Best Practices and Recommendations for Increasing Physical Activity in Youth

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The majority of youth (defined as younger than 18 years of age) in the United States fail to accumulate the recommended levels of daily moderate-to-vigorous physical activity. As discussed in the previous article, barriers exist to youth being physically active. However, potential solutions are available, and strategies have been developed for actions that can increase physical activity participation. This article focuses on the strategies and tactics of the Education Sector of the National Physical Activity Plan (NPAP), which includes an overview of Comprehensive School Physical Activity Programs (CSPAP) as a strategy leading to real-world, practical recommendations for addressing the issue of increasing physical activity in youth. Personal, environmental, and social barriers to physical activity exist in schools and have been described. Strategies for overcoming these barriers are vital for improving the health of youth now and also in their adult years.

National Physical Activity Plan
The NPAP, described earlier in this feature, was designed to offer strategies to increase physical activity among all Americans. The plan, officially in place since May of 2010 (NPAP, www.physicalactivityplan.org/index.php), includes strategies to facilitate meeting the 2008 Physical Activity Guidelines for Americans (U.S. Department of Health and Human Services [USDHHS], 2008). The plan also seeks to create a culture that supports physically active lifestyles by addressing changes in eight societal sectors, one of which is education.

Strategy 1 calls for providing comprehensive opportunities for physical activity and seeks to ensure that all students have the opportunity to be physically active in a safe, inclusive, and developmentally appropriate environment. The CSPAP initiative, explained later in the article, addresses this strategy directly. Tactics for this strategy include education for preservice and practicing teachers focused on high-quality physical education and physical activity programming. The plan also suggests professional development for classroom teachers regarding physical activity in the classroom setting.

Strategy 2 is focused on policy. It recommends that local, state, and national policies be implemented and enforced to hold schools accountable for the quality of physical education and physical activity programming. The related tactics include advocating for

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increased physical activity and using measurements to help track success in schools. Advocating for the adoption of state, district, and local standards for physical education and physical activity programs and increasing moderate-to-vigorous physical activity opportunities is important.

Strategy 3 addresses developing partnerships with other NPAP sectors to offer and implement additional physical activity opportunities. This strategy would prioritize efforts targeting communication between local communities and schools to develop partnerships with community organizations that encourage citizen volunteerism to initiate and sustain opportunities for physical activity.

Strategy 4 calls for promoting and facilitating physical activity opportunities in early childhood education. Suggested tactics include defining specific physical activity components for pre-kindergarten students and addressing physical activity standards that allow children to participate in safe and developmentally appropriate physical activity. SHAPE America – Society of Health and Physical Educators has published physical activity guidelines for children from birth to five years called Active Start (National Association for Sport and Physical Education [NASPE], 2009).

Strategy 5 refers to providing access to physical activity before and after school. This strategy encourages states and organizations to provide resources for schools to support before- and after-school physical activity programs. A tactic example is to subsidize transportation and program costs through local, state, and federal funding.

Strategy 6 addresses physical activity experiences post–high school and is designed to encourage higher education institutions to provide free access to physical activity opportunities (e.g., physical activity courses, clubs and intramural programs, adequate physical activity and recreation facilities). To encourage this change, a tactic suggested is to advocate for accrediting agencies and legislative bodies to tie accreditation and funding to requirements for participation in physical activity and fitness programs. In addition, local partnerships are encouraged for those institutions that do provide opportunities for students to be physically active.

The seventh and final strategy also focuses on higher education, encouraging institutions to implement physical activity within various degree and certification programs. Physical education teacher education (PETE) programs should prepare new physical education teachers to implement best practices and curriculum to effectively support the health of young people. The idea of training others, such as nurses and physical therapists, to help implement additional physical activity opportunities could expand the availability of and access to additional opportunities. Schools could partner with these community resources to design programs to facilitate physical activity.

The Education Sector is one of eight NPAP sectors. Organizations and stakeholders in each sector are encouraged to work collaboratively across sectors in areas of common interest to improve physical activity behaviors. The intent is to include all societal activities so that physically active lifestyles are adopted, reinforced, and maintained in ways that will have an impact on health and quality of life. Schools and educational settings provide excellent venues for delivering many of these messages and actions.

The NPAP is currently being updated. The strategies of each sector are being reviewed, and nationwide input will be solicited.
Comprehensive School Physical Activity Programs

Comprehensive School Physical Activity Programs are identified as a tactic in the Education Sector. Although the idea of different components for school-based physical activity programs has been in existence for years, the first official statement on CSPAP was written in 2008 (NASPE, 2008) and revised in 2013 (NASPE, 2013b). A CSPAP is designed to address physical activity in all aspects of school so as to provide systematic physical activity opportunities beyond the physical education classroom. It includes five components: physical education; physical activity during school, at recess, and in the classroom; physical activity before and after school; school staff involvement; and family and community engagement. The intent is for a leader in each school to coordinate efforts to provide increased opportunities for physical activity to the students, staff, and community. The expectation is that each school will assess the specific needs for a CSPAP. To date, a number of data-based articles have evaluated physical activity outcomes of CSPAP components in isolation, with studies suggesting promise for the increased physical activity contribution of physical education, classroom physical activity, recess, before- and after-school programs, sport participation, and active commuting (Erwin, Beighle, Carson, & Castelli, 2013). The staff involvement and family and community engagement components have little empirical evidence supporting their effectiveness, leaving their potential for contributing to overall physical activity levels unknown. The comprehensive nature of a CSPAP, however, has not been fully researched with regard to physical activity outcomes that can be reached when all components of a CSPAP are provided.

The Let’s Move! campaign, endorsed by First Lady Michelle Obama, was first introduced in 2010. It focused on promoting physical activity and nutrition as a means to raise a healthier generation of youth. This movement led to the SHAPE America launch of Let's Move in School, which later merged with the First Lady’s campaign to create the current Let’s Move! Active Schools program. This initiative focuses on physical activity opportunities in and around the school day; and multiple organizations are involved in supporting this effort, including SHAPE America; Nike; the Alliance for a Healthier Generation; Partnership for a Healthier America; ChildObesity180; Presidential Council on Fitness, Sports, and Nutrition; GENYOUth Foundation; U.S. Department of Education; Kaiser Permanente; USDHHS; Centers for Disease Control and Prevention (CDC); and Build Our Kids’ Success. These organizations have come together to provide and identify supports that encourage school involvement. Some include Fuel Up to Play 60 and the Physical Activity Leader (PAL) training. These programs provide incentives and assistance for schools to integrate more physical activity opportunities throughout the school day. For instance, schools receive monetary rewards for joining Fuel Up to Play 60. The PAL training is provided free to schools that sign up for Let’s Move! Active Schools. Implementing a CSPAP is also well aligned with the Healthy, Hunger-Free Kids Act of 2010 (Public Law 111-296, 2010), which requires that all schools with federally funded meal programs create local school-wellness policies that address physical activity and nutrition.

Seven steps have been identified for developing, implementing, and evaluating a CSPAP (CDC, 2013):

1. Establish a committee and designate a PAL. If a school wellness committee or coordinated school-health committee already exists, utilize it. An important tactic is to identify a supportive school administrator (Carson, 2012). This person may provide resources and/or time for important components of the CSPAP. The person best suited to lead is the physical education teacher at the school. The PAL should promote physical activity but should not be planning, organizing, and implementing all of the programs alone. The leader and committee members can solicit help when necessary.

2. Conduct an assessment of existing physical activity opportunities. This will help the school wellness committee determine how much physical activity is being offered. It also identifies needs, strengths, and weaknesses.

3. Create a vision statement, goals, and objectives for the CSPAP as a basis for identifying specific activities, the resources needed, and realistic timelines for a school-wide action plan (Carson, 2012).

4. Identify the outcomes or specific indicators that should result from program implementation.

5. Identify and plan the physical activities for the CSPAP.

6. Implement the CSPAP.

7. Evaluate the CSPAP. The Healthy, Hunger-Free Kids Act of 2010 (Sec. 204 of P.L. 111-296) requires public updates on the content and implementation of school wellness policies. The committees can determine which practices show adequate progress and improve on policies or practices that are inadequate.

These steps can help school administrators or existing school wellness committees to implement a CSPAP in ways that meet the specific needs of their particular school.

Unfortunately, efforts made to increase physical activity among youth have been implemented and evaluated in isolation or not evaluated at all, or they have addressed multiple CSPAP components that have not been effective. For example, efforts have been made to increase physical activity during recess. Sometimes, the efforts are implemented at the same time another group is working on physical activity promotion after school. Physical activity is increased, but the effectiveness of the tactics is unclear. Studies such as Trial of Activity in Adolescent Girls (TAAG; Lytle et al., 2009), Lifestyle Education for Activity Project (LEAP; Pate, Dowda, O’Neill, & Ward, 2007), Child and Adolescent Trial for Cardiovascular Health (CATCH; Luepker et al., 1996), and Pathways (Caballero et al., 2003) have focused on two or more CSPAP components, but they have not been effective, have been disseminated prematurely, and/or have not had continuing research support to
refine and replicate the process. The authors suggest that collaborating and combining resources to improve physical activity levels would provide a school with the most “bang for their buck.” Often, however, programs targeting a single component of a CSPAP work independently of each other.

With regard to improving the physical activity levels of students, schools are an ideal place to endorse working together, since most youth attend school and every community has a school. Establishing a common process for implementing physical activity programs would be beneficial. For example, perhaps all physical activity or health-related programs that take place within a school should go through the approval of the school wellness committee. Sharing process and monitoring results will benefit all local schools.

Collaboration and Professional Preparation

Collaboration between universities and P–12 schools is a potential solution to improving the implementation of the CSPAP model and, ultimately, the impact on youth activity levels. Universities, with their wealth of expertise in physical activity programming and curriculum development, implementation, and evaluation, can play multiple roles in physical activity promotion in schools. Universities have individuals who train and certify physical education teachers, as well as classroom teachers. In addition, many have emphases in public health, exercise science, measurement, program evaluation, agriculture, wellness, and health and nutrition. Bringing these professionals together to prepare future educators and public health employees is invaluable to drive everyone in the same direction for physical activity. Reaching out to establish a relationship between schools and higher education institutions can be initiated by either one. School wellness committees might reach out or a faculty member of a local college or university might approach a school to initiate cooperative projects concerning physical activity.

PETE Programs. Physical education teacher education programs should incorporate CSPAP training into their curriculum so that graduating physical educators are familiar with the concept and are capable of assuming the multifaceted role of a PAL in a school, once hired. These PETE programs can either revise the curriculum to address the CSPAP model and incorporate program planning aspects into their coursework, or they can infuse CSPAP elements into their existing content. In addition to addressing national content standards and guidelines, perhaps a more physical activity–focused context will shift the culture of teacher preparation. With this approach, the goal for the physical educator is to provide the most amount of physical activity for the students, staff, and community members involved with the school, rather than focusing solely on the students enrolled in physical education. The goal is to provide students with the knowledge, skills, and attitudes to be active for a lifetime beginning now.

The first step is to educate preservice physical educators about CSPAP and their expanded role of teaching beyond the gymnasium. The curriculum should include teaching future teachers the skills for connecting class content to physical activity outside of class; how to plan and implement programs; and how to advocate for more physical activity opportunities and supportive policies. Field experiences should include more than observing and assisting in physical education classes. Teacher candidates should be exposed to observing and
assisting with physical activity promotion at recess, creating before- and after-school physical activity programs, setting up intramurals and physical activity clubs, hosting family and community physical activity nights, organizing events such as fun runs and Jump Rope for Heart or Hoops for Heart at school, providing physical activity breaks for students in classrooms, and organizing physical activity opportunities for staff. Requisite skills for these future teachers include organization and administration, public health, advocacy, and physical activity knowledge (Beighle, Erwin, Castelli, & Ernst, 2009), as well as an understanding of fitness and motor skills.

**Elementary Education Teacher Education Programs.** Elementary teacher education programs should provide all preservice classroom teachers with the knowledge and skills related to a CSPAP and prepare them for supporting classroom-based physical activity and creating appropriate recess environments conducive to appropriate physical activity. The attitude that classroom teachers portray is very important in role modeling healthy behaviors for their students. Practicum placements and field experiences should be designed to allow preservice teachers to incorporate physical activity into lessons with inservice teachers modeling these behaviors for teacher candidates to experience. Physical education teacher educators should provide professional development for practicing teachers to share the benefits of integrating physical activity for students throughout the school day, teach them effective behavior management strategies when students are physically active, and provide resources for physical activity implementation and best practices.

Most colleges and universities have physical education/physical activity-related content specifically for elementary education majors. Professionals have been advocating that this course introduce the CSPAP model and teach preservice elementary teachers the roles and responsibilities within a CSPAP (Webster, Caputi, Perreault, Doan, Weaver, & Doutis, 2013; Webster, Erwin, & Parks, 2013). Research has shown that preservice classroom teachers who completed college coursework related to school physical activity promotion and had physical activity–related teaching or coaching experiences showed higher competence related to promoting physical activity in schools (Webster, Monsma, & Erwin, 2010). Similar to the coursework for physical education majors, it is suggested that elementary education majors experience roles in the schools during their preservice experience that will prepare them to support a CSPAP as an inservice teacher. Therefore, elementary education majors should have the opportunity to observe quality physical education, plan active recess environments, lead movement breaks for P–12 students, advocate for healthy celebrations, develop physical activity point-of-decision prompts for the playground, and create physical activity homework calendars. These individuals are not expected to provide the leadership for physical activity efforts in the school, but it is important that they understand CSPAP and are prepared to support physical activity opportunities for students.

**Public Health Programs.** Public health programs should include content that focuses on school-based health issues because schools provide access to most youth in the United States. Preservice professionals enrolled in public health programs should be aware of the physical activity opportunities that exist in schools, and should conduct field experiences in the school setting so they are aware of the barriers that exist and why. Opportunities should be provided for them to be involved in physical activity interventions with students, families, and communities as a whole. They should be made aware of ways to measure physical activity and ways to complement programs that are already being conducted. They should also be prepared to facilitate connections between community-based programs and services and school health activities.

**Exercise Science Programs.** Many exercise science programs prepare professionals who work in physical activity programming at many levels. Some are preparing for physical and occupational therapy, others work in health and fitness clubs, while still others continue to work in a university setting or corporate entity. Exercise science programs should prepare all their students to promote participation in physical activity at all levels. Exercise science majors should be encouraged and taught how to collaborate with their communities and schools to provide physical activity opportunities for children and adults. Certified health/fitness professionals should also position themselves to carry out exercise assessments and prescriptions from referring physicians.

**Measurement/Evaluation Programs.** University programs that prepare graduates in the area of measurement and evaluation can collaborate with schools to assist with measuring the success of the physical activity programs they implement. They can guide and support PALs with efficient ways to measure outcomes of the various CSPAP components. They play a role in helping with baseline assessments; identifying needs, strengths, and weaknesses; and then following up after programs have been completed.

**Agriculture, Wellness, Health, and Nutrition Programs.** Similar to several of the other university programs and majors, programs such as agriculture, wellness, health, and nutrition should provide their students with experiences in planning physical activity programs, running these programs, and implementing physical activity opportunities for people of all ages. Each specific area provides expertise that is necessary for the comprehensive approach of the CSPAP. Often, extension agents work in school to provide physical activity opportunities, so these instances could be part of the field experience work for these majors.

Changing the culture regarding physical activity within a community needs to involve more than just the school and the PAL within that school. By preparing students during undergraduate programs to seek collaborative relationships between the university and P–12 education, they will be better able to actually form these relationships while they are out in the field. These majors also become members of the community who can advocate for physical activity and health if a PAL is not present. From the start, the physical education teacher or PAL should approach the administration to explore opportunities for help and support in promoting physical activity in the school environment. Are there policies and procedures in place for starting programs or hosting events? What are the steps or chain of command for gaining approval? Understanding avenues for implementing physical activity opportunities may alleviate stress or confusion when offering these events.

**Support within Schools**

While individuals at the university level play the role of preparing individuals to implement effective physical activity programming and providing evidence-based approaches for use, individuals at the P–12 school level are integral in the actual implementation of the approaches available to them. Without the support of the administrators, teachers, staff, and parents, the implementation of additional physical activity opportunities in the school setting would be very difficult. It has been shown that schools that have a supportive administration, that are involved and invested in helping their staff, and that have teachers who implement these
programs within their school setting are more likely to make systemic changes (Castelli & Rink, 2003; Centeio, Castelli, Carson, & Beighle, 2013). Furthermore, teachers who are effective in implementing physical activity in the school setting and feel supported by their administration are more likely to adopt changes that reflect a physically active school culture (Centeio et al., 2013). For example, classroom teachers who feel they are supported by the administration may be more likely to integrate classroom physical activity in their classes, as well as provide additional opportunities for physical activity before and after the school day.

Given that school personnel are integral in the implementation of physical activity opportunities in the school setting, it is important that they are provided adequate resources and professional development to implement these programs. Many inservice teachers have not been taught how to effectively implement physical activity in the school setting. Providing these teachers and school personnel with professional development that focuses on how to implement change is key to successful implementation (Castelli, Centeio, & Nicksic, 2013). As part of this professional development, teachers should be given the resources needed to make changes, have the opportunity to experience the physical activity opportunities themselves, and learn why making these changes is important for both the health and academic learning of students.

**Recommendations for Professionals**

Individuals at different levels play important roles in the creation, development, implementation, and evaluation of physical activity programming for youth, staff, and community members in a CSPAP model. To this end, this next section provides specific recommendations for various groups to successfully implement physical activity programs and increase youth physical activity, and describes the roles and responsibilities of the individuals involved in the CSPAP model.

**Physical Educators and Health Educators.** Physical education teachers and health educators play central roles in creating physical activity opportunities for youth in the school setting. Current teachers should advocate for increasing physical activity opportunities in their physical education and health classes, as well as throughout the entire school day and in their family and community outside of school. Teachers should seek content-specific professional development, such as the PAL training, to help enhance their knowledge concerning the implementation of a CSPAP for additional physical activity opportunities and advocating for issues that facilitate cultural change such as local school policies. Once they have participated in professional development designed to help them increase physical activity opportunities, teachers should follow the steps listed earlier to help facilitate systemic change to support a culture of physical activity. Physical educators should also seek out public health and other local professionals for collaboration and support in expanding physical activity opportunities and advocating for policies and programs. In their day-to-day work, physical and health educators should ensure that regular activity is part of their classes and that their students understand the real-world opportunities for physical activity at home and in their local community outside of school. This may require modifications of activities, changes in management strategies, and new content to support the promotion of 60 minutes of daily physical activity for all students.

**Youth Directors.** Youth program directors are those individuals who are responsible for overseeing programming that takes place outside of the school setting or programs conducted within the school setting by a non-school-affiliated organization, such as Boys and Girls Club or Y programs. These types of programs can take place either before school, immediately after the regular school day, or during the summer school breaks. These individuals play an important role in the promotion of physical activity for children enrolled in their program. The single most important step youth directors can take to enhance activity opportunities is to ensure that time is set aside for physical activity every day. This should include both free-play and organized activities. While scheduling is recognized as a key component, it does not ensure that the time allocated provides maximum physical activity opportunities.

To address this, high-quality professional development in providing physical activity is required (Beets, Webster, Saunders, & Huberty, 2013; Weaver, Beets, Webster, Beighle, & Huberty, 2012). This is emphasized in many physical activity policy and standards documents for school programs. These documents also indicate that both youth directors and their staff (individuals who directly interact with youth on a daily basis) should receive up to 16 hours of professional development to promote physical activity (Beets, Wallner, & Beighle, 2010). Content should focus on developing skills to maximize the physical activity that youth accumulate during already allocated physical activity time. One promising approach is the LET US Play principles. LET US stands for lines, elimination, team size, uninvolved staff/kids, and space/equipment/rules. These principles are identified as key activity-limiting characteristics of youth physical activities (Beets, Huberty, & Beighle, in press; Beets, Weaver, Beighle, Webster, & Pate, in press; Weaver, Beets, & Webster, in press; Weaver et al., in press). Their identification and subsequent modification can lead to sizable increases in moderate-to-vigorous physical activity in both the after-school program (Beets et al., 2014) and summer day camp (Weaver, Beets, Saunders, Webster, & Beighle, 2014; Weaver, Beets, Webster, Beighle, Saunders, & Pate, in press) settings. Importantly, these principles can be integrated easily into previously planned activity opportunities and existing curricula, which means that they do not require learning new activities but rather focus on modifying those already used to help increase activity levels.

**Coaches.** Coaches are responsible for preparing youth to participate in a particular sport or physical activity in an organized setting. They come from a variety of backgrounds; some are trained
and paid for their expertise in the area, but others have no official training and may be volunteering their time. These programs may take place after school, on weekends, or during the summer. Coaches are important in promoting physical activity among their athletes, and certain sports can provide valuable amounts of physical activity for those involved (Leek et al., 2011). Depending on the competitive or noncompetitive nature of the activity or sport, practices and game situations can provide a lot or very little activity for the youth involved. Ideally, all participants would be provided with ample physical activity opportunities during both practices and games.

To endorse high physical activity levels during sports, professional development regarding appropriate and effective practice sessions and game play is necessary. SHAPE America suggests that coaches provide opportunities for all students to participate in all activities (NASPE, 2002). With regard to intramural programs, SHAPE America suggests making the activity available to all students without restrictions for skill level or ability (NASPE, 2013a). Although there are no national policies requiring coaches to be trained to maximize physical activity opportunities for athletes, the National Standards for Sport Coaches (NASPE, 2006) call for maintaining the health of athletes and a variety of coach education programs to help coaches engage all participants in meaningful practice. It would also be beneficial for the PAL of each CSPAP to provide trainings or collaborate with others to find a well-qualified person to conduct training for all youth coaches to enhance youth's physical activity experiences.

Public Health Professionals. Public health professionals serve the community in many areas, including creating new knowledge, evaluating current programs for effectiveness, developing effective programs for bettering health in a number of areas, and disseminating information so others can replicate effective programs. It is important that public health professionals working with youth seek out and collaborate with educators. This can be mutually beneficial to improve current practice and to find new ways to promote regular physical activity to improve the health of youth. Additionally, individuals in public health can pursue and secure funding to pilot and disseminate programs to increase physical activity opportunities for youth. Preprofessionals at the university level should be exposed to projects of these types to gain experiences that will help them promote physical activity in the school setting after they graduate and become employed in the field of public health.

Physical Education Teacher Educators. As a profession, physical education and the role it serves in health-related physical activity is shifting. Physical education is no longer a field focused exclusively on helping youth meet fitness requirements or learn selected motor skills. It is an important component of a child's complete education and must focus on preparing students to adopt and maintain an active lifestyle for the present and future. No other content area will directly address physical activity. Thus PETE programs must lead in preparing future physical educators to lead CSPAPs (Beighle, Erwin, Castelli, & Ernst, 2009). In addition to knowledge and skill in teaching fitness and motor skills, preservice teachers must learn about a variety of areas that help them organize and administer events, understand the importance of physical activity from a public health perspective, advocate for physical education and all physical activity opportunities, and accept and embrace the idea that physical activity should come from school programs other than physical education. It is the job of PETE to prepare physical educators who are enabled to teach in contemporary schools. Thus, candidates must be able to maximize physical activity during physical education; work with colleagues to implement physical activity programs for youth, staff, and the community; and continually push for a physical activity–supportive culture in their school and community (Beighle et al., 2009).

Physical education teaching professionals should seek to expand the knowledge and the dissemination of knowledge through grants, research, presentations, and writing, along with professional development for local teachers.

Conclusion

The Education Sector of the NPAP addresses the need for increasing the levels of physical activity among youth and provides strategies and tactics to do so. Comprehensive School Physical Activity Programs recommend school-wide measures to increase physical activity opportunities for students, staff, and community members in and around the school setting. In order to best utilize schools and implement effective CSPAPs, real-world, practical recommendations for increasing physical activity in youth have been provided. Physical educators and health educators, youth and after-care directors, coaches, public health professionals, and professional preparation faculty are all vital contributors to the success of these initiatives. A collaborative effort by all parties is warranted and must be consistently advocated and pursued. Meeting national guidelines for youth physical activity is an important goal for academic success and for the health of our population now and in the future. Physical activity as a field has evolved, and physical inactivity is a well-documented risk factor that educators and public health professionals must play a major role in reducing or eliminating.

References


