



ADVANCING WELLNESS and RESILIENCE in EDUCATION

Information Brief

Physical Activity and its Contribution to Overall Well-Being for Students

INTRODUCTION AND STATISTICS

Research suggests children and adolescents do not exercise as frequently as experts recommend. For example, although the U.S. Department of Health and Human Services recommends that youth ages 6-17 take part in 60 minutes of moderate to vigorous physical activity daily,¹⁴ only one-fourth of youth ages 12-15 met this requirement in 2012.⁶ Furthermore, the National Health and Nutrition Examination Survey results suggest that children are engaged in sedentary activities for more than seven hours per day and become more sedentary with age.¹¹ When they are not active, children often spend time watching television and using computers, phones and tablets. Fortunately, parents and teachers can encourage healthier habits and influence the amount of physical activity that children participate in each day. This is promising because research has shown that physical activity impacts children's academic performance, social behavior, physical health, mental health and happiness.

IMPACT OF PHYSICAL ACTIVITIES ON CHILD AND ADOLESCENT OUTCOMES

Academics:

Many studies have found an association between physical activity and enhanced academic performance. A review of 125 observational and experimental studies provides support for the significant impact physical activity can have on students' cognitive functioning and academic performance.⁸ Despite the evidence that points to the positive effects of physical activity, an alarming trend is occurring as many schools report they are cutting programs involving physical activities due to a lack of resources and time.^{8,9} Similar results were found in a study that used a randomized, controlled design involving four schools. Two of the schools maintained a traditional schedule without curricular activity breaks, but the other two schools added 20 minutes of physical activity breaks into their day. The physical activity breaks had a positive effect on students' math and reading achievement.⁷ These studies suggest encouraging children to participate in physical activities can promote greater academic achievement.

Social Behavior:

Physical activity, whether through organized sports or active play, often promotes interactions among children, which can enhance the development of positive social behaviors. A study involving an inclusive physical education classroom examined the influence of physical activity on creating friendships between 16 children who were observed and later interviewed.¹² These findings suggest that exercise can allow for student interactions and bonds that are potentially more difficult to be formed in a regular classroom setting. Another study of 80 children ages 9-12 who were on competitive sports teams found that children reported their team involvement and team members had a positive influence on the development of their friendships.³ In addition, a study involving 88 high school students who associated with local sports teams supports this information.¹⁶ After having participants complete a survey, researchers concluded that adolescents who identified closer with sports teams had higher self-esteem, social integration and social well-being. Overall, whether students participate in everyday exercise such as playing kickball at recess or going to the gym with a friend or an organized community or school sports team, physical activity can be an effective way to encourage children and adolescents to develop friendships and practice social skills.

Physical Health:

According to the U.S. Department of Health and Human Services, research has provided strong evidence that children and adolescents who participate in physical activity have improved cardiorespiratory fitness, muscular fitness, bone health, cardiovascular and metabolic health biomarkers, and healthier body compositions. Researchers have also concluded that daily exercise can reduce the likelihood of developing chronic diseases in adulthood such as heart disease, type 2 diabetes, hypertension and osteoporosis.¹⁴ Again, these health benefits are most likely to occur when children participate in 60 minutes or more of physical activity each day that consists of aerobic, muscle-strengthening and bone-strengthening exercises.¹⁴ Overall, youth can receive numerous health benefits from routine exercise, and adults can help guide children into this healthy lifestyle.

Mental Health:

Numerous studies suggest physical activity can have a positive influence in reducing symptoms and preventing the development of mental health issues. In a study of 17 elementary school children who displayed at least four symptoms of ADHD, researchers found that adding 26 minutes of physical activity into the children’s daily routine for eight weeks resulted in behavioral improvements as reported by teachers, parents and program staff.¹³ Additionally, a meta-analysis that reviewed 73 studies found small but significant overall effects of physical activity on children’s mental health.¹ More specifically, increased physical activity reduced the risk of depression, anxiety, psychological distress and emotional disturbance among children.¹ Parents and teachers can help children by creating a supportive and encouraging environment toward exercise, which can lead to better mental health outcomes for students.

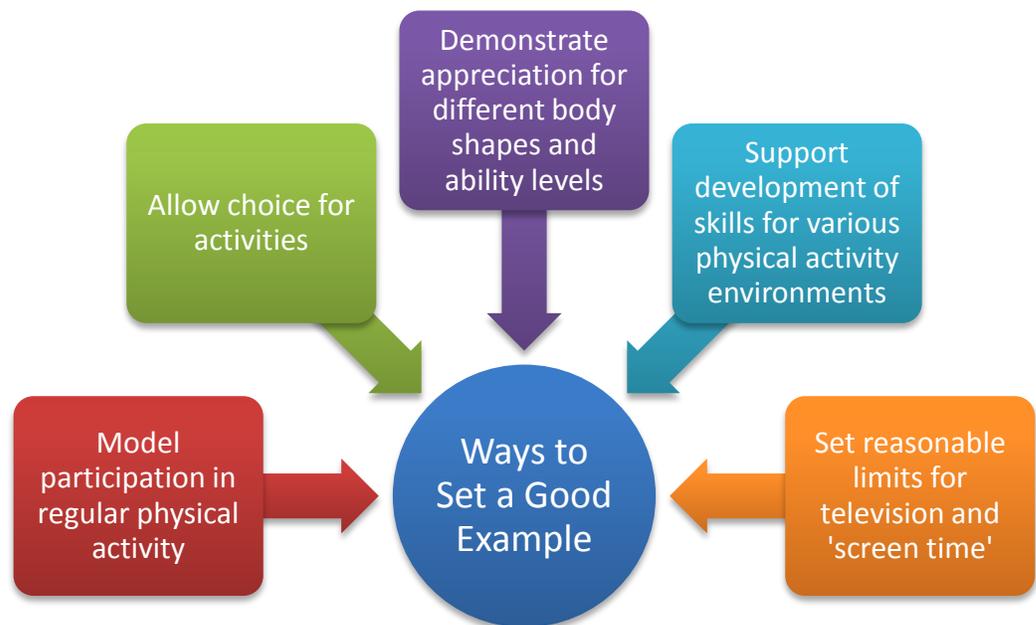
Happiness:

Another benefit many individuals experience with physical activity is an overall increase in happy feelings. A study involving approximately 1,500 students in Norway found that students who exercised at least two to three times per week reported feeling less stressed and happier compared to students who reported participating in physical activity only once a week or less. Results were similar for both girls and boys.¹⁰ Throughout life, many people strive to be happy and physical activity is a simple way to help achieve that feeling.

HELP AND SUPPORT FROM PARENTS AND SCHOOLS

Parents:

There are many ways that parents can impact their children’s physical activity, behaviors and attitudes. In fact, simply having a positive attitude toward exercise and being supportive of active lifestyles encourages this behavior, as children often learn behaviors by watching others.^{5, 15} In addition, engaging with children during physical activities can help maintain their interest in and appreciation for physical activity.¹⁵ Parents serve as role models for their children, and something such as turning off a TV once a show has finished can even be learned at a young age. Parents also should consider encouraging activities that are age appropriate, enjoyed by the child, tailored to the physical and intellectual skills of the child, and are varied in their nature. Some additional suggestions regarding how parents can set good examples are provided to the right:²



Additional tips for parents are provided in the table below:

Tips from the CDC (2015)
Build physical activities into your family's schedule.
Provide children with equipment that encourages physical activity.
Travel to places that allow children to be active (i.e., public parks, sporting fields, etc.).
Make exercise fun, engaging and connected to the child's interests.

School Staff:

There are many ways teachers and other school staff can motivate students to lead physically active and healthy lives. Like parents, educators also are often viewed as role models to students, and their exercise habits can influence their students.⁴ Aside from a physical education class period, there are many things that can be done in a classroom setting to promote physical activity. For example, teachers can include movement within lesson plans and provide time for students to move around between activities.⁴ Additionally, in order to promote positive views of exercise, it should never be used to punish misbehavior or poor academic performance.⁴ Some other recommendations for teachers are provided in the table below:

Recommendations from the CDC (2011)
Have students walk around the room as you read a book aloud. Ask them to identify verbs they hear by physically acting them out.
Incorporate walks as part of science lessons.
During class, teach students about exercise and the importance of it.
Collaborate with the physical education teacher about how to encourage physical activity throughout the day.
Provide equipment and organize games that promote physical activity during recess.
Be creative and think of how to provide opportunities to be active when students cannot go outside for recess due to weather.

CONCLUSION:

Altogether, students need to exercise and find joy in being active. As parents and school staff work together to encourage this behavior on a regular basis, students are more likely to achieve better academic performance levels, lead happier lives, form more positive relationships, and experience better physical and mental health outcomes.

ADDITIONAL WEBSITES FOR PARENTS:

- <http://kidshealth.org/en/parents/active-kids.html>
- <http://www.letsmove.gov/parents>
- <https://www.healthychildren.org/English/healthy-living/fitness/Pages/Encouraging-Your-Child-to-be-Physically-Active.aspx>

ADDITIONAL WEBSITES FOR EDUCATORS:

- http://www.cdc.gov/healthyyouth/health_and_academics/pdf/pape_executive_summary.pdf
- <http://www.letsmove.gov/active-schools>
- https://schools.healthiergeneration.org/getting_youth_active_blog/2014/03/24/893/five_tips_to_increase_students_physical_activity

REFERENCES

1. Ahn, S., & Fedewa, A. (2011). A meta-analysis of the relationship between children's physical activity and mental health. *Journal of Pediatric Psychology, 36*(4), 385-397. doi:10.1093/jpepsy/jsq107
2. Better Health Channel. (2016). *Children- keeping them active*. Retrieved from <https://www.betterhealth.vic.gov.au/health/healthyliving/children-keeping-them-active>
3. Bigelow, B. J., Lewko, J. H., Salhani, L. (1989). Sport-involved children's friendship expectations. *Journal of Sport and Exercise Psychology, 11*(2), 152-160. doi:10.1123/jsep.11.2.152
4. Center for Disease Control. (2011). *Tips for teachers: Promoting healthy eating & physical activity in the classroom*. Retrieved from http://www.cdc.gov/healthyyouth/npao/pdf/tips_for_teachers_tag508.pdf
5. Center for Disease Control. (2015). *Making physical activity a part of a child's life*. Retrieved from <http://www.cdc.gov/physicalactivity/basics/adding-pa/activities-children.html>
6. Fakhouri T., Hughes J. P., Burt V. L.,...& Ogden, C. L. (2014). Physical activity in U.S. youth aged 12–15 years, 2012. NCHS data brief, no 141. Hyattsville, MD: National Center for Health Statistics.
7. Fedewa, A. L., Ahn, S., Erwin, H., Davis, M. C. (2015). A randomized controlled design investigating the effects of classroom-based physical activity on children's fluid intelligence and achievement. *School Psychology International, 36*(2), 135-153. doi:10.1177/0143034314565424
8. Howie, E. K., Pate, R. R. (2012). Physical activity and academic achievement in children: A historical perspective. *Journal of Sport and Health Science, 1*(3), 160-169. doi:10.1016/j.jshs.2012.09.003
9. Lee, S. M., Burgeson, C. R., Fulton, J. E., & Spain, C. G. (2007). Physical education and physical activity: Results from the School Health Policies and Programs Study 2006. *Journal of School Health, 77*(8), 435-463.
10. Molijord, I. E., Moksnes, U. K., Eriksen, L., & Espnes, G. A. (2011). Stress and happiness among adolescents with varying frequency of physical activity. *Perceptual and Motor Skills, 113*(2), 631-646. doi:10.2466/02.06.10.13.PMS.113.5.631-646
11. National Physical Activity Plan. (2014). 2014 US Report Card on Physical Activity for Children and Youth. Retrieved from <http://www.physicalactivityplan.org/projects/reportcard.html>
12. Seymour, H., Reid, G., Bloom, G. A. (2009). Friendship in inclusive physical education. *Adapted Physical Activity Quarterly, 26*(3), 201-219. doi:10.1123/apaq.26.3.201
13. Smith, A. L., Hoza, B., Linnea, K., McQuade, J. D., Tomb, M., Vaughn, A. J., ... & Hook, H. (2013). Pilot physical activity intervention reduces severity of ADHD symptoms in young children. *Journal of Attention Disorders, 17*(1), 70-82.
14. U.S. Department of Health and Human Services. (2008). *2008 Physical Activity Guidelines for Americans*. Washington, DC: U.S. Department of Health and Human Services. Retrieved from <https://health.gov/PAGUIDELINES/pdf/paguide.pdf>

15. U.S. Department of Health and Human Services. (2012). How Parents Can Be Role Models for Healthy Living. Retrieved from <https://health.gov/paguidelines/blog/post/Parents-Should-Be-Role-Models-for-Healthy-Living.aspx>
16. Wann, D. L., Brasher, M., Thomas, D. L., Scheuchner, H. L. (2015). Generalizing the team identification: Social psychological health model for adolescents. *Journal of Sport Behavior*, 38(3), 339-355. doi:10.1037/1089-2699.7.4.289

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