

# The benefits of physical activity How The Daily Mile can help

Taking part in regular physical activity has lots of benefits for children's physical health, mental health and wellbeing, and their learning.<sup>1</sup>





It improves **bone health** and **muscle strength** in children.<sup>2</sup>



It helps reduce anxiety and increases confidence. 9, 10

It enhances fitness and improves heart health.<sup>3, 4</sup>



It improves focus and concentration<sup>11</sup> and can

The benefits of being active are clear but we know that one third of children are active for less than 30 minutes a day.<sup>19</sup> Global recommendations from the World Health Organisation outline that children should be doing 60 minutes of physical activity every day. <sup>20</sup>

The Daily Mile is a simple and free initiative for schools and nurseries. Children run or jog at their own pace, for just 15 minutes every day, outside with their friends. There's no extra workload for teachers, and no need for kit or special equipment - children take part in whatever they're wearing.



promotes healthy body composition.4, 5



It improves memory function,<sup>3</sup> maths problem solving and performance.<sup>13, 14</sup>



Ilt supports self-esteem and happiness.<sup>6, 7, 8</sup>



It supports improved academic attainment <sup>15</sup> and cognitive performance.<sup>16, 17, 18</sup>

#### More than 11,000 schools are already registered for The Daily Mile in 78 countries.

A growing network of researchers around the world are studying the benefits of The Daily Mile. The emerging research has been published in many academic journals and online too. Schools and teachers like The Daily Mile because it's simple to implement, flexible and works in a variety of settings.<sup>21</sup> We also know that The Daily Mile has lots of benefits for children's physical health and wellbeing, mental health and wellbeing, and their learning:

### ... physical health and wellbeing

The Daily Mile helps children be more active and less sedentary <sup>22, 23</sup> and significantly increases their fitness levels. 22, 24, 25, 26, 27 The Daily Mile improves children's body composition by reducing body fat <sup>22</sup>, and has a positive impact on body mass index in girls.<sup>28</sup>

#### ... mental health and wellbeing

Children report feeling happier, more awake and calmer after doing The Daily Mile <sup>27, 29, 30</sup> and **improves** attitudes towards physical activity. 27

Teachers report that The Daily Mile improves teacher-child and peer-to-peer relationships.

### learning

The Daily Mile increases children's alertness and can help increase verbal memory these skills enhance children's

Daily Mile helps children's attention, focus and concentration in class 31, 32, <sup>33, 34</sup> and its social nature supports children to work better together. <sup>27, 35</sup>

### Find out more

To find out more about The Daily Mile, the research for the initiative, or to register your setting, head to our website: www.thedailymile.co.uk

# **Research references**

To learn more about the studies listed in this resource you can find the details below.

- Department of Health, Physical Activity and Health Improvement and Protection, "Start Active, Stay Active: A report on physical activity from the four home countries' Chief Medical Officers," www.gov.uk, 2011.
- C. W. Slemenda, J. Z. Miller, S. L. Hui, T. K. Reister and C. C. Johnston Jr., "Role of physical activity in the development of skeletal mass in children," Journal of Bone Mineral Research, vol. 6, pp. 1227-1233, 1991.
- N. A. Proudfoot, S. King-Dowling, J. Cairney, S. R. Bray, M. J. MacDonald and B. W. Timmons, "Physical Activity and Trajectories of Cardiovascular Health Indicators During Early Childhood," Pediatrics, vol. 144, no. 1, p. e20182242, 1 7 2019.
- I. Janssen and A. G. LeBlanc, "Systematic review of the health benefits of physical activity and fitness in school-aged children and youth," International Journal of Behavioral Nutrition and Physical Activity, vol. 7, no. 1, p. 40, 5 2010.
- L. B. Sardinha, A. Marques, C. Minderico and U. Ekelund, "Crosssectional and prospective impact of reallocating sedentary time to physical activity on children's body composition,"
- M. Liu, L. Wu and Q. Ming, "How Does Physical Activity Intervention
- M. Liu, L. Wu and Q. Ming, How Does Physical Activity Intervention Improve Self-Esteem and Self-Concept in Children and Adolescents? Evidence from a Meta-Analysis," PLOS ONE, vol. 10, no. 8, p. e0134804, 4 8 2015.
- J. Richards, X. Jiang, P. Kelly, J. Chau, A. Bauman and D. Ding, "Don't worry, be happy: Cross-sectional associations between physical activity and happiness in 15 European countries," BMC Public Health, vol. 15, no. 1, 2015.
- M. D. Holder, B. Coleman and Z. L. Sehn, "The Contribution of Active and Passive Leisure to Children's Well-being," Journal of Health Psychology, vol. 14, no. 3, pp. 378-386, 1 4 2009.
- S. J. H. Biddle and M. Asare, "Physical activity and mental health in children and adolescents: a review of reviews," British Journal of Sports Medicine, vol. 45, no. 11, pp. 886-95, 1 9 2011.
- L. Larun, L. V. Nordheim, E. Ekeland, K. B. Hagen and F. Heian, "Exercise in prevention and treatment of anxiety and depression among children and young people," Cochrane Database of Systematic Reviews, 19 7 2006.
- A. L. Fedewa and S. Ahn, "The effects of physical activity and physical fitness on children's achievement and cognitive outcomes:a metaanalysis," Research Quarterly for Exercise and Sport, vol. 82, no. 3, pp. 521-535, 9 2011.
- A. J. Daly-Smith, S. Zwolinsky, J. McKenna, P. D. Tomporowski, M. A. Defeyter and A. Manley, "Systematic review of acute physically active learning and classroom movement breaks on children's physical activity, cognition, academic performance and classroom behaviour: understanding critical design features," BMJ Open Sport & Exercise Medicine, vol. 4, no. 1, p. e000341, 27 3 2018.
- R. Mualem, G. Leisman, Y. Zbedat, S. Ganem, O. Mualem, M. Amaria, A. Kozle, S. Khayat-Moughrabi and A. Ornai, "The Effect of Movement on Cognitive Performance," Frontiers in Public Health, vol. 6, 20 4 2018.
- E. K. Howie, J. Schatz and R. R. Pate, "Acute Effects of Classroom Exercise Breaks on Executive Function and Math Performance: A Dose-Response Study," Research Quarterly for Exercise and Sport, vol. 86, no. 3, pp. 217-224, 3 7 2015
- A. Singh, L. Uijtdewilligen, J. W. R. Twisk, W. van Mechelen and M. J. M. Chinapaw, "Physical Activity and Performance at School: A Systematic Review of the Literature Including a Methodological Quality Assessment," Archives of Pediatrics and Adolescent Medicine, vol. 166, no. 1, pp. 49-55, 2012.
- J. E. Donnelly and K. Lambourne, "Classroom-based physical activity, cognition, and academic achievement," Preventive Medicine, vol. 52, pp. S36-S42, 2011.

- A. Diamond and K. Lee, "Interventions shown to aid executive function development in children 4 to 12 years old," Science, vol. 333, no. 6045, pp. 959-964, 2011.
- I. Bidzan-Bluma and M. Lipowska, "Physical Activity and Cognitive Functioning of Children: A Systematic Review," International journal of environmental research and public health, vol. 15, no. 4, p. 800, 4 2018.
- Sport England, "Active Lives Children and Young People Survey," 2018. [Online]. Available: https://www.sportengland.org/ media/13698/active-lives-children-survey-academic-year-17-18.pdf.
- World Health Organization, "Global recommendations on physical activity for health," 2010. [Online]. Available: https://www.who.int/ dietphysicalactivity/publications/physical-activity-recommendations-5-17years.pdf.
- G. C. Ryde, J. N. Booth, N. E. Brooks, R. A. Chesham, C. N. Moran and T. Gorely, "The Daily Mile: What factors are associated with its implementation success?," PLOS ONE, vol. 13, no. 10, p. e0204988, 4 10 2018.
- R. A. Chesham et al., "The Daily Mile makes primary school children more active, less sedentary and improves their fitness and body composition: A quasi-experimental pilot study," BMC Med., vol. 16, May 2018, doi: 10.1186/s12916-019-1336-3.
- J. L. Morris, A. Daly-Smith, V. S. Archbold, E. L. Wilkins, and J. McKenna, "The Daily MileTM initiative: Exploring physical activity and the acute effects on executive function and academic performance in primary school children," Psychology of Sport and Exercise, vol. 45. Elsevier Ltd, 01-Nov-2019, doi: 10.1016/j.psychsport.2019.101583.
- P. R. Brustio et al., "The daily mile: 15 minutes running improves the physical fitness of italian primary school children," Int. J. Environ. Res. Public Health, vol. 16, no. 20, Oct. 2019, doi: 10.3390/ijerph16203921.
- P. R. Brustio, A. Mulasso, C. Lupo, A. Massasso, A. Rainoldi, and G. Boccia, "The Daily Mile Is Able to Improve Cardiorespiratory Fitness When Practiced Three Times a Week," Int. J. Environ. Res. Public Health, vol. 17, no. 6, p. 2095, 2020, doi: 10.3390/ijerph17062095.
- M. de Jonge, J. J. Slot-Heijs, R. G. Prins, and A. S. Singh, "The effect of the daily mile on primary school children's aerobic fitness levels after 12 weeks: A controlled trial," Int. J. Environ. Res. Public Health, vol. 17, no. 7, 2020, doi: 10.3390/ijerph17072198.
- E. Marchant, C. Todd, G. Stratton, and S. Brophy, "The Daily Mile: Whole-school recommendations for implementation and sustainability. A mixed-methods study," PLoS One, vol. 15, no. 2, p. e0228149, Feb. 2020, doi: 10.1371/journal.pone.0228149.
- K. Breheny et al., "Effectiveness and cost-effectiveness of The Daily Mile on childhood weight outcomes and wellbeing: a cluster randomised controlled trial," Int. J. Obes., Jan. 2020, doi: 10.1038/ s41366-019-0511-0.
- 29. A. S. Slot-Heijs, J.J., Singh, "The Daily Mile," 2019.
- J. N. Booth, R. A. Chesham, N. E. Brooks, T. Gorely, and C. N. Moran, "A citizen science study of short physical activity breaks at school : improvements in cognition and wellbeing with self-paced activity," pp. 1-11, 2020.
- S. Malden and L. Doi, "The Daily Mile: teachers' perspectives of the barriers and facilitators to the delivery of a school-based physical activity intervention," BMJ Open, vol. 9, no. 3, p. e027169, Mar. 2019, doi: 10.1136/BMJOPEN-2018-027169.

 B. Hanckel, D. Ruta, G. Scott, J. L. Peacock, and J. Green, "The Daily Mile as a public health intervention: a rapid ethnographic assessment of uptake and implementation in South London, UK," BMC Public Health, vol. 19, no. 1, p. 1167, Dec. 2019, doi: 10.1186/s12889-019-7511-9.

- S. Sykes, "Miles Ahead: A project exploring the impact of 'The Daily Mile' exercise programme, as part of the school routine, on pupils' learning," 2016.
- G. C. Ryde, J. N. Booth, N. E. Brooks, R. A. Chesham, C. N. Moran, and T. Gorely, "The Daily Mile: What factors are associated with its implementation success?," PLoS One, vol. 13, no. 10, p. e0204988, Oct. 2018, doi: 10.1371/journal.pone.0204988.

35. D. Scholten, Vera: Collard, "Evaluatie van The Daily Mile," 2017.