

# INPACT at SCHOOL

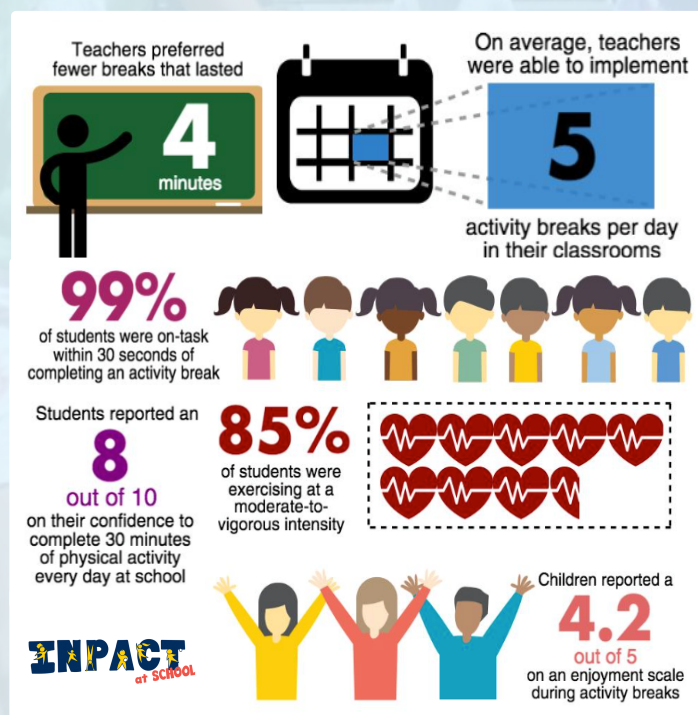


*Incorporating purposeful movement into the classroom to prepare the brain for learning*

**The need:** Today's kids are dropping out of sport and physically active play at a young age. Evidence-based physical activity interventions implemented in school classrooms hold great potential for increasing physical activity opportunities for K-12 students.

**The partnership:** Saginaw Intermediate School District and researchers from the University of Michigan, Wayne State University, and Eastern Michigan University came together to develop and tailor a program for teachers to implement in their classrooms.

**The program:** Interrupting Prolonged sitting with ACTivity (InPACT) is a tailored classroom physical activity intervention delivered with a comprehensive set of strategies designed to provide teachers with the necessary resources to lead their classes in 5 x 4-minute activity breaks throughout the school day. Strategies include classroom curriculum and management resources, instructional exercise videos, floor plans, district-wide implementation guide and a teacher training program. Visit our program website at: [inpact.kines.umich.edu](http://inpact.kines.umich.edu).



Support for this program is provided in part by the Michigan Health Endowment Fund and the University of Michigan.



# Why Classroom-Based Physical Activity Works

This document summarizes the evidence of how physical activity programming in the classroom, such as InPACT at School, can improve student performance, health, and well-being. Physical activity enhances:



## Academic Performance

### Short-term benefits:

- Physical activity has a positive effect on attention span which increases the time for learning<sup>2,3</sup>
- Test scores and comprehension skills are positively associated with classroom physical activity<sup>19</sup>

### Long-term benefits:

- Vigorous physical activity is positively associated with academic performance in boys and girls<sup>5</sup>
- Classroom physical activity increases cognitive skills and attitudes in all ages<sup>1,2,4</sup>



## Behavior Management

### Short-term benefits:

- Physical activity can stabilize student mood and limit hyperactivity-impulsivity behaviors<sup>10,11</sup>
- Classroom physical activity is a strategy for calming challenging emotions<sup>7,8</sup>

### Long-term benefits:

- InPACT can be used as a tier one behavioral approach for anxiety<sup>3,9</sup>
- Movement during class time shows an improvement of social behavior in class and among peers<sup>6,10</sup>



## Social-Emotional Learning

### Short-term benefits:

- Engagement in school activities<sup>10</sup>
- Enhances the management of emotions<sup>7</sup>

### Long-term benefits:

- Increase of social cohesion within the school setting<sup>6</sup>
- Increase in student self-awareness<sup>6,7,9</sup>
- Increase in student self-confidence that can spill over to areas of a student's life<sup>12</sup>



## Student Health

### Short-term benefits:

- Physical activity helps maintain blood sugar levels throughout the day<sup>13,15,16</sup>
- InPACT aids in the accumulation of 20 physically active minutes (Five, four-minute breaks)<sup>14,15,18</sup>

### Long-term benefits:

- Physical activity can improve memory and reduce depression<sup>14,15</sup>
- Classroom physical activity improves blood pressure and bone strength<sup>13,16,17</sup>
- InPACT is aligned with Michigan Model for Health™

**Sources**  
1Centers 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). 2Hasson, R.E., Beemer, L.R., Ajibewa, T.A. et al. (2021). Adapting the InPACT Intervention to Enhance Implementation Fidelity and Flexibility. *Prevention Science*. 22, 324-333 (2021). 3Beemer, L.R., Ajibewa, T.A., O'Sullivan, M.P., Nagy, M.R. et al. Feasibility of the InPACT Intervention to Enhance Movement and Learning in the Classroom. *Translational Journal of ACSM*, 3(18), 136-151 (2018). 4Active Living Research. Active Education: Growing Evidence on Physical Activity and Academic Performance. Robert Wood Johnson Foundation (2015). 5So, W.Y. Association Between Physical Activity and Academic Performance in Korean Adolescent Students. *BMC Public Health*. 12, 258 (2012). 6Centers for Disease Control and Prevention. School Physical Education and Physical Activity Policies Can Support the Social and Emotional Climate and Learning. Atlanta, GA: U.S. Department of Health and Human Services (2021). 7Durlak, J.A., Weissberg, R.P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions. *Child Development*, 82, 405-432 (2021). 8Peluso M.A.M et al. Physical Activity and Mental Health: The Association Between Exercise and Mood. *CLINICS*. 60(1), 61-70 (2005). 9Action for Healthy Kids. Making the Connection. Chicago, Illinois (2020). 10Center for Disease Control and Prevention. School-Based Physical Activity Improves Social and Emotional Climate for Learning. Atlanta, GA: U.S. Department of Health and Human Services (2021). 11Verrill, C., Guay, M.C., Berthiaume, C., Gardiner, P., Beliveau, L. A Physical Activity Program Improves Behavior and Cognitive Functions in Children with ADHD: An Exploratory Study. *Journal of Attention Disorders*. 16(10), 71-80 (2012). 12Christiansen, L.B., Lund-Cramer, P., Brondel, R., Smedegaard, S., Holt, A.D., Skovgaard, T. Improving Children's Physical Self-Perception Through a School-Based Physical Activity Intervention: The Move for Well-Being in School Study. *Mental Health and Physical Activity*. 14, 31-38 (2018). 13Warburton, D.E. Nicol, C.W., Bredin, S.S.D. Health Benefits of Physical Activity: The Evidence. *CMAJ*. 174 (6), 801-809 (2006). 14Centers for Disease Control and Prevention. Benefits of Physical Activity. Atlanta, GA: U.S. Department of Health and Human Services (2021). 15Centers for Disease Control and Prevention. Health Benefits of Physical Activity for Children. Atlanta, GA: U.S. Department of Health and Human Services (2021). 16Boisseau, N., Delamarche, P. Metabolic and Hormonal Responses to Exercise in Children and Adolescents. *Sports Medicine*. 30, 405-422 (2000). 17Turley, K.R. Cardiovascular Responses to Exercise in Children. *Sports Medicine*. 24, 241-257 (1997). 18Pate, R.R., Hillman, C.H., Janz, K.F., Katzmarzyk, P.T. and 2018 Physical Activity Guidelines Advisory Committee, et al. Physical Activity and Health in Children Younger than 6 years old: A Systematic Review. *Medicine and Science in Sports and Exercise*. 51(6), 1282-1291 (2019). 19Watson, A., Timperio, A., Brown, H. et al. Effect of Classroom-Based Physical Activity Interventions on Academic and Physical Outcomes: A Systematic Review and Meta-Analysis. *Int J Behav Nutr Phys Act*, 14 144. (2017).



# INPACT at HOME

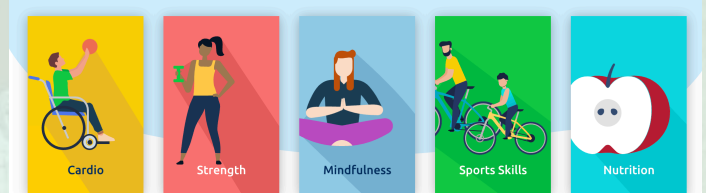


*Improving the health and well-being of Michigan children and their families*

**The need:** School closures during the COVID-19 pandemic eliminated many opportunities for youth to engage in structured exercise as many children lacked spaces to exercise or play sports in their neighborhoods.

**The partnership:** School district consultants, state and local legislators, regional school health coordinators, community outreach specialists, professional sports teams, behavioral interventionists, and implementation scientists across the state of Michigan came together to develop and disseminate a program to get kids moving at home.

**The program:** Interrupting Prolonged sitting with ACTivity (InPACT) at Home is an evidence-informed, home-based physical activity program that enables K-12 students to engage in health-enhancing physical activity during COVID-19 and beyond. The program includes a family engagement toolkit, physical activity play cards, which can be accessed in our interactive program website. Exercise videos are broadcast across the state on the Michigan Learning Channel.



Support for this program is provided in part by the Michigan Public Health Institute and the Michigan Department of Health and Human Services.



# How Families Can Support Their Child's Movement Journey

This document summarizes the different types of support that families can offer their child to encourage daily physical activity participation. They include:



**Emotional Support:** providing your child with encouragement for physical activities.

- Encourage your child to be active.
- Offer praise when your child is being physically active.
- Talk about the types of physical activities you and your child both enjoy.
- Watch your child participate in physical activities.
- Encourage a positive attitude around physical activity.



**Instrumental Support:** offering logistical support for physical activity participation.

- Provide financial support for physical activity (i.e., baseball fees).
- Provide transport to physical activities.
- Provide equipment for a child to be physically active (i.e., soccer cleats).
- Keep up to date on physical activity opportunities in your community.
- Create an InPACT at Home family account to provide access to physical activity videos.



**Informational Support:** providing feedback on physical activities.

- Provide instruction or advice on how to be physically active.
- Discuss why physical activity is important for health and well-being.
- Help your child find educational resources for physical activity.
- Demonstrate the correct form when engaging in physical activity (i.e., how to throw a football, shoot a basketball, or hit a softball).
- Volunteer to help coach your child's sports team.



**Co-Participation:** participating in activities with your child.

- Go for a walk together.
- Complete an InPACT at Home video together.
- Play a game together using the InPACT at Home play cards.
- Volunteer and participate in your child's school field day.
- Hold a family dance night where you dance to each member of the family's current favorite song or learn a new dance together.
- Sign up for a family 5k race.
- Complete the InPACT at Home Challenge Calendars together.
- Plan and participate in a family physical activity day.

Source: Laird, Y., Fawcner, S., Kelly, P. *et al.* The role of social support on physical activity behaviour in adolescent girls: a systematic review and meta-analysis. *Int J Behav Nutr Phys Act* **13**, 79 (2016).