


Promoting Physical Activity among Youth with Visual Impairments: An Emerging Agenda

The Role of Schools in Promoting Physical Activity


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Setting the Stage

“A teacher who makes little allowances for individual differences is an individual who makes little or no differences in the lives of his students”

William A. Ward



What Are the Benefits of Physical Activity for Youth?

- Promotes health and fitness
- Builds healthy bones and muscles¹
- Reduces the risk of developing obesity and risk factors for diseases such as type 2 diabetes and heart disease¹
- Reduces the symptoms of anxiety and depression¹
- Can positively affect concentration, memory, and classroom behavior²

1. HHS. Physical Activity Guidelines Advisory Committee Report:2008
2. J Pediatr 2005;146(6):732-7.

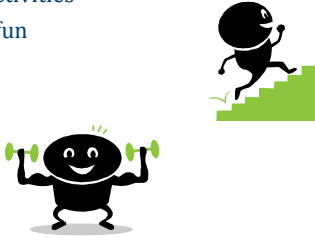
How Much Physical Activity Do Youth Need?

- **Children and adolescents should do 60 minutes (1 hour) or more of physical activity daily.¹**
 - **Aerobic Activities:** most of the 60 or more minutes per day should be either moderate-or vigorous-intensity aerobic physical activity.
 - **Muscle-strengthening Activities:** at least 3 days of the week as part of the 60 minutes of daily physical activity.
 - **Bone-strengthening Activities:** at least 3 days of the week as part of the 60 minutes of daily physical activity.
- Activities should be age-appropriate, enjoyable, and offer variety.

HHS Physical Activity Guidelines Advisory Committee Report:2008

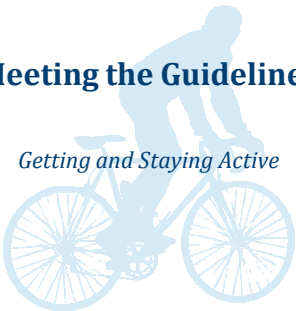
What Does This Really Mean?

- At least 60 minutes every day
- Mostly aerobic activities
- Add variety and fun

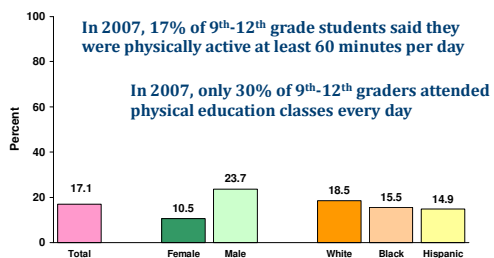


Meeting the Guidelines

Getting and Staying Active



How Physically Active Are High School Students?



* Were physically active doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes/day during the 7 days before the survey.

Source: National Youth Risk Behavior Survey, 2007.

How Physically Active Are Youth with Visual Impairments?

- More likely to be less active than peers without visual impairments^{1,3}
- Significantly less physically fit²
- Considerably more sedentary compared to youth with chronic or hearing impairments³
- Reported more perceived barriers to be physically active³
- Children are more active than adolescents^{1,3}
- More at risk for sedentary lifestyles across lifespan³

1. Clin Kines, 2004;58(3):1-7
 2. JVIB, 2001
 3. APAQ, 2000;17:40-53

Inactivity and Visual Impairments (continued)

- Little appears to have been done to address the lack of physical activity and the increasingly sedentary lifestyles among youth with visual impairments.¹



1. JVIB, 2007;101:133-145

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Why is this of Concern?

- Adults with visual impairments are **2.5 times** more likely than the general population to report: stroke, osteoporosis, depression, forgetful, diabetes, hypertension, arthritis, and sedentary habits.¹
- Recent study revealed that in a sample of adults with visual impairments, they spent 20% of day being active, but spent on average less than 7% in moderate (5.4%) or high (1.4%) intensity activity - **not enough** to achieve health benefits health.²

1. JVIB, 2001;95:453-467
 2. JVIB, 2009;103(1):17-29

*But if PA is so good for our health, why are youth with visual impairments so inactive?
 How could we impact change?*



Barriers to Meeting the Guidelines

- **Personal**
 - Attitude
 - Belief in ability to be physically active
- **Social**
 - Influence of their peers
 - Parental support
- **Environmental**
 - Safe locations to be active
 - Access to equipment
 - Financial costs of physical activities
 - Time





Schools and Physical Activity

- Schools are ideal settings for teaching children and adolescents with visual impairments how to adopt and maintain an active lifestyle. **WHY?**

Schools and Physical Activity (continued)

- Schools may **offer** free-time activity opportunities in a barrier-free, accessible contexts.
- Required activity time – GPE/APE
- In particular, specialized schools may afford additional programs many times not afforded to students who are included in traditional schooling or at home.¹

1. Review, 2006;37(4):149-160.

Schools and Physical Activity (continued)

- However, when part-time day vs residential student activity patterns have been compared, comparable inactivity patterns have been exhibited indicating that even when leisure programming is accessible and facilities safe/accessible, youth with visual impairments select inactive options to spend their leisure time.¹

1. Clin Kines, 2004;58(3):1-7

Schools and Physical Activity (continued)

- Today's schools face the increased challenge to focus on standardized/statewide assessment tests (e.g, NCLB) and budgetary constraints thus resulting in reduction of physical activity time to eliminating physical education class.


Schools and Physical Activity *(continued)*

- A recent review of the literature concluded that:
 1. *Increased time in physical education does not affect students' academic performance;*
 2. *Decreased time for physical education in favor of academics does not result in significant improvements in students' academic performance.*¹

1. Van der Mars, 2007

Schools and Physical Activity *(continued)*

- Increased childhood **obesity** rates suggest a reconsideration in the role of schools in addressing this issue particularly when **physical inactivity** is the leading contributor to the obesity epidemic.¹




1. ALR, 2009

Schools and Physical Activity *(continued)*

- NASBE:

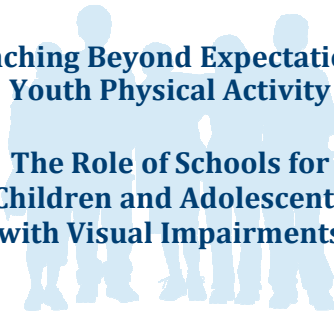
*“health and success in school are interrelated. Schools cannot achieve their primary mission of education if students... are not healthy and fit physically, mentally, and socially.”*¹



1. NASBE, 2000

Reaching Beyond Expectations: Youth Physical Activity

The Role of Schools for Children and Adolescents with Visual Impairments




Why is Physical Activity Important For Schools?

- Associated with lower levels of stress and anxiety¹
- Can positively affect concentration, memory, and classroom behavior among adolescents²
- Can improve standardized test scores³
- Thus, kids who are more active and fit are more likely to have greater academic performance^{4,5}

1. HHS. Physical Activity Guidelines Advisory Committee Report:2008.
 2. J Pediatr 2005;146(6):719-20.
 3. Res Q Exerc Sport 1999;70(2):127-34.
 4. ALR 2009; Research Brief 8/09
 5. Circulation 2006; 114:1214-1224

How Can Schools Help Youth with Visual Impairments Be More Physically Active?



From: http://www.saferoutestoschool.ca/images/walking_school_bus_c.jpg

Physical Education and Academic Achievement¹

- **Nationally representative sample:** 5,316 students starting kindergarten in 1998–1999, followed through 5th grade.
- **Physical education (PE) measure:** Low (0–35 mins/week), Medium (36–69), High (70–300).
- **Academic achievement measure:** Mathematics and reading tests designed by experts.
- **Results:** A small but significant benefit on both math and reading tests were observed for girls in the high PE category compared with those in the low PE category; findings not seen in boys.

1. Am J Pub Health 2008;98(4):72–7.

Physical Activity vs. Physical Education¹

- *Physical activity* = behavior
- *Physical education* = curricular area that **teaches** about physical activity.
 - Provides students with the skills needed to participate in a lifetime of physical activity.

1. National Association for Sport and Physical Education. Understanding The Difference: Is It Physical Education or Physical Activity? 2005.

What is Quality Physical Education?

- **Opportunity to learn**
 - Adequate time, equipment, and facilities
 - Highly qualified, certified, or licensed teachers
- **Meaningful content**
 - Written standards-based curriculum
 - Sequential, developmentally appropriate learning activities for grades K–12
- **Appropriate instruction**
 - Full inclusion of all students
 - Well-designed lessons that facilitate learning
 - Sufficient practice opportunities for class activities
 - Student assessment

Other Characteristics of Quality Physical Education Programs

- Enjoyable experience for all students
- Meet the needs and interests of all students
- Keep students active for most of class time
 - More than 50% of class time spent in moderate- to vigorous-intensity activity

Policy Recommendation: Schools should require daily PE for students in kindergarten through grade 12¹

- Elementary school = 150 minutes per week
- Secondary school = 225 minutes per week

1. National Association for Sports and Physical Education. Moving into the Future: National Standards for Physical Education, 2nd ed. 2004.

Recess

- Opportunity to participate in free-time physical activity and practice skills learned in physical education classes
- Enhances cooperation and negotiation skills
- Improves attentiveness, concentration, and time-on-task in the classroom



Policy Recommendation: Schools should provide at least 20 minutes of recess per day, in addition to physical education classes¹

1. National Association for Sport and Physical Education. Recess in Elementary Schools 2006.

Physical Activity Breaks

- Independent of physical education and recess
- Can enhance positive classroom behavior of students
- Incorporates activity in the classroom as part of planned lessons

Physical Activity Break Ideas: Ask students to identify and act out action words from a story through physical activity or take a walk outside as part of a science class



Intramural Sports

- Can be offered before, during, and after school
- Provide students with a choice in activities
- Offer every student an equal opportunity to participate regardless of ability level
- Incorporate lifetime physical activities such as walking, running, hiking, and swimming



Interscholastic Sports

- Help establish cooperative and competitive skills¹
- Help students learn sport-specific and performance-based skills
- May be related to higher levels of overall physical activity²
- Associated with improved mental health and reduction in some risky health behaviors³⁻⁴



1. National Association for Sports and Physical Education. Eight Domains of Coaching Competencies:2006.
 2. *Pediatr Exerc Sci* 1998;10:379-86.
 3. *Arch Pediatr Adolesc Med* 2000;154:904-11.
 4. The President's Council on Physical Fitness and Sports. *Research Digest* 1997;2:1-12.

How Can Schools Help Youth with VI Get Enough Physical Activity

- Ensure students participate in enough physical activity to develop healthy lifestyles – ***some activity is better than nothing!***
- Build partnerships with community-based providers of physical activity (e.g., fitness clubs).
- Provide time for both structured and unstructured physical activity after school.
- Strengthen the school's policies on physical activity on campus – ***Coordinated School Health Programs.***
- Encourage staff to be active – ***role modeling!***
- Involve the family in school-based physical activity and events.

Example: After School Programming

- *Plan for Health, Plan for Exercise*
- OSSB, 2008 Fall
- Components: *Education and Activity*
- ***Change:*** self-efficacy, social support, outcome expectations, self-regulation (e.g., goal setting)
- Short time, positive outcomes on time spent in leisure time physical activity

Cervantes, 2009

What About Sport and School Athletics?

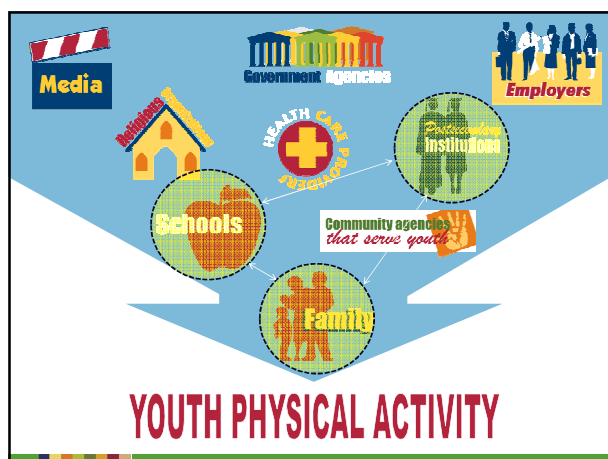
- Recent findings from *U.S. Government Accountability Office* (2010) showed that students with disabilities participated in athletics at varying rates, but at **consistently lower** rates than students without disabilities.
- Schools identified several factors related to inequities in school-based athletics:
 - *Disability type or outreach to students.*
 - *Lack of **information** on ways to expand athletic opportunities.*
 - *Lack of **clarity** regarding schools' responsibilities, and budget constraints.*

Sport and School Athletics (*continued*)

- To help close this gap, the GAO called on the **Department of Education** to provide resources to assist state and schools in serving students with disabilities in physical activity settings and to produce guidance to clarify schools' responsibilities under **Section 504** of the Rehabilitation Act to provide athletic opportunities for students with disabilities.
- *Alliance for Athletics Equity for Students with Disabilities* – working with Department of Ed. and legislators in policy agenda to strengthen the athletic opportunities for students with disabilities
<http://www.up2us.org/images/dldocuments/coalitionbriefingdocument.pdf>

Unanswered Questions on Physical Activity on Youth with Visual Impairments

- Dose-response relation between physical activity and health among youth with visual impairments.
- Factors that affect physical activity behavior change among youth with visual impairments – **personal, social, behavioral, and environmental**.
- Examine the role of school-related factors (e.g., physical education, after school programming, youth leaders) potentially influencing physical activity behavior among school-aged residential youth with visual impairments.



Summary

- Youth with visual impairments are considerably less active and at greater risk for not meeting national guidelines for physical activity.
- Adolescents with visual impairments may be in greater need for strategies to promote health and physical activity participation.
- Schools may play a central role in the provision of opportunities to engage in physical activity.

Thank you! Questions?

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