

# In-School Physical Activity for Children with Intellectual Disabilities

## What Was the Question?

Youths with intellectual disabilities (ID) have been reported to have lower levels of cardiovascular fitness and muscular strength, as well as higher levels of adiposity compared to children without ID. Pitetti, Beets, and Combs (2009) evaluated physical activity patterns of children with ID in three school settings: adapted physical education (APE), self-contained classrooms (CR), and inclusive recess (RE). Examples of ID include autistic syndrome, Down syndrome, fragile X syndrome, Klinefelter syndrome, and attention-deficit/hyperactivity disorder (ADHD). The purpose of this study was to evaluate the amount of time that children with ID spend in school-based moderate-to-vigorous physical activity (MVPA).

## What Was Done?

This study used heart rate to measure physical activity in 15 youths (6 boys, 9 girls) ages six to 11 from a Midwestern city. All participants were classified as having ID, were in one of two self-contained classrooms in the same elementary school, and had no limiting conditions that would decrease their ability to participate in physical activity. For all settings, heart rate was measured by telemetry. Average resting heart rate (RHR) was determined by RHR measurements collected on three nonconsecutive days between 8:00 and 8:45 a.m. Total MVPA was determined by the mean time spent above 1.25 percent RHR in each of the three settings.

## What Was Found?

The average times spent in MVPA were 43, 20.9, and 19.6 minutes

for APE, CR, and RE, respectively. Overall, the total average MVPA was 83.5 minutes per day. Students with ID were found to achieve the recommended daily level of MVPA (i.e., 60 minutes) on most days of the week. The low intraclass correlation coefficients (0.2 RE MVPA to 0.79 APE MVPA) reflected the high variability among observations for each child. This finding indicates widely varying amounts of physical activity during monitoring periods for each child.

## What Does the Study Mean?

The physical activity guidelines for school-age children recommend at least 60 minutes of MVPA on most days of the week. While little information is available about the physical activity patterns of children with ID, the participants in this study surpassed the recommended 60 minutes of MVPA during the day. This study suggests that schools can play a crucial role in promoting the recommended physical activity level for children with ID. However, due to the limitations of this study (i.e., differing class structures, teacher-student ratios, physical infrastructures, etc.), its results cannot be generalized to all students with ID. Fewer than one-third of schools in the United States have separate APE classes targeting children with disabilities, with only 49.7 percent of schools requiring physical education for all students in grades K-6. Although participants in this study were found to engage in more than the recommended 60 minutes of daily activity, this is not true for all students in United States schools. In fact, students, on average, perform only 80

minutes of physical activity over the course of *one week*. What this study does demonstrate, is that students with ID can and will participate in physical education classes and recess to help achieve the recommended amounts of physical activity for improved and sustained health and wellness.

## Reference

Pitetti, K. H., Beets, M. W., & Combs, C. (2009). Physical activity levels in children with intellectual disabilities during school. *Medicine & Science in Sports & Exercise*, *41*, 1580-1586.

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## Submissions Welcome!

Readers may send Research Works abstracts to Suzan F. Ayers at [hper-joperdrw@wmich.edu](mailto:hper-joperdrw@wmich.edu).

### Submission Requirements

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- Abstracts should follow the Research Works structure.
- Research results should be applicable to practitioners.
- Also send the full text of the source paper.
- Length should be no more than two double-spaced pages.