

“Something’s just not right—our air is clean, our water is pure, we all get plenty of exercise, everything we eat is organic and free-range, and yet nobody lives past thirty.”



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Promoting Physical Activity Among Adolescents: A School-Academic Partnership in Appalachia

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**Most Powerful
Health ENHANCING Tool
ever discovered.**

Fountain of Youth

Ponce De Leon

Reduces Risk of:

- **Obesity and Overweight – outcome of interest**
- Coronary heart disease and death from CHD
- Osteoporosis and falls.
- Stroke
- Colon cancer
- High blood pressure
- Type 2 Diabetes Mellitus
- High blood cholesterol and triglycerides
- Depression

Improves:

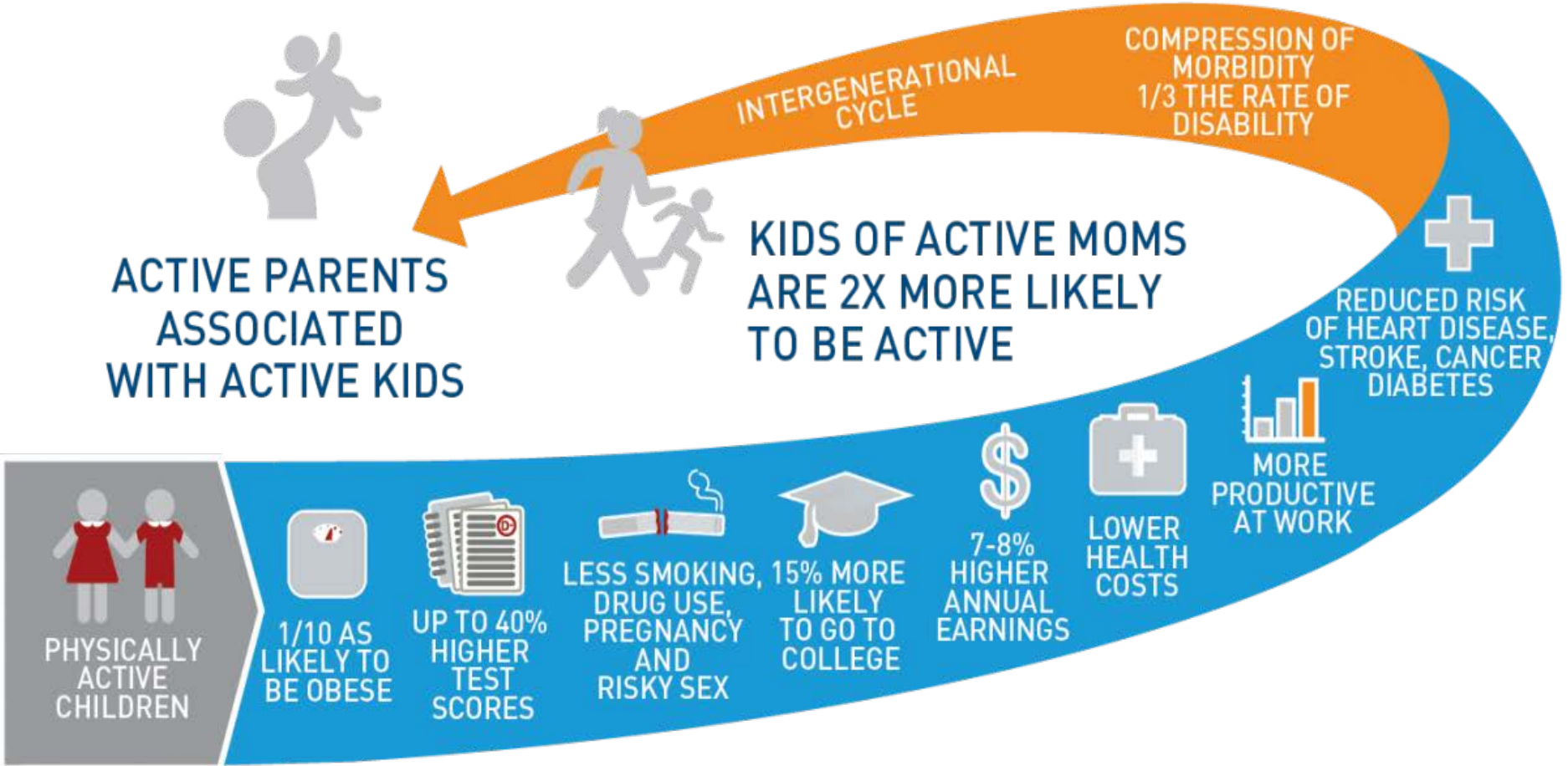
- Healthy bones, muscles, and joints
- Strength and endurance
- Concentration, brain function
- Energy level
- Longevity
- Academic Achievement and Grades, time on task

Single, most powerful
behavior to promote
Public Health.....

Regular Physical Activity
across the Lifespan

ACTIVE KIDS DO BETTER IN LIFE

WHAT THE RESEARCH SHOWS ON THE COMPOUNDING BENEFITS



EARLY CHILDHOOD ADOLESCENCE ADULTHOOD

How Much Physical Activity

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



How Are the Guidelines for Youth Different from the Guidelines for Adults?

- Consider natural activity patterns of children
 - All episodes of moderate- or vigorous-intensity activities count.
 - Unstructured active play can provide all three types of physical activity
- Daily physical activity required
- Need for bone-strengthening activities and vigorous-intensity activities each week



How Physically Active Are Adolescents?

✓ National Rate:	27.1%
✓ Males:	36.0%
✓ Females:	17.7%

Males generally reported doing more physical activity that increased their heart rate at least 60 minutes during the previous 7 days before the survey, compared to females.

* Were physically active doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey.

Source: National Youth Risk Behavior Survey, 2015.



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



Factors: Decline in Activity from Childhood to Adolescence

1. Lower participation in Sports
2. Increased Academic demands / interests
3. Accumulated injuries
4. Interests in other clubs and activities.
5. Reduced interest in active play / reduced FUN
6. Transition to Adults Roles:
 - Part-time work
 - Driver's License
 - Dating
 - More control over discretionary time

“Planning to be Active”

- ❑ Evidence Based program to **increase physical activity and improve health outcomes (body composition)** among Adolescents.
 - ❑ 6 Field trials in southern/rural Ohio.
 - Produced significant improvements in physical activity during free time (Petosa - PBA).
 - Produced improved health outcomes for mentees and mentors (Smith –MBA)
 - ❑ Currently NIH funded 4 year RCT in Southern Ohio
- “A Skill-Based RCT for Physical Activity Using Peer Mentors”**
- 1R01HD080866 (Petosa & Smith MPI): Eunice Kennedy Shriver National Institute of Child Health and Human Development [NICHD]

“Planning to be Active”: Principles

- Lifelong Activity Perspective
- Adherence is Primary
- Home and Neighborhood Based
- Personal Tailoring of Physical Activity
- Self-Regulation Skills based approach

- Integrated Curriculum: health, physical education, life skills, etc....

“Planning to be Active”: Core Skills

- Behavioral Goal Setting
- Behavioral Problem Solving, Decision making
- Self-Monitoring of Behavior
- Tailoring of Activity
- Motivation Analysis
- Overcoming Barriers
- Social Support
- Time Management
- Environmental Management

“Planning to be Active”: Curriculum

10 mini lessons (10 to 15 minutes)

1 lesson week for 10 weeks

Experience based- weekly assignments.



Peer Mentoring

Social Cognitive Theory

- ✓ **Peers define norms by role modeling.**
- ✓ **Younger adolescents imitate the behavior(s) of Peer Role Models.**
- ✓ **Role Models are chosen by: age, appearance, similar circumstances, attainability.**



Adult Peer Mentoring

Adult Peer Mentoring research shows increases in:

1. Condom use.
2. Medication adherence.
3. Mammography screening.
4. Cancer Screening.
5. Breastfeeding.
6. Smoking Cessation.
7. Physical Activity adherence.



Adult Peer Mentoring

Adult Peer Mentoring
is a cost effective way
to reach diverse and
often hard to reach populations.



Adolescent Mentoring

National Sample of adolescents studied natural mentoring relationships found:

Reduced Problem behavior: gang memberships, fighting, risk taking.

More Risk Reducing Practices: physical activity and birth control.

DuBois, D and Silverthorn, N, Natural Mentoring Relationships and Adolescent Health: Evidence From a National Study *Am J Public Health*. 2005; 95:518–524.



Adolescent Peer Mentoring

RCT evaluation of Peer Mentor Smoking Prevention
59 schools N=11,000 adolescents

Treatment: ASSIST Peer Mentoring

Control: Fact/knowledge based approach

Treatment group significantly less smoking at one year posttest using Saliva tests.

Campbell R, Starkey F, Holliday J, et al. An informal school-based peer-led intervention for smoking prevention in adolescence (ASSIST): a cluster randomized trial. *Lancet*. 2008;371:1595–1602.



Adolescent Peer Mentoring

RCT to evaluate peer mentoring on drug use.

Subjects were youth with HIV/AIDS+ parent.

Year long peer mentoring.

Control group was waitlisted.

Significant reduction in Tobacco, Alcohol and other drug use.

Taylor A, Sciuto L, Fox M, et al. The mentoring factor: Evaluation of the across ages' intergenerational approach to drug abuse prevention. *Child Youth Serv.* 1999;20:77–99.



Adolescent Peer Mentoring

Suicide Prevention using Peer Mentors

RCT 18 schools. N=3,123.

Trained Mentors were:

4 times more likely to refer suicidal teens to adult.

Increased acceptability for seeking adult help.

26. P. Wyman, C. Hendricks Brown, M Murray, K. Schmeelk-Cone, M Petrova, Qin Yu, E Walsh, Xin Tu, and W Wang, PhD, An Outcome Evaluation of the Sources of Strength Suicide Prevention Program Delivered by Adolescent Peer Leaders in High Schools, Am J Public Health 2010;100; 1653-1661

Adolescent Peer Mentoring

Alcohol Prevention

Peer Mentor, adult professional, control conditions.

6th months assessment both Mentor and professional groups showed decreases in:

Binge Drinking

Driving after Drinking

28. Fromme K, Corbin W. Prevention of heavy drinking and associated negative consequences among mandated and voluntary college students. *J Consult Clin Psychol.* 2004;72(6):1038–1049.



Adolescent Peer Mentoring

Adolescent Peer Mentoring has been effective in changing risk behaviors among a variety of hard to reach populations.

- **Academic Risk:** drop out, truancy, failure (Herrera, et al., 2007; Rodriguez-Planas, 2009)
- **Juvenile Offenders:** arrest rates, delinquency (Bouffard & Bergseth, 2008; Marsh & Evans, 2009)
- **Mental Health:** emotional distress, impaired social functioning, disruptive behavior (Hughes, et al., 2005; Jent & Nice, 2009; DuBois, et al., 2011)
- **Immigrant and Refugee Youth** (Sanchez, Esparza & Colon, 2008; Sanchez, Reyes & Singh, 2006; Ching, et al., 2009; Diversi & Mecham, 2005; Yeh, Ching, Okubo & Luthar, 2007)





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Peer Mentoring to Support Physical Activity Behavioral Change

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Associate Professor



Background- Challenges

- Schools serve *56 million youth* & provide an educational environment to meet current physical activity guidelines (NCES, 2009)
- Increasing demands for instructional time of core subjects to improve standardized test scores.
- Physical Education, Health, Recess often eliminated from school day and subject areas



Current Activity Levels of Adolescents- Challenges to Overcome

- **2015:** 29.8% attended daily physical education – no change since 1991 (CDC, 2015)
- **2013:** 20% of 12th graders attend daily physical education (CDC, 2013)
- **51.6%** high school students attend ANY physical education class in the average week (CDC, 2015)
- **27%** of high school students report 60 minutes of daily physical activity in the past week (CDC, 2010, CDC, 2013)
- **14.3%** high school students report NO physical activity in the past week (CDC, 2010, CDC, 2013, CDC, 2015)



Structured Peer Mentoring

- Goal-Directed & Skill-Building (Karcher & Hanson, 2014)
- Behaviors learned through role modeling, personalized support, & guidance from mentors (Hamilton & Hamilton, 1992)
- Powerful influence of Peers during Adolescence – friends are more credible, better understand their concerns, responsible to friendships (SAMHSA,2014, Karcher, 2009)
- Peer mentors build Social Networks- linkages (Keller & Blakeslee, 2014)
- Possible dual effect with Mentors changing their own behavior



Structured Peer Mentoring to Support Physical Activity

- Readily done at schools, community-centers, or other neighborhood settings
- STEPS:
 - Select a curriculum – “Planning to be Active”
 - behavioral objectives, skill-building, social interaction, tailoring, continuous review of progress

School Infrastructure and Support

meeting space, time, staff, program size

Overcoming Missed Sessions



Characteristics of Peer Mentors

- Strong Interpersonal Skills
- Good Character
- Empathy
- Supportive & Flexible
- Commit to Projects & People
- Good at Making Friends
- Good at Communicating with Others
- Strong Listening Skills
- Good Problem-Solvers
- Has Fun in School (Structured & Unstructured Activities)



Other Things to Consider

- **Regular Attendance** at School – Connectedness
- Not necessarily “high achievers” or those who have many obligations
- **Consistency** is KEY!
- **2-3 year** difference in age between mentor and mentee
- Mentors who are **outgoing & social**
- Start Small: **10-15 mentors** paired with **1-2 mentees each**
- **Training:** Pre-match, debriefing
- **Supervision & Guidance-** needed every session
- **Other Mentor Responsibilities:** Stay on task, be respectful, role model, focus on mentee, complete program activities, provide feedback, support other mentors, seek assistance when needed
- **Transition Plan:** allows mentors and mentees to leave program feeling positive



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Judy Harness, MS, RN

**Project Director,
“Mentoring to be Active” Schools**

Working with Mentors and Mentees

- **Needs of Mentors**
 - Opportunity to ***Role Play*** prior to first session
 - Reminders, reminders, reminders
 - Support and genuine concern of supervisor
 - Trust and opportunity to do it "their way"
- **Needs of Mentees**
 - Genuine concern of Mentor--Caring and eye contact
 - Consistency
 - True engagement during sessions
 - Positive reinforcement including incentives

Always Challenges!

Mentors:

- Establishing expectations
- Maintaining enthusiasm
- Communication
- Teen behaviors

Mentees:

- Relationship development with older teen
- Gaining trust and buy in
- Doing the work

Biggest challenge for the program overall is the inevitable schedule changes due to :

- weather
- absences
- school closings and delays
- school schedules conflicting with program



Suggestions

- Be “one step ahead”-Anticipate problems
- Be the Mentors’ Mentor
- Be aware of each school's culture and unique needs
- Work with and appreciate the Principal or point of contact with each school
- Say thank you at each contact
- Share results!



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**Beverly Stringer,
Project Coordinator**

**“Planning to Be Active” Classroom
Schools**

Building Trust and Strong Partnerships with Schools

- Work collaboratively with the school contacts, administrators & other designees.
- Involve the school personnel in project planning and decisions from the beginning.
- Listen closely as school partners have valuable information to share to help projects run smoothly.
- Fully engaged school partners *strengthens and sustains* partnerships.

Building Trust and Strong Partnerships with Schools

- Contact schools and key personnel early and as soon as possible.
- Establish main contacts, meet face to face
- Constant and consistent contact is important; keep team members “in the loop” and updated.
- Communicate: important activities and dates, reminders, and confirm day(s) of scheduled activities.
- Follow-up after activities: “Thank You” for commitment, and list follow-up needs from project team and school.

Building Trust and Strong Partnerships with Schools

- Engaging schools in full partnership with the planning process makes them a valued part of the team.
- Working together with school contacts achieves important goals (aims, objectives, school goals).
- Working closely with school contacts makes visits more productive.
- Having a close relationship with school contact more likely results in positive feedback about the program and engaging in research.

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