

# Physical Activity Physical Education *What's the Difference?*

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# The Physical Activity Guidelines for Children and Adolescents

*The Role of Schools, Families,  
and Communities in Promoting Youth  
Physical Activity*

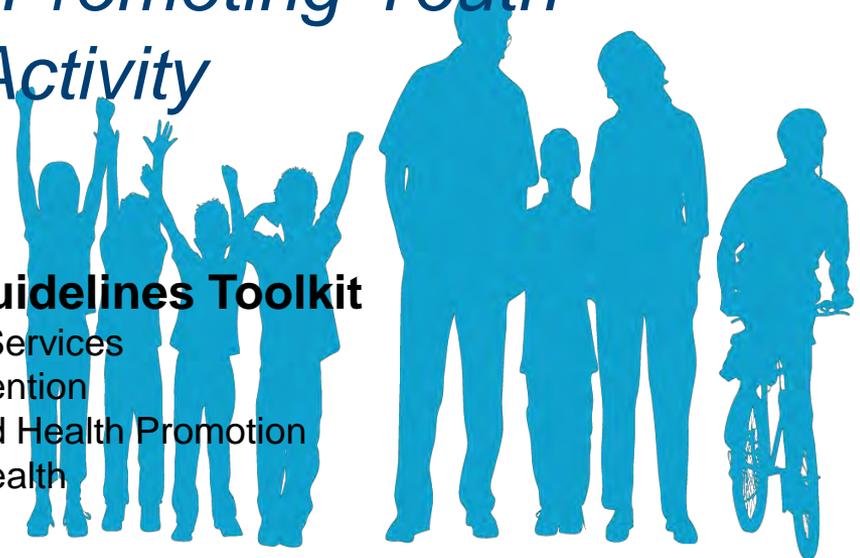
**Featuring the Youth Physical Activity Guidelines Toolkit**

U.S. Department of Health and Human Services

Centers for Disease Control and Prevention

National Center for Chronic Disease Prevention and Health Promotion

Division of Adolescent and School Health



# Presentation Objectives

- Define physical activity and physical education
- Identify how PE and PA work in concert for health and achievement of children and adults
- Identify the benefits of regular PE and PA among youth and adults
- Describe the key PE and PA guidelines for children, adolescents and adults
- Describe the role of schools, in partnership with families and communities, in promoting physical activity among children and adolescents
- Describe PA and wellness-at-work programs for adults



# A Day in the Life of Colin: A 7-Year-Old Child

- Walks to and from school
- Jumps rope and does gymnastics in physical education class
- Plays on the playground during recess
- Does homework
- Watches television
- Plays soccer with family
- Plays video games



# What Are the Benefits of Physical Activity?

- Promotes health and fitness
- Builds healthy bones and muscles<sup>1</sup>
- Reduces the risk of developing obesity and risk factors for diseases such as type 2 diabetes and heart disease<sup>1</sup>
- Reduces the symptoms of anxiety and depression<sup>1</sup>
- Can positively affect concentration, memory, and classroom behavior<sup>2</sup>



1. HHS. Physical Activity Guidelines Advisory Committee Report;2008

2. J Pediatr 2005;146(6):732-7.

# How Much Physical Activity Do Youth Need?

- **Children and adolescents should do 60 minutes (1 hour) or more of physical activity daily.**
  - Aerobic Activities: Most of the 60 or more minutes per day should be either moderate- or vigorous-intensity aerobic physical activity. Include vigorous-intensity physical activity at least 3 days per week.
  - Muscle-strengthening Activities: Include muscle-strengthening physical activity on at least 3 days of the week, as part of the 60 or more minutes.
  - Bone-strengthening Activities: Include bone-strengthening physical activity on at least 3 days of the week, as part of the 60 or more minutes.
- **Activities should be age-appropriate, enjoyable, and offer variety.**

# What Does This Really Mean?

- At least 60 minutes every day
- Mostly aerobic
- Add variety and fun



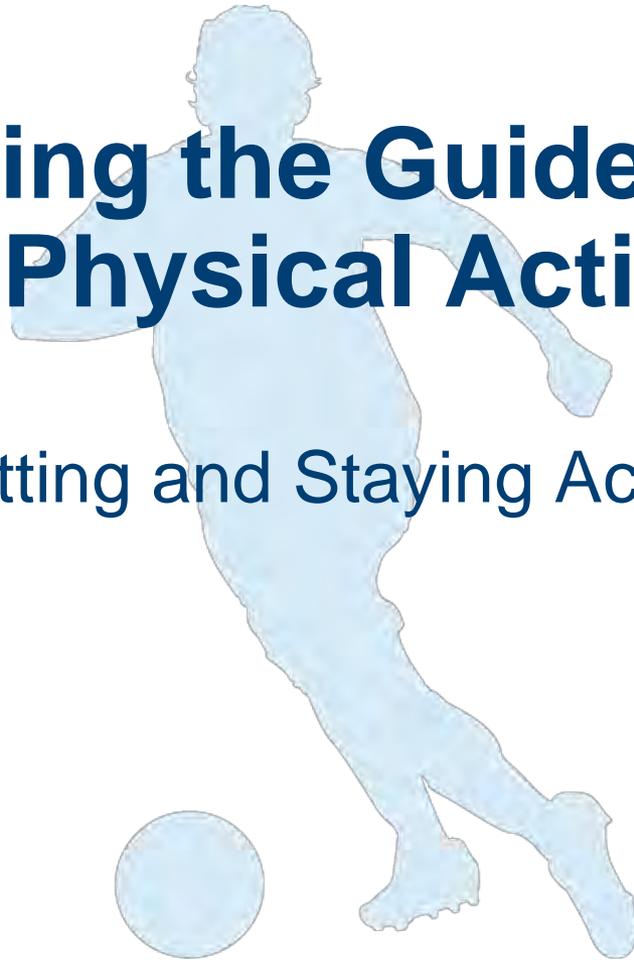
# Examples of Physical Activities for Children and Adolescents

Type of Physical Activity	Children	Adolescents
<b>Moderate-intensity aerobic</b>	Hiking, bike riding, brisk walking	Baseball, yard work, hiking, brisk walking
<b>Vigorous-intensity aerobic</b>	Bike riding, jumping rope, running, soccer, basketball	Jumping rope, bike riding, karate, basketball, cross-country skiing
<b>Muscle-strengthening</b>	Modified push-ups, sit-ups, rope or tree climbing	Exercises with hand-held weights, push-ups, pull-ups, climbing wall
<b>Bone-strengthening</b>	Jumping rope, running, hopping, skipping, gymnastics	Jumping rope, running, sports like gymnastics, basketball

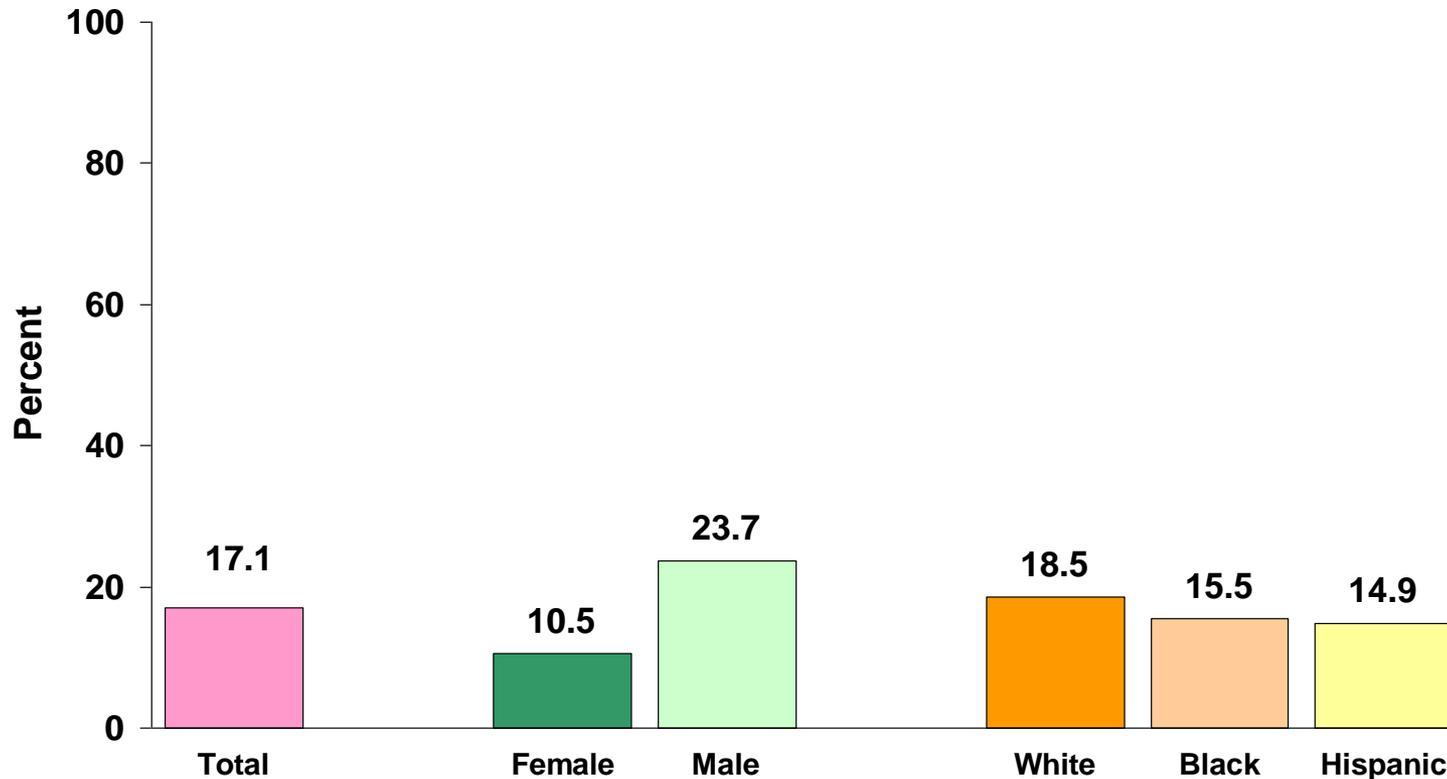


# Meeting the Guidelines for Physical Activity

Getting and Staying Active



# How Physically Active Are High School Students?



\* Were physically active doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of at least 60 minutes/day during the 7 days before the survey.

Source: National Youth Risk Behavior Survey, 2007.

# How Much Do 9- to 13-Year-Olds Participate in Physical Activity?

Race/Ethnicity	Organized Activity	Free-Time Activity
<b>Black, non-Hispanic</b>	24%	75%
<b>Hispanic</b>	26%	75%
<b>White, non-Hispanic</b>	47%	79%
<b>Total</b>	39%	77%

Source: MMWR 2003;52(33):785–8.



# Meeting the Guidelines

- **Youth Who Don't Meet the Guidelines**
  - Slowly increase activity in small steps
  - Participate in enjoyable activities
- **Youth Who Exceed the Guidelines**
  - Maintain activity level
  - Vary the kinds of activities to reduce the risk of injury
- **Youth Who Meet the Guidelines**
  - Continue being active on a daily basis
  - Work toward becoming more active



# *A Closer Look at* **A Day in the Life of Colin**

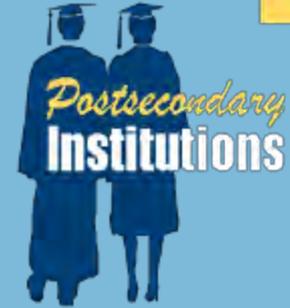
- **Walks to and from school (20 minutes)**
- **Jumps rope and does gymnastics in physical education class (10 minutes each)**
- **Plays on the playground during recess (10 minutes)**
- Does homework (20 minutes)
- Watches television (30 minutes)
- **Plays soccer with family (20 minutes)**
- Plays video games (30 minutes)
  
- **Total physical activity time = 60 minutes**
  - Vigorous-intensity aerobic activity: jumping rope
  - Bone-strengthening activities: jumping rope, gymnastics
  - Muscle-strengthening activities: gymnastics



# Barriers to Meeting the Guidelines

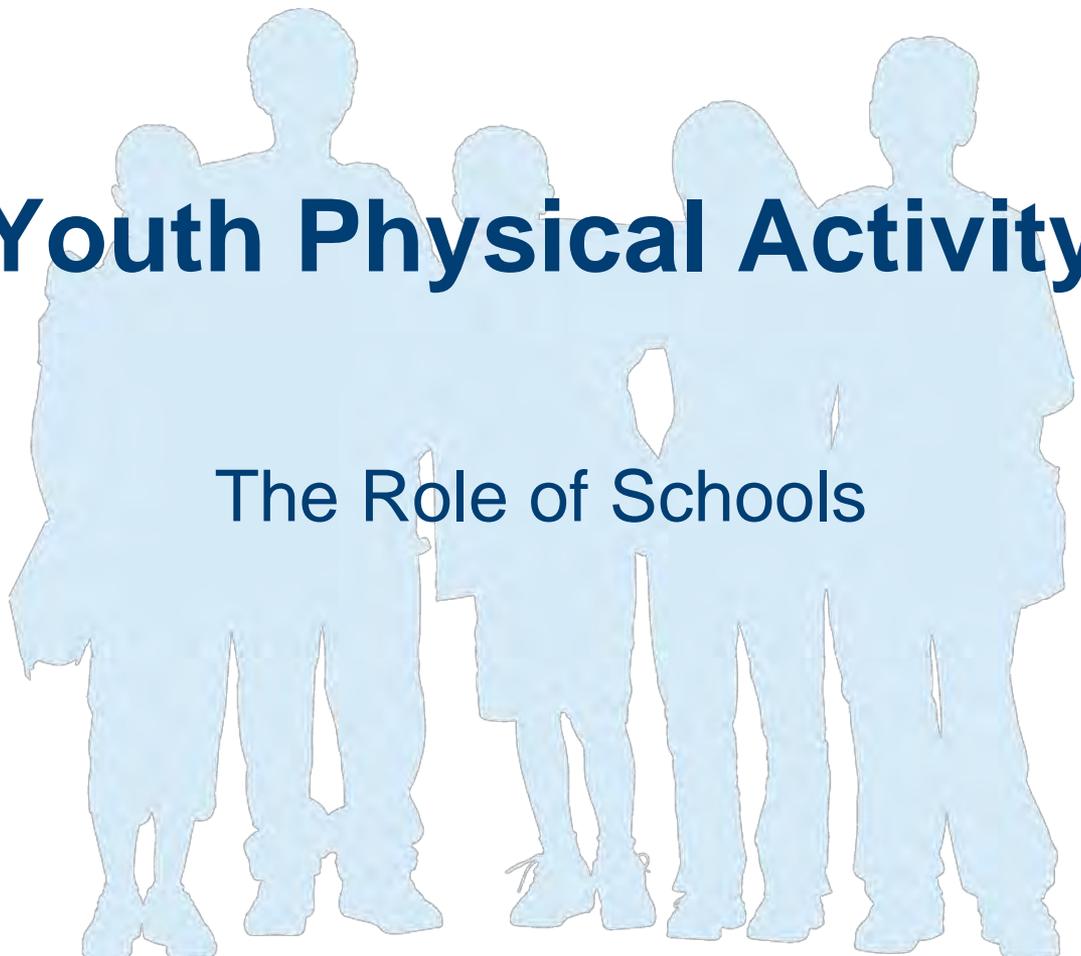
- Personal
  - Attitude
  - Belief in ability to be physically active
- Social
  - Influence of their peers
  - Parental support
- Environmental
  - Safe locations to be active
  - Access to equipment
  - Financial costs of physical activities
  - Time





# YOUTH PHYSICAL ACTIVITY



The image features six light blue silhouettes of young people standing in a line. From left to right, there is a girl, a boy, a girl, a girl, a girl, and a boy. They are positioned behind the main title text.

# Youth Physical Activity

The Role of Schools



# Comprehensive School-Based Physical Activity Program<sup>1</sup>

- **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



1. National Association for Sport and Physical Education. Comprehensive School Physical Activity Programs Package; 2008.

# What is Quality Physical Education?

## Quality physical education provides:

- Opportunity to learn
- Meaningful content
- Appropriate instruction
- Enjoyable experience for all students
- Meets the needs and interests of all students
- Keeps students active for most of class time

**Policy Recommendation:** Schools should require daily physical education for students in kindergarten through grade 12<sup>1</sup>

- Elementary school = 150 minutes per week
- Secondary schools = 225 minutes per week

1. National Association for Sports and Physical Education. Moving into the Future: National Standards for Physical Education, 2nd ed;2004.

CT: no time or frequency mandates. PE must be offered in a planned, ongoing and systematic program of instruction.



# Who Teaches Physical Education?

In schools = state certified physical education teachers (CT statute)

In non-school settings = qualifications established by agencies, organizations, businesses

PE is *taught*, not just supervised.



# Recess

- Opportunity to participate in free-time physical activity and practice skills learned in physical education classes
- Enhances cooperation and negotiation skills
- Improves attentiveness, concentration, and time-on-task in the classroom



**Policy Recommendation:** Schools should provide at least 20 minutes of recess per day, in addition to physical education classes

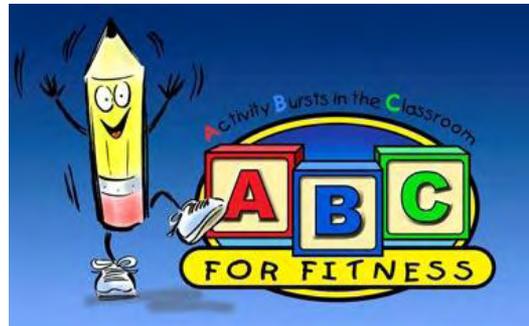
<sup>1</sup> National Association for Sport and Physical Education. Recess in Elementary Schools; 2006.

CT: no time mandates. “A period of physical exercise must be provided daily for students in grades K-5 inclusive.”

# Physical Activity Breaks

- Independent of physical education and recess
- Can enhance positive classroom behavior of students
- Incorporates activity in the classroom as part of planned lessons

**Physical Activity Break Ideas:** Ask students to identify and act out action words from a story through physical activity or take a walk outside as part of a science class.



# Intramural Sports

- Can be offered before, during, and after school
- Provide students with a choice in activities
- Offer every student an equal opportunity to participate regardless of ability level
- Incorporate lifetime physical activities like walking, running, hiking, swimming, tennis, dancing, and bicycling



# Interscholastic Sports

- Help establish cooperative and competitive skills<sup>1</sup>
- Help students learn sport-specific and performance-based skills
- May be related to higher levels of overall physical activity<sup>2</sup>
- Associated with improved mental health and reduction in some risky health behaviors<sup>3-4</sup>



1. National Association for Sports and Physical Education. Eight Domains of Coaching Competencies;2006.
2. *Pediatr Exerc Sci* 1998;10:378–86.
3. *Arch Pediatr Adolesc Med* 2000;154:904–11.
4. The President's Council on Physical Fitness and Sports. *Research Digest* 1997;2:1–12.

# Walk- and Bicycle-to-School Programs

**Activity Recommendation:**  
Schools should participate in *International Walk to School Week* and support ongoing walk and bike to school programs.

- Resources:
  - *Safe Routes to Schools*
  - *Walking School Bus*
  - *KidsWalk Guide*



# Youth Physical Activity

*The Role of Families*



# Set a Positive Example

- Lead an active lifestyle yourself
- Make family time an opportunity for physical activity
  - Take a walk together after dinner
  - Do housework or yard work together
  - Walk the dog together
  - Make use of low- or no-cost resources
    - ◆ Public parks
    - ◆ Community fields and courts
    - ◆ Recreation areas
- Replace inactivity with activity whenever possible
  - Example: walk or bike to school instead of riding in a car



# Limit “Screen Time”

- The American Academy of Pediatrics recommends less than 2 hours of media time per day.
  - Television
  - Computer
  - Movies/DVDs
  - Video games
- Turn commercial breaks into activity breaks
- Turn off the television during mealtimes
- Do not use screen time as a reward or punishment



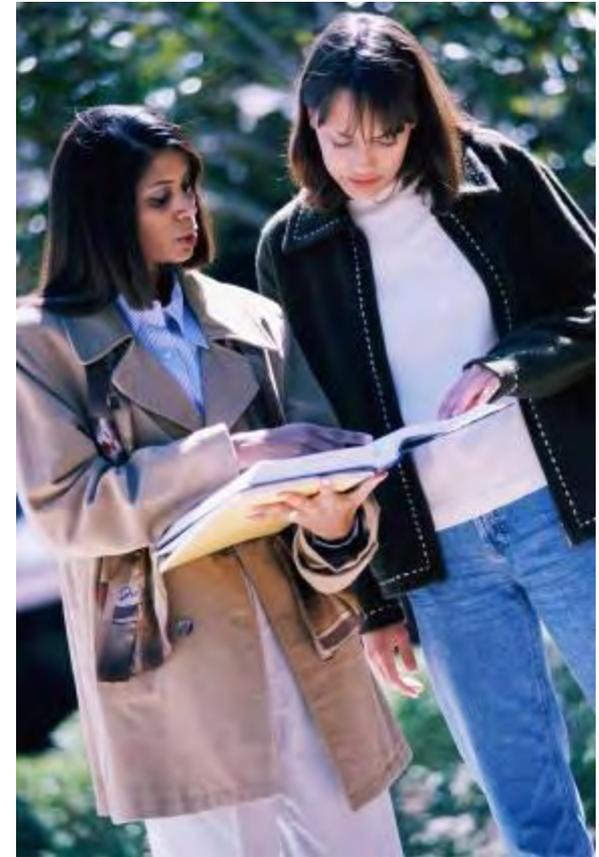
# Encourage Physical Activity

- Expose children to a variety of physical activities
- Be positive about the physical activities in which your child decides to participate
- Encourage children to talk about their experience with physical activity
- Help your child get to and from practices and events
- Give your child toys that promote physical activity
- Encourage children to play outside instead of watching television or playing video games
- Make special events physical activity events
- Encourage your child to join a team or try a new physical activity with a friend.



# Partner With Your Child's School

- Learn about what physical activities are offered at your child's school
- Talk to the principal or write a letter to the district superintendent if you think that there should be more physical education at your child's school
- Encourage the school to implement a comprehensive physical activity program
- Become a member of the school health advisory board
- Help organize special events like walk-a-thons, dance-a-thons or bike-a-thons
- Volunteer to help with afterschool sports teams



# Youth Physical Activity

The Role of Communities



# How Communities Can Promote the Youth Physical Activity Guidelines

- Community-wide campaigns
- Enhance access to places to be physically active
- Involve multiple sectors of the community



# Community-Wide Campaigns

- Include physical activity messages with activities
  - Health fairs
  - Walk/run events
  - Physical activity counseling
- Distribute messages through television, newspapers, radio, and other media
  - Encourage local media to feature stories about young people who have made physical activity a priority



# Lexington, Kentucky, and the *VERB*<sup>™</sup> Campaign

- Social marketing campaign promoted physical activity among “tweens” (youth aged 9–13 years)
- Coalition of local health, education and community based agencies adapted the CDC’s *VERB*<sup>™</sup> campaign for their community



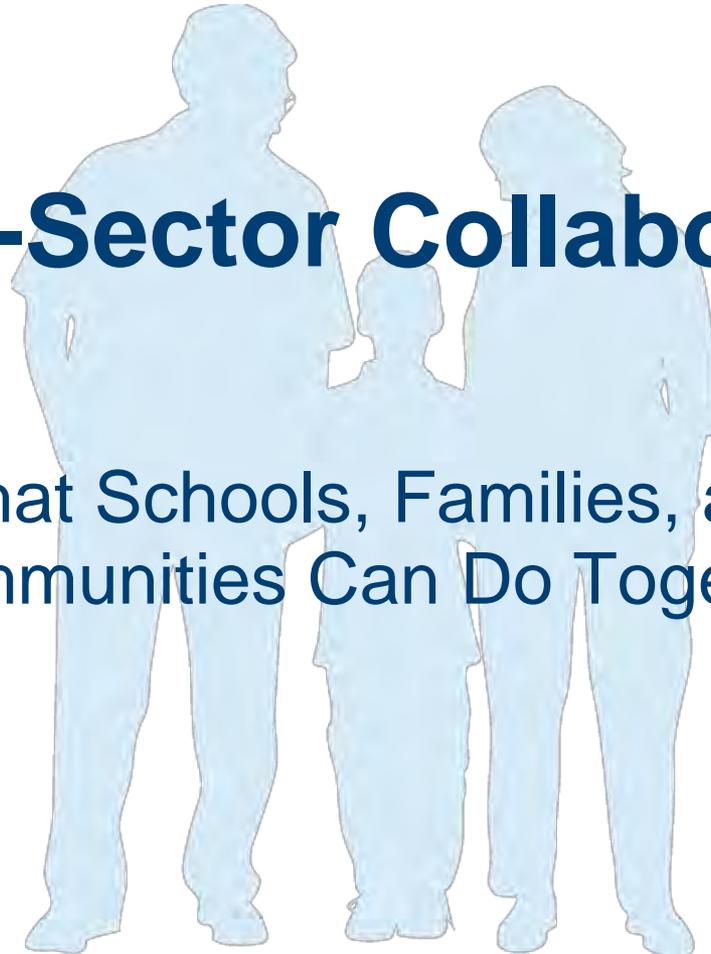
# Improving Access to Places and Programs To Be Physically Active

- Implement “complete streets” policies
- Identify safe routes for walking and bicycling
- Build new places for physical activity or turn an abandoned or vacant lot into a park, multipurpose court, or playground
- Provide access to school gymnasiums, recreation fields, and playgrounds when school is not in session



# Cross-Sector Collaboration

What Schools, Families, and  
Communities Can Do Together



# Cross-Sector Collaboration

- Parks and recreation departments—provide access
- Law enforcement agencies—promote safety
- Urban planners—design features
- Transportation agencies—promote use, safety, and access
- Architects—design and construction



# Working Together: Community Involvement In School-Based Physical Activity

Support school-based physical activity

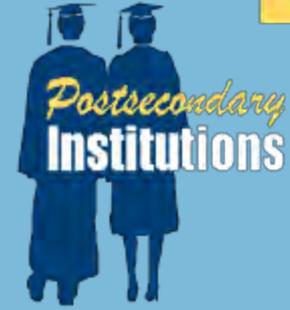
- Join the school health advisory council
- Donate equipment or money or encourage staff to volunteer time
- Support *Safe Routes to School* programs
- Offer afterschool physical activity programs



# Working Together: Joint-Use Agreements

- Share resources: athletic fields, playgrounds and fitness facilities with other community members
- Open school facilities to provide physical activity programs to students, families, school staff, and community members
- Seek funding from local businesses, community groups and health organizations for physical activity programs





# YOUTH PHYSICAL ACTIVITY



# How Much Physical Activity Do Adults Need?

**Adults should do 60 minutes (1 hour) or more of physical activity daily.**

- Aerobic Activities: Most of the 60 or more minutes per day should be either moderate- or vigorous-intensity aerobic physical activity. Include vigorous-intensity physical activity at least 3 days per week.
- Muscle-strengthening Activities: Include muscle-strengthening physical activity on at least 3 days of the week, as part of the 60 or more minutes.
- Bone-strengthening Activities: Include bone-strengthening physical activity on at least 3 days of the week, as part of the 60 or more minutes.

Activities should be medically advisable, enjoyable, and offer variety.



# Population benefit estimates of risk factor change: PA

- 3-minute bouts of PA 10 times per day *lowers serum triglycerides* to same extent as 1 continuous 30-minute bout of PA (Miyashita et al., 2006)
- Sedentary behaviors (e.g., TV watching) as well as sub-optimal  $\geq$ moderate PA levels contributed to *type 2 diabetes mellitus & obesity risk* over 6 years in women (Hu et al., 2003)



# Increased Interest in Physical Activity Promotion

- Less controversy, conflict, stigma than surrounding diet/nutrition
- “Deep pocket” business interests (e.g., Nike & 24-Hour Fitness) stand to *benefit* from success of efforts vs. large food industry interests losing \$ because profit margins lower & can't as readily induce over-consumption of H<sub>2</sub>O, whole grains, legumes, F+V)
- Cheaper & easier—10 min. supply 1/3 of PA “RDA”
- May positively influence food preferences (↑ H<sub>2</sub>O)

# Need for Focus on Physical Activity vs. Weight

- Cultural differences in obesity definition
- Stress management/mood elevation benefits
- “Do better when we feel better”
- Risk of increasing stigmatization of obese & spurring eating disorders, especially in females (but not exclusively)
- Cultural assets, e.g., collectivist vs. “rugged individualist” values, social support consistently emerges as facilitator of PA, dancing normative throughout life span, sports and music central to urban youth culture

# “Push” vs. “Pull”

***Pull strategies:*** majority of physical activity promotion efforts including worksite programs rely on individual motivation---largely unsuccessful at population-level

---Tends to improve PA for individuals already inclined

---Examples: gym membership subsidies, stair prompts

***Push strategies:*** efforts to make the healthful choice the default choice, ideally force individuals to “go out of their way” to make the unhealthy choice

----Promise of broader engagement including those at risk for obesity— including ethnic minority populations

----Examples: providing free healthy food at meetings during lunch time, walking meetings, exercise breaks during non-discretionary time at work



# Why worksites?

## *The practical reasons...*

- Proportion of time spent at work is significant and has been expanding
  - Large proportion of calories per day—consumed during work hours
  - Opportunities for physical activity outside of work hours may be limited
- Especially true for ethnic minority/low income populations who may work longer hours or multiple jobs



# Employee Health Care Cost Savings from Physical Activity

Among 23,490 employees,

- Moderately active and very active employees had \$250 less paid health care costs annually than sedentary employees across all weight statuses
- Savings were \$450 for moderately and very active obese employees compared with their sedentary obese counterparts

Wang F, McDonald T, Champagne LJ, Edington DW. Relationship of BMI and physical activity to health care costs among employees. *J Occup Environ Med* 2004;46:428-436. [City of Live Oaks, CA]



# Why worksites?

## *On the philosophical side...*

- Changes made at work may spill-over to home
- Growing realization of need for interventions to change the physical & sociocultural environment—work is an important environment
- Interventions focused solely on “leisure-time” behaviors—less successful among ethnic minorities--- those at highest risk for obesity
- Need more interventions that “push” vs. “pull” someone to make healthful choice (i.e., make the healthy choice the default choice)



# Practical “Push” Approaches for Integrating Physical Activity into the Workday

- Integrating 10-minute “*Lift-off!*” or *Instant Recess* break at scheduled time(s) of the day and in meetings lasting  $\geq 1$  hr
- Restricting nearby parking spaces for disabled use only
- Scheduling walking meetings at least weekly
- Promoting stair use (and deterring elevator use)
- Promoting walking for at least part of commute, e.g., by providing large subsidies for mass transit use

---

*All of these:*

- *Are variable intensity, low-impact activities that can accommodate most overweight, unfit and/or disabled individuals, i.e. the average American adult!*
- *Can build and mobilize social support for physical activity*

# Integrating 10-min. *Instant Recess* into Organizational Routine

Short bouts easier for sedentary individuals, minimizing perspiration & hair/make-up disturbance

Variable intensity, low-impact activity accommodates higher proportion overweight, unfit and/or disabled individuals

Social support & desire for conformity drives participation

Breaks associated with fun, play and stress release, vs. exercise=work to most people



*Workplace Intervention Studies*

# ***Lift Offs! At Work:***

- Documented individual and **organizational receptivity** to integrating activity on paid work time
- Contribute to daily accumulation of activity
- Motivational **“teachable moment”** helping inactive people link ‘*sedentariness*’ to health status
- As little as 10 min./day improves **BP, weight, waist circumference**, mood, attention span, cumulative trauma, bone mineral density
- **“Spill-over”** to increases in active leisure
- Favorable **return on investment** — LL Bean mfg. plant gets 30 min. productivity for 15-min. investment (three 5-min. breaks per shift)

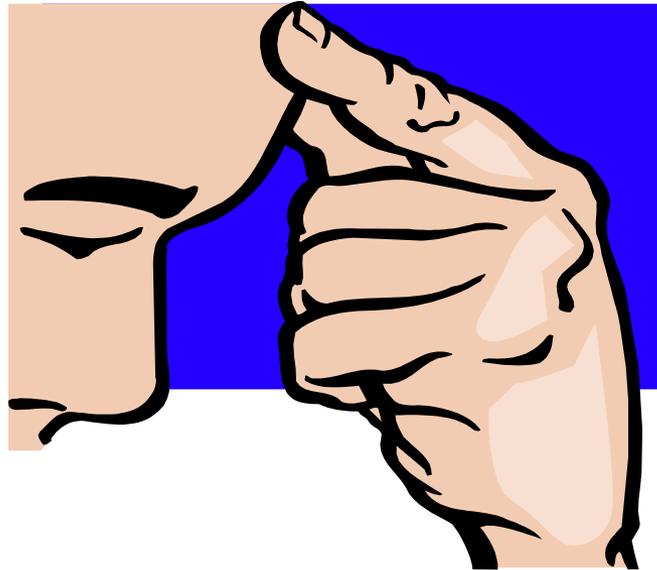
# California Fit WIC Staff Wellness Training

## Significant findings:

- Increased perceived workplace support for staff PA (96 vs. 58%,  $p=0.002$ ) and healthy food choices (85 vs. 28%,  $p=0.001$ )
- Change in types of foods served during meetings (72 vs. 24%,  $p=0.002$ ) & PA priority in workplace (96 vs. 71%,  $p<0.02$ )
- Increased self-reported counseling behaviors with WIC parents promoting physical activity (64 vs. 35%,  $p<.05$ ) & sensitivity in handling weight-related issues (92 vs. 58%,  $p<0.01$ )

# And.....

Did all of this with  
no budget.....



# Promote Physical Activity

- Evening and Noontime Fitness Classes
- Group Activities
  - Walking Clubs
  - Stair Climbing Campaign
  - On-site Gym
  - Bike to Work Day
  - Let's Get Moving
  - Active for Life
  - Core Strengthening
  - Lunchtime Bootcamp



- Yoga
- Light Weight Training
- Tai Chi
- Kick Boxing
- Zumba
- Flex & Firm



# Promote Sound Nutrition Habits

Weight Watchers at Work

Fresh Fruit Deliveries

Healthy Cooking Classes

Nutritional Pot Lucks

Healthy Desserts

Low-Fat Comfort Foods

Salsa & Guacamole Contest

Brown Bag Days

“Nutritional”

Presentations

Supermarket

Strategies

Energy Drink Alert

Readiness for

Healthy Change

Diabetes Prevention

Healthy Holiday

Meals







# Wellness Website

- Current Events
- Calendar/Sign-Ups
- Wellness Bulletins
- Photo of the Day
- Recipes
- Fitness Tips

The screenshot shows a web browser window titled "http://to/wellness.asp - Microsoft Internet Explorer". The address bar shows "http://to/wellness.asp". The website has a purple header with the title "Wellness" and a navigation menu with links: Home, Applications, Departments, Information, Personnel Forms, Other Forms, and Tutorials. A "PUBLIC WEBSITE" logo is in the top right corner.

The main content area features a calendar for March 2007. The calendar shows dates from 1 to 31, with icons for events on various days. Below the calendar is a link: "Probate Living Trusts Click here to sign up."

On the right side, there are several news items with "More..." links:

- Upcoming Employee Wellness/Safety Day on Thursday, April 11th [More...](#)
- Flex & Firm and Core Strengthening Classes! [More...](#)
- "Let's Get Moving" Campaign [More...](#)
- Request For More Wellness Photos - April Giveaways! [More...](#)
- Help Us Celebrate! Over 888 Pounds and Counting... [More...](#)

Below these items is a section titled "March is 'National Nutrition Month'" with icons and links for:

- Fitness & Recipes
- Healthy Attitude & Stretching
- March
- Power of Attorney & Vacations
- Quit Smoking Tips

On the far right, there are vertical banners for "NUTRITION HEALTH FITNESS BMI Calc" and "Activities Recipes Items For Sale".

At the bottom of the page, there is a "Questions & Comments: Cheryl" section.

The browser's taskbar at the bottom shows the Start button, several open applications (Novell GroupW..., Windows Media..., H:\COMMON..., Jul - Sep 07 Ba...), and the system tray with the time 8:17 AM.

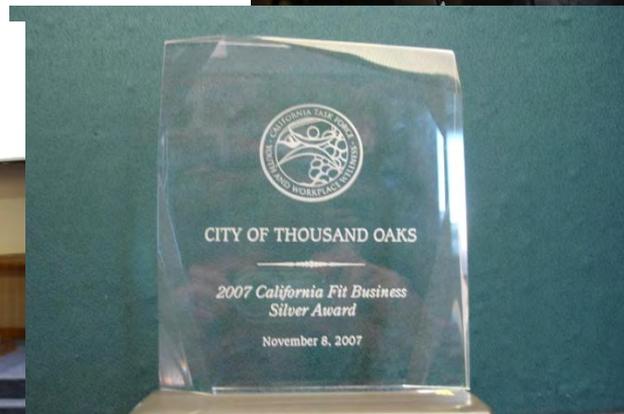
# Educate in Family Related Topics

- Elder Care Support Group
- Baby Pak Program
- Alcohol/Drug Awareness
- Stress Management
- Intro to Employee Assistance Program
- Identity Theft
- Local Child Care
- Directory
- Strategies for Working Parents
- Balancing Work/Family Priorities



# Return on Investment

- Improved Employee Morale
- Recognition
- Culture of Wellness



# Benefits of Program

In places where staff wellness programs have been done, and done well, Health Risk Assessments show:

- ❖ Employees are more informed about health issues/topics
- ❖ Less sick leave & fewer health care claims
- ❖ Increase in morale and productivity
- ❖ Peace of mind

*Successful Programs Share These*  
**KEYS to Program Success**



- ❖ Employee designed and driven.
- ❖ Employees encouraged to participate in one or more aspects of the program.
- ❖ Suggestions for improvements and comments always welcome.



# Thank you! Questions?

*Be Active and Play, 60 minutes, every day!*

Information in this presentation is provided by

Dr. Jean Mee

Physical Education and School Health Education Consultant  
Connecticut State Department of Education

*and*

U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention  
National Center for Chronic Disease Prevention and Health Promotion  
Division of Adolescent and School Health  
[www.cdc.gov/HealthyYouth](http://www.cdc.gov/HealthyYouth)

