Policies & Practices for Enhancing Physical Activity in Preschools

National Early Childhood Inclusion Institute (2012)

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Obesity: A National Problem

- Healthy People 2020
  (United States Department of Health and Human Services, 2010)

  (Krishnamoorthy, Hart, & Jelalian, 2006)
The data shown in these maps were collected through CDC’s Behavioral Risk Factor Surveillance System (BRFSS).


In 2010, no state had a prevalence of obesity less than 20%;

Thirty-six (36) states had a prevalence equal to or greater than 25%; and

Twelve (12) of these states (almost all Southeastern states, including S. C.) had a prevalence equal to or greater than 30%.
Researchers have hypothesized that increased rates of obesity are related to

- decreases in physical activity
- dietary changes
- or both
Among 2- to 5-year-old children in the U.S., the prevalence of overweight is 26.7%.

Among 6- to 11-year-old children, the prevalence of overweight is 32.6%.

Overweight is both those at-risk for overweight (BMI ≥ 85th percentile) and overweight (BMI ≥ 95th percentile).

(Ogden, Carroll, Kit & Flegal, 2012)
Health Implications for Children

- Increased LDL cholesterol
- Decreased HDL cholesterol
- Increased triglycerides
- Atherosclerotic plaques
- Hypertension
- Increased type 2 diabetes
- Sleep apnea
- Orthopedic problems
Let’s Move! Child Care is a very recent effort to promote children’s health by encouraging and supporting healthier physical activity and nutrition practices for children in all child care settings.

www.HealthyKidsHealthyFuture.org
National Partners for Let’s Move Child Care

- Office of the First Lady
- White House Domestic Policy Council
- US Department of Health & Human Services
  - Administration for Children and Families
  - Centers for Disease Control & Prevention
  - Health Resources and Services Administration
Screen Time - No screen time for children under 2 years. For children age 2 and older, strive to limit screen time to no more than 30 minutes per week in child care, and work with parents and caregivers to ensure children have no more than 1-2 hours of quality screen time per day (recommended by AAP)
Physical Activity - Provide 1-2 hours of physical activity throughout the day including outside play when possible.

Nutrition - Serve fruits or vegetables at every meal, eat meals family-style whenever possible, and don’t serve fried foods.
**Beverages** - Provide access to water during meals and throughout the day, and don’t serve sugar-sweetened drinks. For children age 2 and older, serve low-fat (1%) or non-fat milk, and no more than one 4- to 6-ounce serving of 100% juice per day.
Infant feeding - For mothers who want to continue breastfeeding, provide their milk to their infants and welcome them to breastfeed during the child care day.
Conventional wisdom is that preschoolers are naturally active and have a lot of outdoor playtime in community-based programs.
The National Association of Sport and Physical Education (NASPE) recommends that preschool aged children participate in 60 minutes of structured activity and 60 minutes of unstructured activity each day.

A recent IOM report suggests that preschoolers should participate in 15 minutes per hour of physical activity (light + MVPA).
Children’s Activity and Movement in Preschools Study (CHAMPS)

- Interdisciplinary research team headed by Russ Pate in the Arnold School of Public Health
  - Cheryl Addy, Bill Brown, Marsha Dowda, Kerry McIver, Jennifer O’Neill, Karin Pfeiffer, Kristen Swaney, and Harriet Williams

- To obtain multi-measure and multi-source descriptive information to inform policies and practices related to preschoolers’ physical activity in community programs
## Physical Activity by Primary Location

<table>
<thead>
<tr>
<th>Observed categories</th>
<th>Observed codes</th>
<th>Observed intervals</th>
<th>Sedentary (Levels 1–2)</th>
<th>Light (Level 3)</th>
<th>MVPA (Levels 4–5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary locations</td>
<td>Inside</td>
<td>264,809</td>
<td>94</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Outside</td>
<td>29,694</td>
<td>56</td>
<td>27</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Transition</td>
<td>10,993</td>
<td>61</td>
<td>35</td>
<td>4</td>
</tr>
</tbody>
</table>

### Pie Charts

**Inside**
- Sedentary
- Light
- MVPA

**Outside**
- Sedentary
- Light
- MVPA
Two Applied Interventions


Teacher Enhanced Outdoor Physical Activity (Hannon & Brown, 2008)

- Addition of portable materials related to running, jumping, and crawling (e.g., playground balls, hoops, target toss sets, tunnels)

- New materials were arranged into activity stations around the playground
Three- to five-year-old girls and boys decreased sedentary behavior when materials present.

Three- to five-year-old girls and boys increased light, moderate, and vigorous activity when materials present.
Teacher-Led Physical Activities
(Brown, Googe, McIver, & Rathel, 2009)

- Activity-based intervention with a focus on children’s physical activity (cf. Bricker)

- Modified “Plan, Do, and Review Process” (cf. High Scope) that focuses on encouraging MVPA during group activities at outdoor playtime
“Plan, Do, and Review Process”

- Initial teacher discussion allows the teacher to “set the stage” for an activity (“PLANNING PHASE”)

- Teacher participation with modeling PA or at least monitoring and careful supervision, increases the likelihood of children’s active engagement (“DOING PHASE”)
Teacher discussion and feedback creates a classroom atmosphere that promotes healthy behaviors ("REVIEWING PHASE")

Debriefing with children will also be a "teaching context" for preschoolers’ self-evaluation and development of their self-regulation.
Immediately after high-energy physical activity, employ a “COOL DOWN” strategy

Examples: talking in soft relaxed voice, modeling deep breathing to slowly relax participants, and providing a clear signal for the end of the high-energy activity
Approaches to Enhancing Preschooler’s Physical Activity

- National, local policy and support
  - Expectations and resources (policy, space, supply)
  - Encouraging adults – staff, school partners & volunteers

- Integrated physical activity
  - Indoor breaks with vigorous activities
  - Outdoor free play opportunities with appropriate materials
  - Teacher-led activities to explicitly encourage sustained activity
Physical Activity in Preschools

- Preschools are sedentary in nature
- Limited adult encouragement and acknowledgement of physical activity in preschools, even during recess
- Restricted employment of intentional teaching to promote children’s physical activity
Three Evidence-Informed Recommendations for Outdoor Play

- Increase the amount of time that children spend outdoors
- Organize and directly encourage children’s vigorous activity during outdoor play
- Provide several shorter outdoor play activities to capture peak physical activity
1. Preschool children need more physical activity during appropriate times of the school day

2. Preschool teachers are on the “front lines” of prevention in promoting healthy habits, dispositions, and lifestyles for young children’s physical activity
3. Preschool teachers “ought” to be proactive in implementing high-interest and high-energy activities that are embedded at appropriate times during the school day