Taking Youth Physical Activity Beyond the School Walls

with guest speaker:

James “Jim” Sallis, PhD
University of California, San Diego
Today’s webinar will be recorded and available online at www.CATCHinfo.org
We are an international leader in conducting research and providing programs that promote healthy living for children, their families and communities.

**Our mission:** To advance health and healthy living for children and families through innovative research, cutting edge community-based programs, and dissemination of evidence-based practices.

**Our vision:** *Healthy children in a healthy world*

[www.msdcenter.org](http://www.msdcenter.org)
James “Jim” Sallis, PhD
Distinguished Professor of Family Medicine & Public Health
Chief, Division of Behavioral Medicine
University of California, San Diego

Scientific Advisory Council member
Michael & Susan Dell Center for Healthy Living
Taking Youth Physical Activity Beyond the School Walls

James F. Sallis
UC, San Diego
For UT Austin, CATCH webinar
February 10, 2015
http://sallis.ucsd.edu
Outline

• Prevalence of youth physical activity
• Community-based strategies to increase physical activity
  – Active commuting
  – Shared use agreements
  – After school programs
  – Youth sports
  – Dance Classes
  – Park design
• Active Living Research Resources
Percentage of youth ages 6-19 meeting 60 min/day physical activity guidelines. Based on accelerometers. NHANES 2003-4

Troiano, MSSE 2007
Accelerometer-based MVPA for Adolescents. From Hallal, Lancet, 2012

Time Spent in MVPA
adjusted for age, sex

<table>
<thead>
<tr>
<th>Country</th>
<th>MVPA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>minutes (95% CI)</td>
</tr>
<tr>
<td>Australia</td>
<td>72.48 (71.62, 73.34)</td>
</tr>
<tr>
<td>Belgium</td>
<td>50.58 (48.52, 52.64)</td>
</tr>
<tr>
<td>Brazil</td>
<td>47.41 (44.81, 50.01)</td>
</tr>
<tr>
<td>Denmark</td>
<td>66.00 (64.80, 67.20)</td>
</tr>
<tr>
<td>Estonia</td>
<td>74.86 (71.84, 77.89)</td>
</tr>
<tr>
<td>Norway</td>
<td>83.57 (79.51, 87.63)</td>
</tr>
<tr>
<td>Portugal</td>
<td>63.28 (61.23, 65.32)</td>
</tr>
<tr>
<td>Switzerland</td>
<td>78.96 (77.56, 80.37)</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>63.84 (63.40, 64.28)</td>
</tr>
<tr>
<td>United States</td>
<td>45.94 (45.54, 46.34)</td>
</tr>
<tr>
<td>Overall</td>
<td>64.65 (56.50, 72.81)</td>
</tr>
</tbody>
</table>

(I-squared = 99.9%, p = 0.000)
Endangered: Children Walking to School

Walking and Biking to School Reduces Odds of Being Overweight

A Danish study found that adolescents (N=3847) who walked or cycled to school were less likely to be overweight than those who rode to school in motor vehicles (passive transport).

![Graph showing odds ratios for different modes of transportation to school. The odds ratio for passive (Reference) transport is 1.0, for walking it is 0.47, and for cycling it is 0.63.]


---
Evaluation of Federal SRTS Grants: % of SRTS Projects, By Type

% of projects

- Ped bridge
- Bicycle lane
- Shared use path
- Traffic calming
- Bicycle rack
- ADA improvement
- Signage
- Crosswalk
- Sidewalk

Moving Forward: WASH DOT.
http://www.wsdot.wa.gov/research/reports/fullreports/743.3.pdf
Walking & Cycling to School Pre & Post SRTS Projects in 5 States

Moving Forward: WASH DOT.
http://www.wsdot.wa.gov/research/reports/fullreports/743.3.pdf

Figure 1. Average rates of walking and bicycling to school by length of participation in Safe Routes to School program.
Effect of Walking School Bus on Active Commuting to School (ACS)

Percent of week using ACS: Intervention vs. Control

*controlled for acculturation and parents’ outcome expectations

Youth are more likely to be physically active when they have access to fields and play areas after school.

Shared Use Agreements

SCHOLYARDS TO PLAYGROUNDS

HOURS FOR PUBLIC USE
When school is in session: After school until Dusk
During all other times: 8:00 am until Dusk

DIAL 311 FOR NON-EMERGENCY NYC SERVICES OR 911 FOR EMERGENCIES
Shared Use Partnerships

Key Lessons:

1. Build sustainable and trusting relationships
2. You CAN surmount liability concerns
3. Shared use partnerships should address explicit local needs.

See shared use cost calculator

http://citiesandschools.berkeley.edu/reports/CC&S_PHLP_2008_shared_use_with_appendices.pdf
Joint use policies: Are they related to adolescent behavior?

Sandy Slater a,*, Jamie Chriqui b, Frank J. Chaloupka c, Lloyd Johnston d

- Surveys of >51,000 8th, 10th, 12 grade students in 461 school districts nationwide
- Joint use policies coded for content
- Presence of shared use policy was not related to reported PA
- Specific polices were weakly related to PA
  - Specify times facilities are available for use
  - Specify which facilities are available for use
Before and after renovation of Denver schoolyards in low-income neighborhoods. Youth increased their PA in renovated schoolyards (Lois Brink)
Research Brief:

**Promoting Physical Activity through the Shared Use of School and Community Recreational Resources**

Available at: http://www.activelivingresearch.org/shareduse
After School Programs

Policies and Standards for Promoting Physical Activity in After-School Programs

A comprehensive review of 13 physical activity interventions conducted across numerous after-school programs found that the amount of time children spent in physical activity during the after-school program increased by as much as 17 percent after the interventions were implemented.

The effectiveness of programs designed to increase children’s physical activity within after-school programs is mixed; some programs have decreased the amount of time children spend in moderate-to-vigorous physical activity and others have shown modest increases.
Physical Activity during Youth Sports Practices

Desiree Leek et al.

Background

- Participating in sports is a common way for children to meet these guidelines.

- It is important for parents and practitioners to have an idea as to how much physical activity children are getting during sports.

- In this study, we evaluated minutes and intensity of children’s physical activity patterns during soccer and baseball practices.
Percent of 8-14 year-olds meeting 60 min/day of MVPA during sports practice

<table>
<thead>
<tr>
<th>Sport</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soccer</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td>Baseball</td>
<td>30</td>
<td>5</td>
</tr>
</tbody>
</table>
Physical Activity in Youth Dance Classes

• Kelli Cain et al. Revision submitted
• Dance is a popular activity, particularly for girls, but PA in class is seldom studied
• Girls were studied in 7 types of dance classes in 17 private studios and 4 community centers in San Diego
• 264 girls were monitored in 66 classes
  – n=154 children; n=110 adolescents
• average of 17 minutes MVPA (36% of class)
Analyses adjusted for student age, race, class length, BMI percentile, instructor MVPA, community vs private, and clustering within dance classes and instructors.
Parks & Youth Physical Activity

Youth who live near parks are more likely to use them and have higher physical activity.
Disparities in Recreational Facilities
(% of census tracts without facilities, by race/ethnicity)

Mean energy expenditure by Park Activity Zones (Chicago): Myron Floyd et al

Energy Expenditure (Kcal/kg/min)

- Softball/Baseball
- Open Area
- Playground
- Basketball
- Tennis/Racketball
- Volleyball

Chicago, F = 10.20, p < .001
Conclusions

• CDC recommendations are for youth to obtain at least 30 min of MVPA during school and 30 min of MVPA outside of the school day
• New evidence that SRTS programs are effective for the 1/3 of students who live close enough
• Much work needed to improve PA in after school programs, including popular options such as youth sports and dance classes
• Emerging evidence on the role of parks in youth PA and how to design parks to be more active
• Effectiveness of shared use policies is unclear
• There are many options for youth PA outside of school, but much work is needed to optimize their effects and ensure equitable access
• Please be an advocate for policies and programs to increase youth PA outside of school, as well as during school
Infographic on Schools

The Role of Schools in Promoting Physical Activity

**Recess**
- Students who get at least **20 minutes of recess per day** have a lower body mass index percentile than their peers.

**Safe Routes to School**
- Students who walked to school every day had **24 more minutes of physical activity per day.**

**Achievement**
- Teens who were active in school were **20% more likely to earn an “A” in math or English.**

Sources:
New “Active Education” Research Brief & Infographic

Lead author: Darla Castelli
Thank You!

Peter Cribb, MEd
National CATCH Director
Michael & Susan Dell Center for Healthy Living
The University of Texas School of Public Health
email: Peter.W.Cribb@uth.tmc.edu
phone: (512) 482-6167
www.CATCHinfo.org

Today’s webinar was recorded and will be available online at
www.CATCHinfo.org