Physical Education
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What is the difference between physical education in schools and physical activity?
Physical Activity

A Behavior
Current Physical Activity Recommendations

- 60 minutes or more of physical activity daily (30 mins in school) to include Vigorous activity and strengthening (muscle and bone) 3 days per week
- Can be cumulative over the day
  - Several episodes of at least 15 mins each
- Can occur in multiple settings
  - Variety of activities that are developmentally appropriate
- Incremental increases to reach the goal
- Developmentally appropriate
- Extended periods of inactivity are discouraged
Physical Activity

At what age does sedentary behavior begin?
- 75% of 3 year olds in strollers, 39% of 4 year olds

What is the status of daily sports participation?
- In 1969, 80% of children played sports daily, now 20% do

What happened to walking to school?
- Only 17% of children walk to school, only 29% of children who live within a mile (60% in 1969)

How do children “run errands” now?
- 70% of children live in “non-walkable” environment, either urban risk or rural distance
Physical Activity Levels, Children 9 to 13 years old

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Organized Activity</th>
<th>Free-Time Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black, non-Hispanic</td>
<td>24%</td>
<td>75%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>26%</td>
<td>75%</td>
</tr>
<tr>
<td>White, non-Hispanic</td>
<td>47%</td>
<td>79%</td>
</tr>
<tr>
<td>Total</td>
<td>39%</td>
<td>77%</td>
</tr>
</tbody>
</table>

Percent of students who met currently recommended levels of physical activity, by grade and sex, USA, YRBS, 2007

<table>
<thead>
<tr>
<th>Grade</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>44.4</td>
<td>31.5</td>
</tr>
<tr>
<td>10</td>
<td>45.1</td>
<td>24.4</td>
</tr>
<tr>
<td>11</td>
<td>45.2</td>
<td>24.6</td>
</tr>
<tr>
<td>12</td>
<td>38.7</td>
<td>20.6</td>
</tr>
</tbody>
</table>
Physical Activity

Girls who are OW or O in Kindergarten reduce their BMI if 1 hr additional PE (active time) in 1st grade+

3rd graders in one study in a 33 minutes PE class they had only 4.8 minutes very active and 11.9 minutes of moderate to vigorous physical activity*, below the recommended 50% of the time in MVPA

*Arch Pediatr Adolesc Med. 2003;157:185-190
+ AJPH 2004;94(4):1501-1506
Benefit of Improved Physical Activity in Childhood

- Obesity risk can be reduced by 10% for every hour a day spent in moderate activity
- In teens, every ½ mile walked reduces obesity risk by 5%
- Reduced risk of chronic diseases
- Leads to a more active lifestyle in adulthood
Barriers to Physical Activity

- Transportation
- Lack of opportunity
- Expense
- Lack of parent’s time
- Lack of neighborhood safety
Environmental Influences

- Role models
  - Families
  - School staff

- Community aspects
  - General safety
  - “Walkability”
  - “Green space” to play
  - Proximity to community activities

- Availability of alternatives
  - TV, video games replacing “free play”
  - Vehicles and public transportation

- School factors
  - Recess
  - Physical education
  - Attitudes
  - Transportation
Comprehensive School-Based Physical Activity Program

Components include:
- Quality physical education
- Daily recess period
- Activity breaks throughout the day
- Intramural sports
- Interscholastic sports
- Walk- and bike-to-school programs
- Staff wellness and involvement
- Family and community participation

Source: National Association for Sport and Physical Education. Comprehensive School Physical Activity Programs Package; 2008. as presented at CDC.gov
Physical Education

Curricular instruction about physical activity AND physical activity
What is the purpose of physical education?

Why should schools provide physical education?
Purpose of Physical Education

- Enhance physical fitness
- Improve large muscle motor skills
- Promote social, cognitive and emotional development
Percentage of US Adolescents Who Participate in Physical Education Classes

Benefits of Physical Education and Sports in School

- Physical
- Lifestyle
- Psychological
- Social
- Cognitive

Source: Baily, R. J Sch Health. 2006;76(8): 397-401
Lifestyle Benefits

- Youth activity/inactivity tracks into adulthood
- PE classes increase likelihood of PA outside of school
- “Low risk behavior” lifestyle for adolescents

Source: Baiy, R. J Sch Health. 2006;76(8): 397-401
Relation of Physical Activity to Youth Risk Behaviors

Less likely to:
- Have sexual intercourse
- Used no birth control in most recent sexual intercourse
- Delinquency
- Smoke, drink, and use drugs
- Get drunk or drive while drunk
- Skip school

More likely to:
- Wear a seatbelt
- High self-esteem
- Other weekly activities
- Work for pay outside of the home
- Do housework
- Get “A’s” in math, and English
- Sleep 8 hours/night
Psychological Benefits

- Promotes self-esteem
- Reduced stress, anxiety, and depression
- Improves attitudes toward school

Source: Baily, R. J Sch Health. 2006;76(8): 397-401
Social Benefits

- Can promote pro-social interactions
  - Learning experience for developing appropriate social behavior and social bonds
    - May or may not achieve appropriate behaviors for those with behavior issues

- Can promotes pro-social behavior

- Promotes moral reasoning, fair play, sportsmanship, personal responsibility

- Opportunities for influence of role models
  - Peer and teacher

- In-school activities can combat elitist attitudes that arise from competitive sports

Source: Baily, R. J Sch Health. 2006;76(8): 397-401
**Academic Benefits**

- **California (2004)**
  - Decreased classroom time by 13%
    - Higher performing students are more physically fit—As fitness increased, test scores did also
      - F>M; High SES>low SES
      - Causal link not established

- **France (1950)**
  - Decreased classroom time by 26%
    - Improved behavior, increased academic performance, attentiveness, reduced absenteeism

Baily, R. J Sch Health. 2006;76(8): 397-401
School Opportunities to Promote Physical Activity Benefits

- Bridge the gap between school and home
  - Assures safe environment for regular physical activity
  - Provides opportunities for children with economic issues that limit other after school activities

- Contribute to youth development
  - Sports teachers and coaches are role models and mentors
    - Needed for the benefits to occur

- Address Community needs for youth activities
  - Middle and high school specifically
Policy Vs. Environment

SHPPS 2006
- Requirements and policies
- Standards and guidelines
- Student assessments
- Evaluation
- Physical education for students with disabilities
Issues for Physical Education Programs

- Teacher Certification
- Curriculum
- Staffing
- Barriers*
  - Low priority (academic accountability)
  - Financial
  - Space limitations
  - Lack of equipment
  - Lack of time
  - Poor facilities

* Barroso, CS. JSH, 2005; 75(8): 317
School Sponsored Sports

- Added benefit to fitness levels of students
- Team based
- Benefits even for “non starters”—attended practices
- PE in school alone lower fitness level
- PE insufficient intensity to promote CV fitness
How has the purpose changed over time and why?
Purpose of Physical Education

- Enhance physical fitness
- Improve large muscle motor skills
- Promote social, cognitive and emotional development

Health promotion
Chronic disease prevention
Considerations

- Change in emphasis as children age
  - Shift from general physical activity and motor development to organized activity and health and fitness focus
- Variation in physical development (puberty) and sports skills acquisition
- Family differences in emphasis on physical activity vs academics
- Need to be inclusive
- Community support
- Need for policy change
National Physical Education Standards

A physically educated person:

- Demonstrates competency in many movement forms and proficiency in a few movement forms;
- Applies movement concepts and principles to the learning and development of motor skills;
- Exhibits a physically active lifestyle;
- Achieves and maintains a health-enhancing level of physical fitness;
- Demonstrates responsible personal and social behavior in physical activity settings;
- Demonstrates understanding and respect for differences among people in physical activity settings; and
- Understands that physical activity provides opportunities for enjoyment, challenge, self-expression, and social interaction.
CDC’s Comprehensive Approach

“Quality, daily physical education;
Classroom health education that complements physical education by giving students the knowledge and self-management skills needed to maintain a physically active lifestyle and to reduce time spent on sedentary activities such as watching television;
Daily recess periods for elementary school students, featuring time for unstructured but supervised play;
Extracurricular physical activity programs, especially inclusive, intramural programs and physical activity clubs (e.g., dance, hiking, yoga) that 1) feature a diverse selection of competitive and noncompetitive, structured and unstructured activities, 2) meet the needs and interests of all students with a wide range of abilities, particularly those with limited athletic skills, and 3) emphasize participation and enjoyment without pressure”.

Promoting Better Health for Young People Through Physical Activity and Sports: A Report to the President From the Secretary of Health and Human Services and the Secretary of Education. 2000 http://www.cdc.gov/nccdphp/dash/presphysactrpt
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

Source: http://www.cdc.gov/healthyyouth/physicalactivity/toolkit/youth_pa_guidelines_schools.ppt#505,31,What is Quality Physical Education?
Quality Programs (according to the CDC)

- Adequate time
  - At least 150 minutes for elementary schools and 225 per week for secondary schools
- Prepared teachers with opportunities for professional development
- Adequate facilities
- Reasonable class sizes

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

Quality Physical Education Programs (according to DHHS and DOE-2000)

“Quality physical education is not a specific curriculum or program; it reflects, instead, an instructional philosophy that emphasizes:

- Providing intensive instruction in the motor and self-management skills needed to enjoy a wide variety of physical activity experiences, including competitive and noncompetitive activities.
- Keeping all students active for most of the class period.
- Building students’ confidence in their physical abilities.
- Influencing moral development by providing students with opportunities to assume leadership, cooperate with others, and accept responsibility for their own behavior.
- Having fun!”
“Curriculum” Content

- Mastery of basic skills and understanding of motor skills related to a variety of physical activities so that each individual can make positive decisions about physical activity choices.
- Experiences that encourage children to question, integrate, analyze, communicate, and apply cognitive concepts about motor skill and physical activity.
- Opportunities to improve social and cooperative skills, and gain a respect and appreciation for diversity.
- Use of fitness education and assessment to help children understand, enjoy, improve, and/or maintain their physical health and well-being.

Source: ERIC Clearinghouse on Teaching and Teacher Education Washington DC. National Standards for Physical Education. ERIC Digest. Young, Judith C. http://www.ericdigests.org/eric-digests.html
Students with Disabilities
PL 94-142 (IDEA)

- Physical education services must be made available to every child with a disability receiving FAPE.

- Each child with a disability must be given the opportunity to participate in the regular physical education program unless—
  - The child needs specially designed physical education, as prescribed in the child's IEP.
  - If specially designed physical education is prescribed in a child's IEP, must provide the services directly or make arrangements for those services to be provided through other public or private programs.
Physical Education Curriculum Analysis Tool (PECAT)

- Curriculum Analysis
  - Curriculum Description
  - Accuracy Analysis
  - Acceptability Analysis
  - Feasibility Analysis
  - Affordability Analysis

- Content and Student Assessment Analyses

- Curriculum Improvement Plan