1135	.50**
Cholesterol (mmol/l)	23	-0.21	0.54	25	0.22	0.46	.34**
Diastolic blood pressure	33	-3.5	8.0	29	0.3	9.8	-.31*
Systolic blood pressure	33	-4.2	17.3	29	0.5	12.8	-.27
Aerobic cap (sec ISWT***)	49	26.0	108.1	37	-17.3	69.3	.27
Strength (kg/m)	53	0.81	3.6	43	-0.74	4.5	.16*
DMR Cognitive subscale (0-50)	35	0.1	5.1	49	1.4	3.6	.11*

* $p < 0.05$ ** $p < 0.01$ *** Incremental Shuttle Walking Test

CONCLUSIONS

- The program is feasible for older adults with ID.
- The program increases the physical activity level significantly.
- The program has a positive health effect on indicators for the development of chronic diseases.
- The program's content, such as the behavioral change techniques, may be used among other low IQ populations to promote physical activity.