

BOSTON, MA: Movement Breaks in the Classroom



This brief summarizes a CHOICES Learning Collaborative Partnership model examining a strategy to integrate movement breaks into school classrooms in Boston, MA. This strategy incorporates five-to-10-minute classroom physical activity breaks during class time in kindergarten to fifth grade classrooms.

The Issue

One in three first-graders in Boston has overweight or obesity.¹ Being physically active can support children in growing up at a healthy weight, though not all schools provide students with the recommended 150 minutes of physical activity per week or 30 minutes per day.^{2,3} Regular physical activity can boost brain health, including improved cognition and reduced symptoms of depression.⁴ Students who are physically active also tend to have better grades, attendance at school, and stronger muscles and bones.⁴

Experts suggest that schools provide opportunities for classroom physical activity,⁵ but few schools offer it.⁶ Movement breaks supplement other critical school physical activity opportunities, like recess and physical education, and help children meet recommendations for physical activity.⁵ Providing all students with opportunities to be physically active will ensure more students are growing up at a healthy weight and ready to learn.

About the Movement Breaks in the Classroom Strategy

We can provide healthier opportunities for all children by initiating strategies with strong evidence for effectiveness. To implement the Movement Breaks strategy, teachers, Wellness Champions, and staff would receive training, equipment, and materials to incorporate short activity breaks in the classroom to help children move more.^{7,8} Initiating strategies with strong evidence for effectiveness like Movement Breaks in the Classroom helps fulfill Boston Public School's (BPS) Physical Education and Physical Activity Policy requirements for schools to offer physical activity opportunities during the school day.³ This strategy also aligns with BPS' Whole School, Whole Community, Whole Child approach, which supports students' holistic health by promoting positive classroom environments that foster physical activity and learning.

Comparing Costs and Outcomes

A CHOICES cost-effectiveness analysis compared the costs and outcomes over a 10-year time horizon (2020-2030) of implementing movement breaks with the costs and outcomes associated with not implementing them. We assumed that elementary schools in Boston Public Schools serving grades K-5 would receive training, equipment, and materials to implement movement breaks. The model assumes that 56% of those trained would implement the movement breaks in classrooms.

Implementing movement breaks in the classroom is an investment in the future. By the end of 2030:



33,300 STUDENTS REACHED

over 10 years

\$1.54

COST PER CHILD



25 ADDITIONAL MINUTES OF MODERATE-TO-VIGOROUS PHYSICAL ACTIVITY

per student per school week

BOSTON, MA: Movement Breaks in the Classroom

Conclusions and Implications

If movement breaks were incorporated into classrooms, we project that over 10 years, 33,300 students would benefit. The students would increase their moderate-to-vigorous-physical activity levels by 25 minutes per school week, helping them meet wellness goals of 150 minutes of physical activity per week.³ This strategy would also prevent 48 cases of childhood obesity (in 2030) and save \$43,500 in health care costs related to excess weight over 10 years. The average annual cost to implement this program in every public elementary school (Grades K-5) in Boston would be \$1.54 per student, or just over \$1,000 per school per year.

In addition to promoting a healthy weight, classroom physical activity benefits students in other important ways. By training and equipping over 600 teachers and other school staff yearly to incorporate movement breaks in the classroom, this strategy could help all Boston Public Schools cultivate a positive school climate and improve social emotional learning.⁹ Participation in movement breaks are associated with students spending more time on task,⁵ and teachers report that students are more engaged, supportive of each other, and responsive to teacher instructions after participating in a movement break.¹⁰

Childhood is a crucial period for developing healthy habits. Many preventive strategies can play a critical role in helping children establish healthy behaviors early on in life. Providing movement breaks in the classroom is an easy and relatively low-cost way to increase physical activity and support the overall health and wellness of all Boston students.

1. School Health Services, Department of Public Health. Results from the Body Mass Index Screening in Massachusetts Public School Districts, 2017. 2020:88. <https://www.mass.gov/doc/the-status-of-childhood-weight-in-massachusetts-2017>
2. Boston Public Schools, Health and Wellness Department. School Health Profiles [2018]: Boston, MA.
3. Boston Public Schools. Physical Education & Physical Activity Policy. 2020:8. Superintendent's Circular. https://drive.google.com/file/d/1rsGwpFaa4LsPKxjhdsHxz2laXg3ZfVtE/view?usp=embed_facebook
4. Centers for Disease Control and Prevention. The Association Between School-Based Physical Activity, Including Physical Education, and Academic Performance. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2020-04-21T09:02:35Z 2010.
5. The Community Preventive Services Task Force. Physical Activity: Classroom-based Physical Activity Break Interventions. The Community Guide. 2021:8.
6. Classroom Physical Activity. Centers for Disease Control and Prevention. Accessed Oct 8, 2021. <https://www.cdc.gov/healthyschools/physicalactivity/classroom-pa.htm>
7. Erwin HE, Beigle A, Morgan CF, Noland M. Effect of a low-cost, teacher-directed classroom intervention on elementary students' physical activity. *J Sch Health*. 2011;81(8):455-461.
8. Murtagh E, Mulvihill M, Markey O. Bizzy Break! The effect of a classroom-based activity break on in-school physical activity levels of primary school children. *Pediatr Exerc Sci*. 2013;25(2):300-307.
9. School-Based Physical Activity Improves the Social and Emotional Climate for Learning. Centers for Disease Control and Prevention. Accessed March 9, 2022. https://www.cdc.gov/healthyschools/school_based_pa_se_sel.htm
10. Campbell AL, Lassiter JW. Teacher perceptions of facilitators and barriers to implementing classroom physical activity breaks. *J Educ Res*. 2020;113(2):108-119



Suggested Citation:

Carter J, Greene J, Neeraja S, Bovenzi, M, Sabir M, Carter S, Bolton AA, Barrett JL, Reiner JR, Cradock AL. *Boston, MA: Movement Breaks in the Classroom* (Issue Brief). Boston Public Schools, Boston Public Health Commission, and the CHOICES Learning Collaborative Partnership at the Harvard T.H. Chan School of Public Health, Boston, MA; June 2022. For more information, please visit www.choicesproject.org

The design for this brief and its graphics were developed by Molly Garrone, MA and partners at Burness.

This issue brief was developed at the Harvard T.H. Chan School of Public Health in collaboration with the Boston Public Health Commission through participation in the Childhood Obesity Intervention Cost-Effectiveness Study (CHOICES) Learning Collaborative Partnership. This brief is intended for educational use only. This work is supported by The JPB Foundation and the Centers for Disease Control and Prevention (U48DP006376). The findings and conclusions are those of the author(s) and do not necessarily represent the official position of the Centers for Disease Control and Prevention or other funders.

