Journal articles

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**Title:** Effect of continuous aerobic vs. Interval training on selected anthropometrical, physiological and functional parameters of adults with Down syndrome.

**Citation:** Journal of Intellectual Disability Research, Apr 2016, vol. 60, no. 4, p. 322-334, 0964-2633 (Apr 2016)

**Author(s):** Boer, P. H., Moss, S. J.

**Abstract:** Background: A large percentage of adults with Down syndrome (DS) are overweight and have extremely low aerobic capacities compared with the general population and persons with intellectual disability without DS. Previous aerobic training intervention studies showed limited potential to significantly ameliorate anthropometrical and cardiovascular variables. The primary purpose of this study was to determine the effect of
continuous aerobic training (CAT) vs. interval training (IT) on selected anthropometrical, health, physical and functional parameters of adults with DS. Methods: Forty-two adults with DS (25 men and 17 women) and a mean age of 33.8 (8.6) years were randomly allocated to one of three groups (IT, CAT and control). Training was performed for 12 weeks. The IT group performed 1030 s all out sprints with 90 s (1:3 work-rest ratio) of low cadence, low intensity cycling or walking. The CAT group performed continuous cycling and walking at an intensity of 7080% of VO2 peak. Heart rate monitors were used for monitoring training intensities. After 6 weeks of training, the intensity of the CAT was increased to 85% of VO2 peak, whilst the intensity of the IT group remained all out. An increase of 5 min in duration was implemented after 6 weeks for both training groups. To evaluate prepost differences between groups, a repeated analysis of covariance with post hoc Bonferroni test was performed. Results: After 12 weeks of training, body weight and body mass index decreased significantly more in the IT group compared with control and CAT (P < 0.05). Participants in the IT group decreased their body weight from 71.4 8 to 69.4 8 kg and their body mass index from 29.3 4 to 28.5 4 kg/m². Significant ameliorations for functional parameters and leg strength were shown for CAT compared with control (P < 0.05). Participants in the CAT group improved their performance in the 6 minute walk distance (499 78 to 563 75 m), 8-ft up-and-go (5.9 1.2 to 4.8 0.9) and leg strength (13.1 2 to 15.2 2). VO2 peak and time to exhaustion significantly improved in both the IT and CAT group compared with control (P < 0.01). Moreover, a significant improvement for relative VO2 peak was also determined for IT compared with CAT (P < 0.05). Participants in the IT group increased their VO2 peak from 32 8 to 37 8 mL/min/kg. Submaximal heart rate and VO2 values improved significantly within both exercise groups (P < 0.05). Conclusion: Interval training and CAT can both be pursued by adults with DS to positively impact on various parameters of anthropometry, fitness and functional ability, with IT more appropriate for improving body weight and aerobic capacity. (PsycINFO Database Record (c) 2016 APA, all rights reserved) (Journal abstract)

Source: PsycInfo

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"I Don't Have Time": Barriers and Facilitators to Physical
Activity for Adults With Intellectual Disabilities.

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Abstract

Individuals with intellectual disabilities (ID) tend to have low rates of participation in voluntary or prescribed physical activity. The purpose of this study, therefore, was to identify the barriers, facilitators, and needs influencing physical activity participation of adults with ID within the framework of a social ecological model. A qualitative approach consisted of data collected from surveys and guided focus groups. Participants included adults with ID (n = 6) and their primary caregiver (n = 6). Barriers were categorized under three themes: organizational barriers, individual constraints, and external influences. Examples of subthemes included information dissemination, reliance on others, and caregiver considerations. Facilitators included primary caregivers as champions and camaraderie. Needs centered on family program involvement, improved programmatic structure, and programmatic support. Results indicate the need for community programs to examine barriers and facilitators applicable to their unique setting and population across all levels of a social ecological model.

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Title: Do people with intellectual disability use Nintendo Wii when placed in their home as part of a physiotherapy program? An observational study.

Citation: Disability and rehabilitation. Assistive technology, May 2016, vol. 11, no. 4, p. 310-315, 1748-3115 (May 2016)

Author(s): Chung, Alison M J, Harvey, Lisa A, Hassett, Leanne M

Abstract: To examine how much, and in what way, Nintendo WiiTM (Wii) is used when prescribed as part of a home-physiotherapy program for people with intellectual disability.
Twenty people with intellectual disability were recruited. The following parameters were recorded about play patterns over a 12-week period: frequency, duration, perceived exertion, play position, play mode, initiation of play and games from Wii Sports and Wii Fit Plus. Participants used the Wii for a median of 101 min per week (interquartile range [IQR]: 50-172) in weeks one and two across a median of three days per week (IQR: 3-4), decreasing down to a median of 35 min per week (IQR: 0-141) in weeks 11 and 12 across a median of one day per week (IQR: 0-3). Usage of the Wii drops off rapidly when it is placed in the homes of people with intellectual disability and they are instructed to use it as part of a physiotherapy program. Implications for Rehabilitation Usage of the Nintendo Wii drops off rapidly when it is placed in the homes of people with intellectual disability as part of a physiotherapy program. Games commonly played include bowling and boxing in Wii Sport, and penguin slide, ski jump and tight rope walk in Wii Fit Plus. Physiotherapists should use person and family centred practice to ensure that Nintendo Wii is a suitable intervention for the person with an intellectual disability and provide support to encourage ongoing usage.

Source: Medline

Regards