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# Physical Education Matters

*The California Endowment commissioned this report as part of its efforts to improve physical activity, reduce childhood obesity and reduce health disparities in California. Further reports on PE and physical activity for California youth are forthcoming to inform discussions about needed policy changes.*

■ ACTIVITY MATTERS FOR CALIFORNIA KIDS® POLICY BRIEF January 2007

## Physical Education Matters for California Kids

There is unprecedented need to reform physical education (PE) in California's schools. High levels of obesity and diabetes in California children, particularly in Latino, African American and Native American youth, indicate the need for our schools to make PE a priority. Action to improve the quantity and quality of PE should be guided by evidence. This brief identifies several areas in which

California PE is serving children poorly and summarizes research on effective strategies to improve PE. There are many opportunities for improving PE, but they require policy changes at the state, district and school levels. We hope this brief will be helpful to educators, health professionals, lawmakers, parents and other groups working to improve PE for the benefit of children's health and education.

### NOTES

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### SUMMARY OF FINDINGS

After reviewing the status of school PE recommendations, requirements, compliance and resources in California and nationally, the following conclusions can be drawn:

- Both quantity and quality of PE are deficient in grades K-12 in California schools, but the problems are most severe at the elementary level.
- PE quantity and quality are particularly deficient for less affluent students and those in racial and ethnic groups at high risk for overweight and obesity.
- Personnel and material resources are clearly inadequate to support quality PE in many schools, particularly those in less affluent communities.
- Improving the quantity and quality of PE could improve the health and academic performance of students.
- Research-based, activity-focused PE programs for schools at all levels have been shown to improve physical activity and provide other benefits.
- New state funding provides an unprecedented opportunity to improve the quantity and quality of PE in California schools, but it is only a first step.
- Initiatives to improve school PE by private sponsors and foundations provide welcome incentives for innovation, but public funding is necessary for sustainable improvements for all students.
- For school PE to become part of the solution to the childhood obesity epidemic, policy changes are needed to improve the quantity and quality of PE.

School PE is the primary instrument for preparing children with the skills, knowledge and confidence to lead physically active lives.<sup>1</sup> Children who take PE report more total physical activity on school days than students who do not take PE.<sup>2</sup> Several national organizations and a California Department of Education (CDE) Task Force reviewed the evidence on the benefits of PE and recommend activity-focused PE as a priority to maintain and improve children’s health.<sup>3,4,5</sup>

Daily physical activity plays a vital role in maintaining and enhancing the physical and emotional health of children and teens. National experts recommend 60 minutes of moderate to vigorous physical activity per day for children and adolescents.<sup>6</sup> However, in California, Latino teens are less likely to engage in moderate physical activity five days per week than African American or white teens.<sup>7</sup> And teens from the poorest families are least likely to be regularly active.<sup>7</sup>

**Activity-focused PE can contribute to academic performance and positive classroom behavior.**

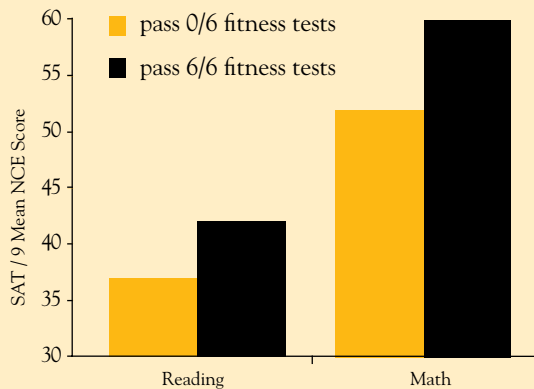
A common reason for reducing time, leadership and resources for PE is the claim that time spent in PE hinders academic performance. To the contrary, several studies show that students who spend more time in PE do not have lower grades or achievement test scores, and, sometimes, more PE leads to higher scores.<sup>8,9</sup>

Studies in California and elsewhere show that:

- More physically active and fit students have better grades and achievement test scores.<sup>10,11,12,13</sup>
- PE and physical activity can improve academic achievement by enhancing concentration<sup>14</sup> and by helping students be more attentive.<sup>15</sup>
- Most, but far from all, California school administrators are convinced of the value of PE, believing high-quality PE can enhance concentration (69%), decrease discipline problems (63%) and improve academic performance (63%).<sup>16</sup>

**FIGURE 1**

**STUDENTS WITH HIGHER FITNESS SCORES HAVE BETTER SCORES FOR READING AND MATH**



**Why then is PE not seen as an academic priority?**

School administrators may place a lower priority on PE for a number of reasons, including that schools are not held accountable for PE by state or federal education departments. PE was omitted as a core education subject in the federal No Child Left Behind Act, helping to perpetuate what, according to PE specialists, is one of the most important barriers to high-quality PE: PE’s perceived low academic value.<sup>17</sup> Additionally, University of California and comparable institutions do not consider PE grades in their admissions procedures.

**California requirements for PE fall short of national guidelines.**

California requirements are well below national recommendations. National Association for Sports and Physical Education (NASPE) recommends 150 minutes of PE per week for elementary students and 225 minutes per week for middle and high school students.<sup>18</sup> Since the early 1990s, the CDE has only required:

- 200 minutes of PE per 10 school days in grades 1-6
- 400 minutes of PE per 10 school days in grades 7-12<sup>19</sup>

**Schools are not even meeting California’s PE minute requirements.**

Of those monitored during the 2004-2005 school year, 48% of elementary schools and 23.5% of middle and high schools were non-compliant with PE minute requirements.<sup>20</sup> Based on direct observations, elementary classroom teachers provided only about 30 minutes per week of PE, far below the mandated 100 minutes.<sup>20</sup> Because California PE requirements are so low in elementary schools, and lack of compliance is so high, the elementary school PE deficiency is severe.

**There is little monitoring and no enforcement of PE requirements.**

Schools are only considered for monitoring of PE requirement compliance every four years, and they may be excluded if they meet academic goals. There are no real consequences for failure to comply—schools that do not enforce requirements only need to submit written plans for improvement.

**Students are not sufficiently active during PE.**

The national health objective is for students to be physically active for 50% of PE class time.<sup>21</sup> However, California law and regulations do not stipulate the number of minutes of activity required during PE class time. Observations of California PE classes show that children spend less than 50% of class time physically active, regardless of whether they are taught by classroom teachers<sup>22,23</sup> or PE specialists.<sup>24,25</sup> Activity time during PE is especially low in California’s elementary and secondary schools in low-income communities.<sup>25</sup>

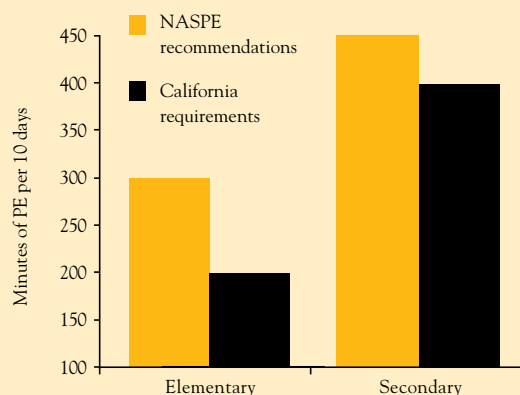
**Exemptions to PE requirements are commonplace, so many high school students take no PE at all.**

California is among the 18 states that allow exemptions from required high school PE for such activities as driver’s education, band and athletics.<sup>18</sup> Although there are requirements for high school PE, albeit contradictory, in practice it is possible for students to be exempted from PE throughout high school.<sup>26</sup> Starting in July 2007, 9th graders will be required to pass the FitnessGRAM to be eligible for exemptions.<sup>27</sup>

Students from poorer families report they are less likely to be required to take PE in comparison to students from more affluent families.<sup>28</sup>

FIGURE 2

CALIFORNIA PE MINUTE REQUIREMENTS DO NOT MEET NATIONAL RECOMMENDATIONS



## The curriculum matters.

PE curricula come from both the health and education fields, and their differing approaches need to be reconciled. Even corporate sponsors are now offering PE programs.<sup>29,30</sup> Because California does not adopt instructional materials for PE, as it does for other mandated disciplines, schools and districts have many choices but little guidance about the most effective programs.

Without State Board of Education-approved PE curricula, schools are left to pick and choose based on more general guidelines. CDC's Task Force on Community Preventive Services<sup>4</sup> and the Institute of Medicine<sup>5</sup> strongly recommend activity-focused PE as an effective way to increase physical activity. Numerous studies show that specific PE curricula designed to provide opportunities for activity to all students are more effective than usual PE.<sup>31,32,33,34</sup> Activity-focused PE curricula evaluated by research are available for all levels of schools, but it is unclear how many California schools are using these or similar programs.

The State Board of Education adopted PE content standards in 2005 that provide guidance in adopting or developing curricula that meet educational standards. However, there are currently no evaluations of which curricula are consistent with the standards. Unlike other subjects, there is no official staff training provided by the state to support implementation of the standards.

## Class size matters.

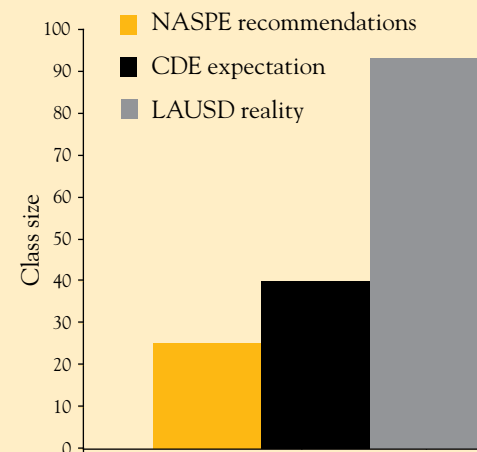
The California Teachers' Association stresses the importance of smaller class sizes to improve performance.<sup>35</sup> However, in California there are no state standards for PE class sizes. NASPE recommends a student-teacher ratio of 25:1 in elementary PE classes,<sup>36</sup> and it has been proposed that PE student-teacher ratios should be the same

as those for other subjects.<sup>37</sup> Large class size is the number one barrier to high-quality PE according to PE specialists,<sup>17</sup> and large classes have a detrimental effect on achieving high levels of physical activity in PE.<sup>24,25</sup>

California has the largest class sizes in the country.<sup>38</sup> The CDE recommends that middle and high schools plan on an average PE class size of 40 students per teacher.<sup>39</sup> In Los Angeles Unified School District (LAUSD), the five largest PE class sizes averaged 93 students in middle schools and 87.5 students in high schools.<sup>40</sup> In Fresno, 81% of high school PE classes and 55% of middle school PE classes had more than 40 students.<sup>41</sup>

**FIGURE 3**

### PE CLASS SIZES ARE TOO LARGE IN CALIFORNIA



## Qualified teachers matter.

Certified PE specialists provide more PE and higher quality PE than classroom teachers.<sup>42,43</sup> Thus, a CDE Task Force recommends credentialed PE teachers at all levels.<sup>3</sup> Despite the recommendation, schools continue to assign classroom teachers, with no professional preparation in PE, to teach an estimated 85% or more of elementary PE classes.<sup>1</sup>

In 1994, more than 50% of California districts had no full time PE specialists teaching elementary school.<sup>16</sup> Even when an elementary school has a PE specialist, that individual alone is usually able to provide PE to each student only once per week.

To begin addressing the issue, in 2006, California made available \$40 million annually to hire PE specialists for grades K-8. This funding is both needed and welcomed, but the funds will pay for much less than one full-time teacher in each school. Each year only 1,100 schools—just 16% of California’s total<sup>44</sup>—will receive \$35,000. Schools will be selected to receive funding by lottery, a system that is not likely to reduce income-based disparities in students’ access to PE specialists.

While fewer than 10% of California school administrators reported that the most important factor in implementing quality elementary PE was having PE specialists, nearly half (48%) reported that the most important factor was teacher training.<sup>16</sup> Major studies show professional development and ongoing support improve elementary PE classes taught by classroom teachers over an extended period.<sup>31,32,42,43</sup>

A one-time allocation of \$500 million was made to California schools in the 2006-2007 school year for improving PE, arts and music. While these funds could be used for staff development, there is little or no accountability for how they will be spent.

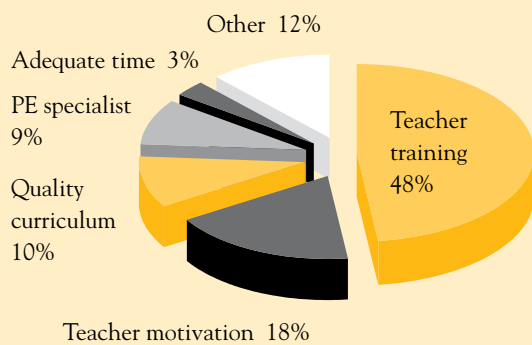
### Physical environment matters.

School PE facilities, such as play fields and indoor gym space, and equipment are essential for high-quality PE. Larger school play areas are associated with increased physical activity in middle school students.<sup>25,45</sup> Elementary teachers identify inadequate facilities and equipment as among the top three barriers to implementing PE guidelines.<sup>46</sup> CDE recognizes the necessity of adequate facilities for PE and has published site requirements based on enrollment.<sup>39</sup> No information on the adequacy of physical facilities for California schools could be found.

Having adequate PE equipment and supplies is considered essential for quality programs<sup>36</sup> and is a strong predictor of continued use of a health-related PE curriculum.<sup>47</sup> The adequacy of PE equipment in California schools could not be determined.

**FIGURE 4**

**ADMINISTRATORS BELIEVE TEACHER TRAINING IS IMPORTANT FOR QUALITY PE**



### Professional development matters.

Professional development in activity-focused PE should be one of the highest priorities for improving PE, because of substantial evidence for its effectiveness. Professional development is particularly needed for the classroom teachers, who continue to be main instructors of PE in elementary schools.

School PE is the primary instrument for preparing young people to lead active lives and is the only physical activity promotion program that can reach virtually all youth, regardless of race/ethnicity and income. For school PE to become part of the solution to the childhood obesity epidemic, policy changes to improve the quantity and quality of PE are necessary. The following are recommended policy goals:

1. Ensure PE minutes provided to each student meet or exceed state requirements by improved monitoring and enforcement.
2. Ensure all PE classes are taught by certified PE specialists who receive continuing professional development. If classroom teachers provide PE instruction, they must receive adequate training in PE instructional methods.
3. Encourage the adoption and implementation of activity-focused PE curricula that are research-based or consistent with content standards.
4. Increase required PE minutes in elementary schools.
5. Eliminate exemptions from PE, except for medical contraindications.
6. Ensure PE class sizes are consistent with those of other subjects.
7. Ensure schools have adequate indoor and outdoor facilities and sufficient equipment for PE.
8. Target funding for improving PE quantity and quality to schools serving low-income communities.
9. Enhance the value of PE within the education community by including PE in school accountability measures, including PE grades in GPAs used by universities, and adding PE as a core subject in the federal No Child Left Behind Act.
10. Encourage the California Department of Education, school districts and schools to partner with the California Department of Health Services, local public health departments, and community organizations to build advocacy and support for the policies and funding required for improved school PE.

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