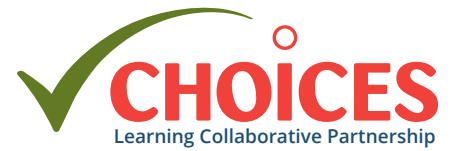


WASHINGTON: Active Recess Intervention



This brief provides a summary of the CHOICES Learning Collaborative Partnership simulation model in Washington of a potential Active Recess program in public elementary schools to increase students' physical activity levels during recess via installation of playground markings, provision of portable play equipment, and/or provision of structured activities.

The Issue

Over the past three decades, more and more people have developed obesity.¹ Health care costs for treating obesity-related health conditions such as heart disease and diabetes were \$147 billion in 2008.² Emerging cost-effective prevention strategies directed at children show great promise for addressing this issue.³ Evidence shows that physical activity helps kids grow up at a healthy weight.

In Washington, 98% of schools serving elementary grades provide at least one daily recess.⁴ Recess is typically allocated in bouts of 10-15 minutes or more as isolated breaks and/or in association with lunch.^{5,6} Elementary school children generally spend more time in recess than physical education weekly.⁷ Schools often lack resources that encourage physical activity among children including supervision, play facilities, and equipment.^{8,9} On average, children spend less than 50% of recess engaged in moderate-to-vigorous physical activity.⁹

About Active Recess

Implementation of this voluntary school-level intervention would occur in public elementary schools in Washington that provide recess but not Active Recess strategies. It would include installation of playground markings, provision of portable play equipment, and/or provision of structured activities designed to increase students' activity levels during school recess time. Through grant proposals, school personnel and parent volunteers would support creation of playground markings for structured games for the children to be physically active (e.g., four square, hop-scotch) and each participating school would receive portable playground equipment to be used during recess time.

Comparing Costs and Outcomes

CHOICES cost-effectiveness analysis compared the costs and outcomes of Active Recess over 10 years (2015-2025) with costs and outcomes associated with not implementing the program. The approach assumes that 90% of children attend schools without an Active Recess program, and 100% of these schools adopt Active Recess practices where all students benefit.

Implementing Active Recess in Washington is an investment in the future. By the end of 2025:



**OVER 1,000,000
CHILDREN REACHED**



**955 CASES OF
CHILDHOOD OBESITY
PREVENTED**

in 2025.



**6,010 YEARS
WITH OBESITY
PREVENTED**

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Conclusions and Implications

Every child deserves a healthy start in life. This includes ensuring that all kids have the same opportunities to be physically active during recess, no matter where they live or where they go to school. A state-level program in Washington to assist public elementary schools invest in equipment and resources to increase physical activity during recess may be a cost-effective strategy for reducing obesity at \$23.30 per child. This intervention would prevent 955 cases of childhood obesity in 2025 and provide the opportunity for over 1 million children to engage in active recess opportunities. There are also likely positive benefits from physical activity related to cognition and academic performance which are not quantified in this analysis, but may result in additional cost savings.^{10,11,12}

For every \$1.00 spent on implementing the Active Recess intervention, we would save \$0.10 in health care costs. These results reinforce the importance of investing in prevention efforts to reduce the prevalence of obesity. Shortchanging prevention efforts can lead to more costly and complicated treatment options in the future. Introducing small changes to school-aged children can inform healthy habits that carry into adulthood.

Evidence is growing about how to help children achieve a healthy weight. Interventions such as Active Recess are laying the foundation for a healthier future by helping schools create environments that nurture healthy habits. Leaders at the federal, state, and local level should use the best available evidence to help children eat healthier diets and be more active.



¹ Flegal KM, Kruszon-Moran D, Carroll MD, Fryar CD, Ogden CL. Trends in Obesity Among Adults in the United States, 2005 to 2014. *JAMA*, 2016;315(21), 2284-91.

² Finkelstein EA, Trogdon JG, Cohen JW, Dietz W. Annual Medical Spending Attributable To Obesity: Payer-And Service-Specific Estimates. *Health Affairs*. 2009;28(5).

³ Gortmaker SL, Claire Wang Y, Long MW, Giles CM, Ward ZJ, Barrett JL, Kenney EL, Sonneville KR, Afzal AS, Resch SC, Cradock AL. Three Interventions That Reduce Childhood Obesity Are Projected to Save More Than They Cost to Implement. *Health Affairs*, 34, no. 11 (2015):1304-1311.

⁴ Howard K & Rakoz L. Survey Regarding Recess Periods for Elementary School Students: Report to the Legislature. Office of Superintendent of Public Instruction, Dec 2009. <http://www.k12.wa.us/LegisGov/2009documents/RecessPeriodsforElementarySchoolStudents.pdf>

⁵ Parsad B & Lewis L. Calories In, Calories Out: Food and Exercise in Public Elementary Schools, 2005, National Center for Education Statistics, U.S. Department of Education Report No. NCES 2006-057, (2006). <https://nces.ed.gov/pubns2006/2006057.pdf>. Accessed January 24, 2017.

⁶ Centers for Disease Control and Prevention. The Association Between School-Based Physical Activity, Including Physical Education, and Academic Performance. Atlanta, GA: U.S. Department of Health and Human Services; (2010). https://www.cdc.gov/healthyyouth/health_and_academics/pdf/pa-pe_paper.pdf. Accessed January 24, 2017.

⁷ Robert Wood Johnson Foundation. Recess Rules: Why the Undervalued Playtime May Be America's Best Investment for Healthy Kids and Healthy Schools. Princetown, NJ: Robert Wood Johnson Foundation; 2007.

⁸ National Association for Sport and Physical Education. Recess for Elementary School Students: A Position Paper, Council on Physical Education for Children Report, (2006). <http://files.eric.ed.gov/fulltext/ED497155.pdf>. Accessed January 24, 2017.

⁹ Stratton G. Promoting Children's Physical Activity in Primary School: An Intervention Study Using Playground Markings. *Ergonomics*, 2000, 43(10), 538-1546.

¹⁰ Lees C & Hopkins J. Effect of Aerobic Exercise on Cognition, Academic Achievement, and Psychosocial Function in Children: A Systematic Review of Randomized Control Trials. *Prev Chronic Dis*, 2013, 10, E174.

¹¹ Fedewa AL & Ahn S. The Effects of Physical Activity and Physical Fitness on Children's Achievement and Cognitive Outcomes: A Meta-Analysis. *Res Q Exerc Sport*. 2011, 82(3), 521-535.

¹² IOM. Educating the Student Body: Taking Physical Activity and Physical Education to School. Washington, DC: National Academies Press; 2013.

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