

**THE PHYSICAL
ACTIVITY MATRIX:**
*IMPLEMENTING THE
CALIFORNIA AFTER SCHOOL
PHYSICAL ACTIVITY GUIDELINES*



CANFIT

Communities • Adolescents • Nutrition • Fitness

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THE PHYSICAL ACTIVITY MATRIX: IMPLEMENTING THE CALIFORNIA AFTER SCHOOL PHYSICAL ACTIVITY GUIDELINES

BACKGROUND

Young people are more physically inactive today than in years past.¹ Youth spend an average of 7.6 hours every day using electronic media, compared to just 1.75 hours spent being physically active.² In 2000, a national study of school health policies found that although a majority of elementary, middle and high schools had policies in place requiring physical education, most of the schools did not in fact provide physical education on a daily basis.³ In addition to inactivity, youth are also consuming more calories, eating larger portion sizes, drinking more soda or high sugar drinks and eating out almost daily at fast food restaurants. Not only has this all led to an increase in weight gain among youth, but also to Type 2 diabetes and other chronic diseases.

THE IMPORTANCE OF PHYSICAL ACTIVITY

Regular physical activity can help improve the health of youth and reduce the risk of developing long-term chronic conditions as adults. Studies have shown also that physical activity among youth helps to improve academic performance, increases self esteem, lowers levels of anxiety and improves weight control and bone mass.⁴ *But how and when can youth be active?* With challenges such as budget cuts to physical education programs and academics highly prioritized during the school day, after school programs are uniquely positioned to help youth get

the daily physical activity they need that helps to support academic success and decrease their risk of future health-related problems. Recognizing the importance of this issue, California has made tremendous strides in after school to improve the physical activity and healthy food options for youth, particularly those from low income communities and communities of color.

In 2006, California Senate Bill (SB) 638⁵ introduced a number of changes to the After School Education and Safety (ASES) program. Along with doubling the number of state-funded after school programs, the legislation mandated that state-funded after school programs provide healthy snacks that are consistent with California's school nutrition standards (SB 12), and that the California Department of Education (CDE) develop voluntary physical activity guidelines for ASES programs. The After School Physical Activity (PA) Guidelines were developed by an expert panel in 2008.

With funding from The Rosalinde and Arthur Gilbert Foundation, CANFIT created the After School Nutrition and Physical Activity Guidelines Feasibility Project to pilot the CDE-developed Guidelines with after school programs serving low income communities. CANFIT partnered with two community-based after school programs in Los Angeles -- the Children, Youth and Family Collaborative (CYFC) and University of Southern California's (USC) Neighborhood Academic Initiative (NAI) Middle School Saturday Academy -- to gather critical feedback about the guidelines from their staff and youth.

Although both guidelines were initially intended for ASES-funded programs only, CANFIT believed it would be instructive to get a sense of how the guidelines can support all after school programs, especially those that may have limited resources. The results of this project could help all after school programs implement quality physical activity programs and learn ways to provide healthy snacks for youth; pro-

gram changes that could reduce the risk of chronic disease and health disparities among youth.

METHODOLOGY

Data were collected during the assessment, implementation and evaluation phases by a CANFIT staff member. Both sites participated in a site assessment and a series of interviews to determine staff knowledge and behaviors associated with the CDE guidelines.

CYFC

After an initial meeting with program stakeholders, CANFIT staff conducted a two-hour training for 45 CYFC staff to introduce the project, create program buy-in and share CANFIT's environmental approach to improving the health of youth. Staff also completed an assessment form to gauge the physical activity opportunities and challenges within their own individual programs.

CYFC identified two program sites to participate in the pilot: the Audubon and Walton Middle Schools. CANFIT then conducted site visits to observe both after school programs in action and rated their proficiency in meeting the PA Guidelines. (See Chart I.) From these observations and the initial assessment of the two programs, CANFIT identified three recommendations to improve the implementation of after school physical activity.

CANFIT created the "Physical Activity Matrix" to assess each school site's progress towards improving staffs' skills and implementing the PA Guidelines. (See Chart II.) Also, a recording sheet was given to site leaders to track progress and write down any feedback, challenges or issues over the implementation phase. During the implementation phase, CANFIT worked closely with both schools, providing extensive technical assistance.

USC NAI

CANFIT staff completed a site visit and introductory training with USC NAI student leaders and staff. Due to university contractual issues and the program structure of only running once per week on Saturdays, CANFIT decided it was best to focus on working with two of the student leaders who lead a group of youth throughout the day rather than the entire staff.

A site visit was conducted to observe the USC NAI program, rate their proficiency in meeting both the Snack Standards and the PA Guidelines, and film the identified student leaders conducting three physical activities with youth. From the assessments, observations and the video, CANFIT identified six recommendations (three snack related and three physical activity related) to improve the program's adherence to the CDE Guidelines.



ASSESSMENT FINDINGS

In CANFIT's initial assessment, both CYFC and NAI addressed many of the ten Physical Activity Guidelines in varying capacities. Many obstacles were mentioned in providing physical activity such as lack of accessibility, supplies, funding and resources, especially for girls. Chart I is based on the California After School Resource Center (CASRC) self-assessment tool (see: www.californiaafterschool.org) and shows a summary of how the pilot programs matched up to the CDE PA Guidelines.

IMPLEMENTATION

Based on the site assessment findings, observations, interviews and the ability to implement the specific PA Guidelines in the given timeframe, both sites were tasked to implement the following three PA Guidelines over a two week time period:

- Create an after school physical activity culture that fosters youth development.
- Develop and implement after school physical activity policies.
- Plan and evaluate after school physical activity.

CANFIT provided the "Physical Activity Matrix" to help the staff assess their site's observance of the PA Guidelines, a packet of activities and games and a weekly implementation checklist. The matrix was developed to help the programs not only adhere to the Guidelines, but assess where they were in the process and work towards improving their skills. Both programs agreed that this interactive matrix was a valuable guide in helping them better understand the Guidelines and served as a motivator to achieve higher quality physical activity.

Implementation Findings

■ Both CYFC and USC NAI already use quality youth development principles throughout their programs. Both have staffs that are well trained in engaging youth in all their activities. USC NAI developed a “Movement Hour” where youth are active for 60 minutes (sports or dance) in between their math, science and language arts classroom sessions. In their football drills activity, instead of having the youth do pushups after missing a catch, the staff gave “high-fives” to encourage them for the next try. They reported that keeping everything positive definitely helped to keep youth active and participating in the activities, especially for those youth who did not yet have a highly developed skill set.

■ The ten minute physical activity break at the start of the program was thoroughly enjoyed by the students at most of the sites. Since they had been sitting for a long period of time during school, all programs leaders expressed how much the youth enjoyed the initial activity and how it increased interaction amongst students. At the CYFC Audubon Middle School site, the program leader said it helped increase the self esteem of many of the shy youth. At the CYFC Walton site, the youth liked to do something active at the beginning of the program but preferred doing activities outdoors. There were also challenges to getting youth to try something new. Based on the results, CYFC is looking into making an organizational policy change to include ten minutes of activity at the start of programming for all their programs. At USC NAI, the ten minute physical activity breaks were a way to get youth to stretch to prevent injuries and for youth to “showcase their skills” in leading activities.

■ A weekly checklist sheet was used to capture the number of actual physical activity minutes each day, excluding instruction time. At CYFC, the youth averaged a total of 46 minutes of actual physical activity each day. At USC NAI, the youth averaged a total of 43 minutes of actual physical activity. Both sites felt this record keeping was tedious and not feasible to do on an everyday basis, especially while they were on the field leading activities, teaching and supervising. In addition, it was also difficult to track the actual minutes of *each* youth when multiple activities were running concurrently (i.e., ten youth may be playing basketball, 15 youth may be playing soccer). Site leaders also expressed challenges with time and space constraints, students’ attention spans and behavior problems as other factors that contributed to the lack of reaching the 60 minutes per day goal.

Healthy Snack Guidelines -- USC NAI Only

In July 2009, CANFIT performed a snack assessment and met with the USC NAI Executive Director to discuss the snacks being served during the program. The following three recommendations were made:

- Develop partnerships with local organizations to provide free or subsidized snacks/food items.
- Apply for free-and-reduced-price after school snacks through the National School Lunch Program which would increase access to healthy snacks and ensure that all reimbursable food items follow nutritional standards.
- Send snacks to the classroom to be eaten during instruction.

Even though the program offers snacks to be purchased during a 30 minute break period (two hours after the first classroom session and before the Movement Hour), we found that a limited amount of USC

NAI's youth ate breakfast and said they usually don't eat until after the program ends. Research has shown that youth are better able to concentrate, remember and comprehend when they eat food in the morning.⁶

CANFIT created a tailored snack guide for USC NAI to improve the snack quality and affordability. In September 2009, CANFIT staff conducted a presentation and taste test party for the 200+ USC NAI youth which allowed them to try different types of dried fruit. The event went well and now the program is considering buying "fruit leathers" and other types of dried fruits as part of their snacks each week.



Challenges

The programs faced a few challenges during the implementation phase of the project:

- **Academics Take Priority** - In the pilot sites, programming was focused on helping the youth complete their homework and provide extra learning opportunities to help boost student achievement. Physical activity was considered a "break" rather than another opportunity for quality skill enhancement.

- **Screen Time Use** - Although computers are a great tool for continued learning after school, they have become the preferred way for youth to social network, play online games, etc., leading to even more sedentary behavior. Program site leaders also acknowledged that when attempting to implement the PA Guidelines, many youth were preoccupied playing on their media gadgets rather than participating in activity.

- **Budgetary Issues** - The 2009 budget crisis in California caused inadequate funding situations for many summer programs. As a result, the implementation phase was postponed until the beginning of the school year, the test period went from four to two weeks and a designated comparison site was eliminated. An additional change precipitated by the truncated time frame was that the sites would report student satisfaction on the recording sheets rather than conduct a formal survey. It is clear in working with after school programs that, in general, it will be increasingly difficult to keep youth active when budgets and programs are reduced.

CANFIT RECOMMENDATIONS

Program Recommendations

Enhance the program's physical activity culture by avoiding the use of activity as punishment and developing a more positive attitude in their physical activity instruction.

Ensure that students spend no more than 60 minutes of sitting at a time and instead, incorporate ten minute physical activity breaks for each hour of instruction with the first session to begin at the start of the program. Programs are encouraged to have youth lead the activities.

Keep a record of the "actual physical activity minutes" -- not including minutes of instruction -- to observe how many minutes youth were actually active in their program.

Policy Recommendations

Provide more technical assistance and support to after school programs.

Based on the results from this feasibility study, technical assistance is essential if the PA Guidelines are to be implemented effectively. The pilot sites expressed that most of the PA Guidelines are indeed feasible to implement but that they will require more technical assistance, professional development and support to make them work on an everyday basis. Also, staff may lack experience in leading organized physical activity and, therefore, need curricula and toolkits, particularly ones that require little preparation time. With more technical support and assistance, after school programs can strengthen their PA and nutrition components and create a healthier environment for our youth.

Mandate after school physical activity guidelines to ensure all programs implement quality physical activity.

SB 638 mandated that state-funded after school programs comply with nutrition standards for the snacks served to students, yet there is currently no mandate for PA. California is one of the first states in the nation to develop voluntary after school PA Guidelines. The PA Guidelines have significant potential to support the health, well-being and academic success of students in ASES and other after school programs. With youth arriving at school early in the morning and after school programs remaining open until 6 p.m., as required in California Statute for ASES programs, there is little time to be active once they return home. For this reason alone, high quality PA needs to be incorporated into daily after school programming. To ensure this happens, the PA Guidelines need to become a mandatory component.

Require after school programs to participate in the district's/campus' local wellness policies (LWP).

The pilot test sites were not familiar with or involved in developing or implementing their district's/campus' LWP. This is a missed opportunity. Our youth need to be in a healthy environment. As a result, more training and assistance is needed on implementing LWP in after school programs. The more after school staff are knowledgeable and involved in these policies, the greater the potential for serving healthier snacks and keeping youth physically active. An added incentive is that according to California Education Code, after school programs are required to be closely linked to the school day. Being actively involved in the LWP is one more way to make this happen.

Continue to pilot test the feasibility of the Guidelines.

Although both programs provided great insight on the feasibility of the guidelines, more information and feedback is needed over a longer period of time to gain a greater sense of how the Guidelines can be used to improve PA in the after school setting. In addition, the PA Guidelines need to be more fully tested for cultural appropriateness. CANFIT is in discussions to partner with the Oakland Unified School District (OUSD) and Oakland's Healthy Eating, Active Communities (HEAC) Program to pilot test the Guidelines with their school-based after school programs in 2010. CANFIT is also looking to partner with other potential after school sites across the state of California.

ENDNOTES

¹ Centers for Disease Control and Prevention (CDC), *Physical Activity and Health, a Report of the Surgeon General Executive Summary*, 1999. Viewed at: <http://www.cdc.gov/nccdphp/sgr/pdf/execsumm.pdf>.

² Rideout, V., Foehr, U.G., Roberts, D.F. *Generation M²: Media in the Lives of 8-18 Year Olds*. Menlo Park: Kaiser Family Foundation, 2010. Downloaded on 2/22/2010 from: <http://www.kff.org/entmedia/8010.cfm>.

³ Stanford Prevention Research Center. *Building "Generation Play:" Addressing the Crisis of Inactivity Among America's Children*. Stanford University School of Medicine, 2007.

⁴ Active Living Research. *Research Brief: Active Education. Physical Education, Physical Activity and Academic Performance*. Robert Wood Johnson Foundation, 2009. Downloaded on 8/13/09 from: <http://www.activelivingresearch.org/resourcesearch/summaries>.

⁵ More information about SB 638 available at: <http://www.leginfo.ca.gov>.

⁶ Food Research and Action Center (FRAC). *Breakfast for Learning: Recent scientific research on the link between children's nutrition and academic performance*. Viewed at: <http://www.frac.org/pdf/breakfastforlearning.PDF>.

Chart I - PA Guidelines Proficiency - Pilot Sites

1-4 Ratings Key:

Level 1: Program is just beginning to work in this area and has an urgent need to address this practice.

Level 2: Program has done some work in this area, but will need targeted support to move to the next level.

Level 3: Program has achieved a high level of proficiency in this area and needs only a little additional work to be proficient.

Level 4: Program is clearly proficient in this practice and can demonstrate this in observable ways.

CDE PA Guidelines	USC NAI Middle School Saturday Academy	CYFC Audubon Middle School <i>Boys Uplifted Program</i>	CYFC Walton Middle School
1. Create an after school physical activity culture that fosters youth development.	Level 2 - Done some work in this area but needs targeted support; needs to address not using activity as punishment.	Level 2 - Good core youth development principles; needs more “check-ins” and encouraging youth to ask questions.	Level 2 - Done some work in this area but needs targeted support and more activities for youth who are less skilled.
2. Develop and implement after school physical activity policies.	Level 2 - Not familiar with Wellness Policy. Has a Movement Hour that ensures 60 minutes of PA per day; needs formal written policy on this practice.	Level 1 - Not familiar with Wellness Policy. CYFC has policies in place that honor youth, but policies are not specific to PA.	Level 1 - Not familiar with Wellness Policy. CYFC has policies in place that honor youth, but policies are not specific to PA.
3. Plan and evaluate after school physical activity.	Level 1 - Tracks youth attendance but does not assess or track minutes of PA.	Level 1 - Tracks youth attendance but does not assess or track minutes of PA. Working on reviewing school’s CA Physical Fitness Test results.	Level 1 - Tracks youth attendance but does not assess or track minutes of PA.
4. Build and maintain a strong infrastructure for after school physical activity.	Level 4 - Good access to indoor/outdoor space. Equipment and agreements with USC to use space are intact. Uses a variety of locations onsite.	Level 4 - Good access to indoor/outdoor space. Equipment and agreements with school to use space are intact.	Level 4 - Good access to indoor/outdoor space. Equipment and agreements with school to use space are intact.
5. Ensure that all directors and staff members support and promote after school physical activity programs.	Level 2 - Staff led the activities during Movement Hour. Coach provides support. Needs more staff engagement around PA.	Level 2 - Good director support; needs more staff engagement around PA.	Level 2 - Good director support; needs more staff engagement around PA.

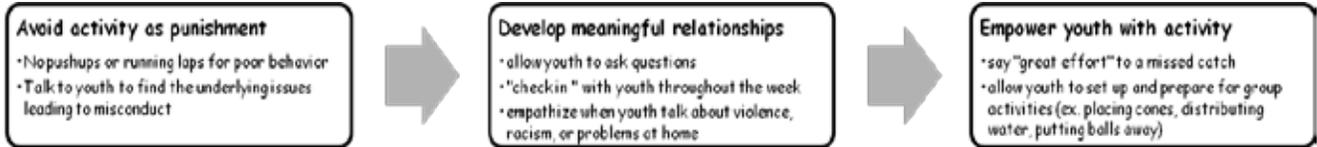
6. Develop and maintain high quality after school physical activity.	Level 3 - Movement Hour mostly consists of sports; needs work on variety although recently added hip-hop dance.	Level 2 - Good activities, but seeking assistance with more variety.	Level 2 - Employs a variety of age appropriate activities. Seeking more class management principles and games.
7. Ensure that all students achieve the appropriate amounts of physical activity after school.	Level 3 - Movement Hour ensures youth get 60 minutes/day. Needs to incorporate 5-10 minutes PA with each hour of sitting.	Level 3 - Youth are active for 60 minutes/day but need to incorporate 5-10 minutes PA with each hour of sitting.	Level 3 - Youth are active for more than 60 minutes. Does not allow youth to be sedentary for more than 60 minutes.
8. Ensure that all students are included in after school physical activity.	Level 3 - Movement Hour includes all youth and have hip-hop dance as an option.	Level 2 - Needs to account for all skill levels to increase participation.	Level 2 - Needs to account for varying skill levels to increase participation.
9. Connect after school physical activity with the regular school day.	Level 1 - USC NAI works with schools to enhance students' academics but not to improve physical activity.	Level 3 - Good relationship with school day physical education teachers; good equipment sharing. Staff have attended PTA meetings.	Level 4 - Good partnerships with school day staff. Very involved with what is happening at the school site. Shared staff with school day.
10. Build partnerships with the community to support after school physical activity.	Level 1 - Looking to expand in this area but on private school campus.	Level 1 - Does not seek outside support for PA. Very interested in building future partnerships.	Level 1 - Does not seek outside support for PA. Very interested in building future partnerships.



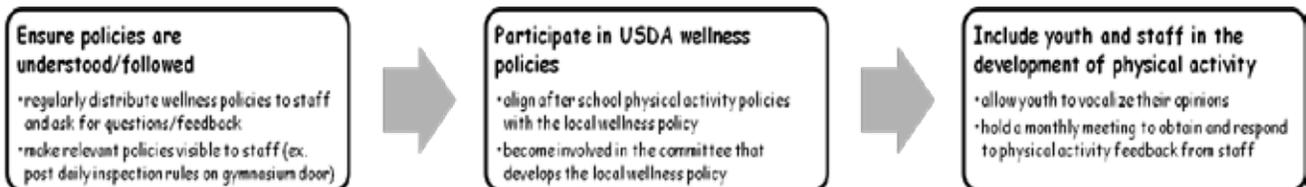
Chart II - CANFIT Physical Activity Matrix Strategies to Incorporate the CDE Physical Activity Guidelines

(ESSENTIAL ----- TO -----OPTIMAL)

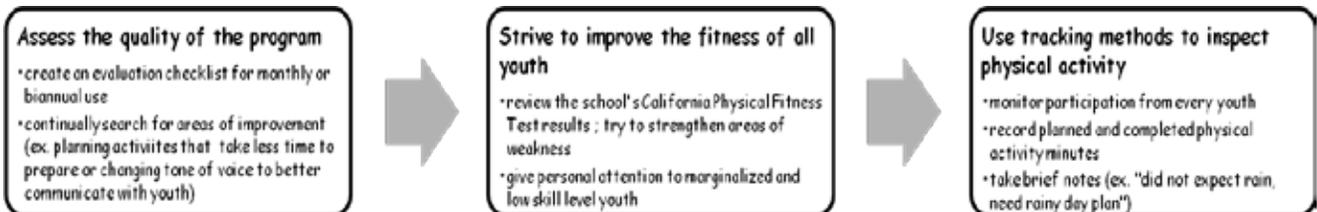
1. Youth Development



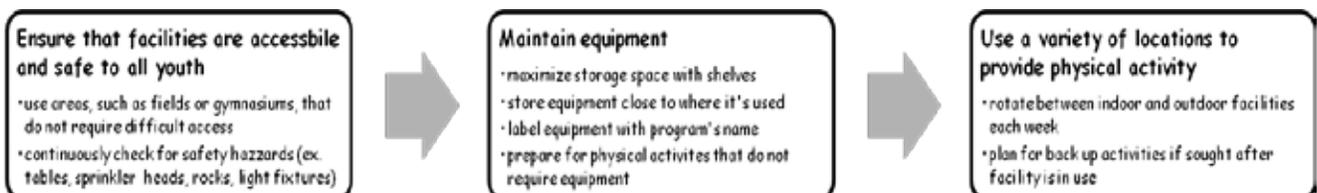
2. Policy



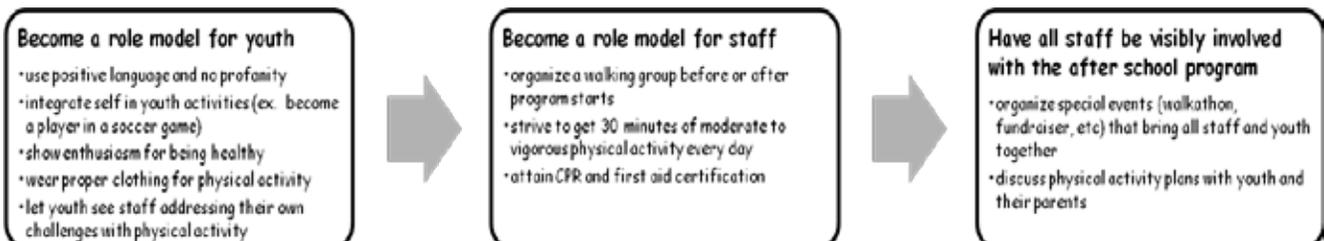
3. Planning & Evaluation



4. Infrastructure



5. Director & Staff Involvement



6. Quality

Ensure emotionally safe activity

- pick teams randomly (ex. number each students and have odds against evens)
- prevent bullying and teasing
- choose activities that encourage cooperation over competition (ex. dancing)
- create a "social contract" (understandings of respect and support) that can be posted



Provide a variety of activity

- accommodate for multiple group sizes (ex. individual activities like running, partner activities like passing, small and large group activities)
- vary the amount of structure for physical activity
- rotate different activities every week



Meet the needs of all youth

- especially for those with special needs
- if necessary, simplify activities (ex. using a larger ball for easier hand-eye coordination)
- provide multiple options of physical activity

7. Quantity

Develop relationships with credentialed PE teachers

- ask PE teachers to volunteer in the after school program or provide a staff training
- use PE teachers as a resource to create developmentally appropriate activities



Collaborate with regular school day staff

- get involved in school fundraisers and health fairs
- connect with student clubs (ex. lacrosse club) to expand after school opportunities



Attend PTA meetings

- learn of parent concerns
- highlight how the after school program can benefit the regular school day (ex. providing students a safe place while parents are still at work)

8. Inclusion

Collaborate with community partners to secure space/resources

- contact organizations that have experience in providing physical activity to the community (ex. YMCA, Boys & Girls Clubs, recreation centers)
- ask community partners to provide knowledgeable instructors



Use community resources for staff training and development

- search for trainings held by community based organizations in the area
- have after school staff observe effective community based physical activity programs



Adopt joint-use agreements

- contact organizations that have adequate facilities or are in need of facilities
- plan through a collaborative and participative process

9. Regular School Day

Provide 30-60 minutes of MVPA

- plan an extra 10 minutes for set up and explanation of rules
- multiple short periods can be used to achieve 30-60 total minutes of MVPA
- create a designated and well known time period for physical activity (ex. "power hour")



Assure youth spend no more than 60 minutes of sitting at one time

- incorporate physical activity in learning sessions (ex. showing the mechanics of jogging when learning biology)
- have youth take turns leading interactive breaks



Provide multiple venues of activity

- schedule physical activity at or near the beginning of the program
- allow youth to choose activities they prefer

10. Community

Accommodate for special needs

- be informed of youth with special needs to better prepare for emergencies (ex. administering medication or an inhaler)
- directly ask for appropriate adaptations and modifications of physical activity



Increase girls' participation

- offer competitive and noncompetitive options
- help girls develop a healthy body image by focusing on physical activity for health, not weight



Cultural competency

- ask youth what they like to do when they are not in school
- include a multicultural dance
- be aware of cultural barriers (ex. girls who are not allowed to wear shorts)

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ABOUT CANFIT

CANFIT helps bridge the gap between communities and policy-makers. Since 1993, we have been at the heart of the movement to improve healthy eating and physical activity environments for adolescents in low income communities and communities of color. From grassroots to government, we work with community-based and youth-based organizations to identify local solutions and support the development of culturally competent policy and practices. At CANFIT, we work to build relationships across cultural, economical and social differences to improve the health of the communities we serve.



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