



ILLINOIS PUBLIC HEALTH INSTITUTE

Enhanced School-based Physical Education

Fact Sheet – September 2011

Expanding the quantity and quality of physical education (P.E.) classes is an important part of comprehensive strategies to promote physical activity among school-aged children.¹ The Centers for Disease Control and Prevention's Guide to Community Preventive Services strongly recommends enhanced P.E. to increase physical activity.² The CDC also recommends students engage in 60 minutes, or more, of physical activity each day. Moreover, the U.S. Department of Health and Human Services has identified improving daily P.E. as a national health objective, aiming to increase the number of schools scheduling daily P.E., the proportion of students participating, and the number of students who are physically active for at least 50% of the time.³

What Is Enhanced Physical Education?

Enhancing physical education (P.E.) curricula involves making classes longer or having students be more active during existing classes in order to increase the amount of time students spend doing moderate or vigorous activity in P.E. class. Some enhanced P.E. programs change the activities taught to increase activity levels and minimize time when inactivity occurs (e.g., substituting soccer for softball). Other enhanced P.E. programs modify the rules of the game so that students are more active (e.g., in softball, have the entire team run the bases together when the batter makes a base hit). Enhanced P.E. programs can be modified based upon differing levels of ability to ensure active participation by all students – not just athletes. Finally, enhanced P.E. programs can be integrated into a broader health education program that focuses on developing skills needed for life-long physical activity and nutrition.

Why Is Enhanced Physical Education Needed?

Increasing physical activity time to at least 50% of class time is an important goal because regular physical activity is an essential tool for enhancing health and reducing risk for all-cause mortality and the development of many chronic diseases, including obesity, diabetes, heart disease and high blood pressure.⁴ Unfortunately, activity times in P.E. class are consistently low.⁵ Activity time in a traditional P.E. class can be less than 37% of the total class time.⁶ A health impact assessment conducted by UCLA found the mean amount of P.E. class time spent in moderate-to-vigorous physical activity was only 26.4%.⁷ That means for a typical, 30-minute K-6 grade class, students engage in less than 8 minutes of physical activity. Thus, a traditional P.E. class falls substantially short of the Healthy People 2010 objective of 50% activity time and contributes very little to ensuring students are meeting the 60 minutes of exercise recommended in the Physical Activity Guidelines for Americans.⁸

What Are the Potential Benefits of Expanded or Enhanced Physical Education?

Physical activity is good not only for physical health, it also has cognitive benefits.⁹⁻¹¹ For example, physical activity feeds the brain with glucose and oxygen, and increasing nerve connections, all of which makes it easier for children of all ages to learn. Numerous studies show that children who exercise have better in-class performance.¹²⁻¹³ And, a growing body of research suggests that students who exercise also perform better on standardized tests.¹⁴

What Are the Potential Benefits of Expanded or Enhanced Physical Education? (cont'd...)

In grades K-6, enhancing a typical, 30-minute P.E. class to provide merely 4 additional minutes of activity per day would provide 20 minutes more activity per week.¹⁵ This small enhancement in P.E. classes adds up quickly. Assuming that an elementary student receives daily physical education over a 40 week school year, for 30 minutes per day, an enhanced P.E. program that increases the average activity time from just 8 minutes to 12 minutes, would provide 1 hour and 20 minutes more activity per month, or 13 hours and 20 minutes more activity per year.¹⁶ Thus, over the course of K-6 grade instruction, an enhanced P.E. program that provides merely 4 additional minutes of activity per day provides a total of 93 more hours of physical activity, which is the equivalent of 186 additional thirty-minute lessons!¹⁷

What Does Enhanced P.E. Look Like?¹⁸⁻¹⁹

	TRADITIONAL / OLD	ENHANCED / NEW
Curriculum	<ul style="list-style-type: none"> • Skills and rules to play team games • Examples: basketball, football, soccer, baseball 	<ul style="list-style-type: none"> • Physical competence and cognitive understanding about physical activity so students can be active for a lifetime • Examples: fitness activities, outdoor education, individual lifetime activities, dance, integrated lessons
Grouping	<ul style="list-style-type: none"> • Large groups • Limited equipment • Athletes are leaders • Has the potential to disenfranchise obese students and children with disabilities 	<ul style="list-style-type: none"> • Small groups • Adequate equipment for active participation • Full inclusion of all students and all students have opportunities for success, not just athletes
Fitness Emphasis	<ul style="list-style-type: none"> • Skill-related • Comparison to national norms 	<ul style="list-style-type: none"> • Health-related • Students engaged in self-testing; applying principles of fitness • Designing an individual program based on personal goals and differing levels of ability • Students learn to maintain and improve physical well-being
Instruction	<ul style="list-style-type: none"> • Teacher-directed • Teacher controls and paces the entire lesson 	<ul style="list-style-type: none"> • Teacher as coach/guide • Uses instructional strategies to allow students to progress at individual pace and to self-assess
Social Skills	<ul style="list-style-type: none"> • Emphasis on competition, winning and losing 	<ul style="list-style-type: none"> • Emphasis on cooperation, working together as a group, leadership, conflict resolution during active participation situations
Grading and Assessment	<ul style="list-style-type: none"> • Based on attendance, dress, skill level, fitness scores 	<ul style="list-style-type: none"> • Based on self-improvement, self-evaluation; peer assessment; skill rubrics • Used to monitor and reinforce student learning
Games	<ul style="list-style-type: none"> • Teacher officiates games, giving feedback on skill performance and knowledge of rules; large group games; students waiting in line to play; winning emphasized 	<ul style="list-style-type: none"> • Students engage in activities and sports with a health-related fitness component • Emphasis on participation and getting everyone active
Technology	<ul style="list-style-type: none"> • Stop watch 	<ul style="list-style-type: none"> • Computers, pedometers, heart rate monitors, other fitness technology

Source: American Academy of Pediatrics, Illinois Chapter; Illinois Association for Health, Physical Education, Recreation and Dance; American Heart Association.

Is Enhanced P.E. Evidence Based?

After a systematic and comprehensive review of all available evidence, the Task Force on Community Preventive Services has strongly recommended school-based, enhanced P.E. as an effective method of increasing physical activity and physical fitness.²⁰ In fact, enhanced physical education is one of only five interventions that has been identified as having sufficient evidence to be “strongly recommended” for increasing physical activity in the U.S. Centers for Disease Control and Prevention’s Guide to Community Preventive Services.²¹⁻²²

Prior research has shown that enhanced P.E. programs can increase the amount of time spent engaged in physical activity at school, increase the quality of time spent by engaging in moderate to vigorous physical activity, increase daily energy expenditure, improve overall aerobic capacity of students, and can have a significant impact on physical fitness.²³ Moreover, enhanced P.E. teaches students about activities that can help them become active for a lifetime, which has the potential not only to prevent childhood obesity, but to prevent adult-onset obesity as well.²⁴⁻²⁵ In contrast, students enrolled in traditional classes failed to meet Healthy People 2010 goals.²⁶

A consistent concern expressed by administrators, parents and others is that P.E. takes time away from academic instruction, and will result in lowering academic performance. Rather, studies have shown that more time devoted to physical activity actually maintained and sometimes increased academic performance.²⁷ Despite less time devoted to academic instruction, 6th grade students in Michigan enrolled in P.E. achieved similar grades and standardized tests scores as their peers not enrolled in P.E. who had more time devoted to academic instruction.²⁸ A 1999 study of California 4th and 5th graders demonstrated that students enrolled in enhanced P.E. programs performed better on standardized tests than the control group.²⁹ Overall, positive correlations have been found between physical activity and academic performance.³⁰ The benefits of enhanced P.E. programs do not end with just better physical health in children, but may also improve students’ academic achievements as well.

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Illinois Public Health Institute
954 West Washington Blvd.
Suite 405 / Mailbox 10
Chicago, Illinois 60607-2228



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