



# Generation Inactive

An analysis of the UK's childhood inactivity epidemic and tangible solutions to get children moving



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**“Measurement is the first step that leads to control and eventually to improvement. If you can’t measure something, you can’t understand it. If you can’t understand it, you can’t control it. If you can’t control it, you can’t improve it.”**

H. James Harrington



## Foreword

### Baroness Tanni Grey-Thompson

Chair of the board, ukactive

**Most of my life has been spent as a Paralympic athlete, competing at the highest level and pushing my body and willpower to its limits. In such environments a burning passion for physical activity is required to keep up with the relentless demands of training and competing. This passion for physical activity led me to the position of Chair of ukactive, the leading campaigning body for physical activity in all its forms in the UK. It's my pleasure to be able to support the organisation on its mission to get more people, more active, more often.**

My first month as Chair of ukactive saw the official launch of ukactive Kids, a new wing of ukactive committed to the fight against childhood inactivity. The integration of Compass, a prominent trade association that represented children's activity providers into ukactive, was the catalyst for the formation of ukactive Kids. As a result of this integration the organisation has gained an army of leading children's activity experts, many of whom work tirelessly throughout the year in schools and beyond, instructing, encouraging and inspiring young people to love activity. Complementing the thousands of organisations in the ukactive network who have already delivered outstanding services and support for young people, this new group of ukactive members brings to ukactive first-hand experience of the most enjoyable and successful methods of engaging even the most inactive children.

Across the political divide, there is growing recognition that our health service is unsustainable unless we get a grip on the rising demand caused by lifestyle-related diseases, of which inactivity (along with obesity, smoking and alcohol) is a major cause. With a stretched National Health Service, and with inactivity said to cost the UK economy £20 billion per year, it is simply unsustainable to sit back and allow inactive children to grow into inactive adults. Action must be taken now to halt the rise of what Lord Sebastian Coe described as the 'least active generation in history'.

ukactive Kids will be unwavering in its drive to serve the interests of children and young people from the very early years, pre and post-natal, through to teens. This means our focus is as much on pre-school as children at school; therefore, involving families as well as teachers.

Simply put, our call is that when it comes to health, no child will be left behind by condemning them to a life of inactivity.

To ensure we get more children, more active, more often, I will ensure that ukactive Kids works with a wide range of children's activity stakeholders, government bodies, respected charities, the academic community and other dedicated partners. We will pool together knowledge and resources and set the wheels in motion for change. We look forward to working with the many committed organisations who share in the mission to improve the health of the nation's children.

'Generation Inactive', ukactive Kids' inaugural publication, establishes the state of the challenge ahead and highlights the enormity of the problem of childhood inactivity and lack of control we currently have of the situation. It explores the methods that primary schools and primary academies in England use to track and monitor the activity and fitness levels of their pupils; from formal measurement of motor-skills and children's cardiorespiratory condition to the basic awareness of the time children spend in PE. It finds that less than half the schools surveyed knew how much actual time children spent being physically active in PE when time spent changing etc. was excluded. At best, we are measuring solely the inputs into a system, as opposed to having any regard for the outcome, even though the outcome we seek is a healthy childhood that sets young people up for a healthy life. It is the equivalent of measuring the impact of maths lessons by counting the number of hours in the timetable, rather than whether a child can count.

The report sets out recommendations that show how we can encourage children to get more physically active. It stresses the need for a better understanding of children's activity and fitness levels so that targeted and evidence based action can be taken to improve children's health.

Parents have an absolutely crucial role in taking responsibility at home and also demanding change elsewhere. Currently parents have an awareness of how their children are progressing in core subjects such as English and Maths. This same importance is not afforded to their children's fitness or activity levels with very little formal measurement or tracking. It's time to ensure that no child is left behind by depriving them of physical activities. With personal attention, engagement and support all children must be encouraged to enjoy activity before they're turned off for life.

If a child is at risk of leaving school unable to read, special measures are taken to address it. If a child is at risk of leaving school unable to grasp the basic tenets of a healthy lifestyle, no effort is made to address this, condemning the NHS to pick up the bill and the inevitability of the end of a health service free at the point of need.

I hope that with the combined efforts of ukactive Kids and a diverse range of stakeholders we can stop the emergence of 'Generation Inactive' so that our young people can have a brighter and healthier future. This can be achieved by alignment in our objectives around improving the health and wellbeing of young people. From the establishment of that goal, everything else is possible as we work together to get more children, more active, more often.





# Foreword

Professor Sir Al Aynsley-Green

Professor Emeritus of Child health,  
University College London

**I** welcome this report from ukactive Kids in shedding light upon the problem of childhood inactivity in the UK and how this is unsustainable for the future of our public services let alone for the health, wellbeing and longevity of children, our most precious resource.

I served as Children's Commissioner for England from 2005-2010 so know first-hand about the many unique issues young people face today. From the distractions of new and easily accessible technology to safety concerns about playing outdoors, the barriers to the essential daily physical activity needed to keep children healthy and happy seem far more pronounced for today's children than they were for my generation.

Whether walking, cycling or being active in and out of PE lessons, providing children with opportunities to be active throughout the day, before, during and after school, is key to engaging even the most disengaged children.

The way children's physical activity is often viewed in this country also fails to help its promotion. All too often childhood physical activity is seen as a small factor in the wider obesity epidemic which fails to acknowledge the numerous benefits and overwhelming importance of physical activity in its own right that lie outside of weight management alone.

February 2015 saw the release the Health Select Committee's report looking into the impact of physical activity and diet on health. The report was clear on the fact that physical activity is worth dis-cussing in its own right, and I hope we can move on at the top level to talk about how we actually begin the process of getting young people and the entire nation moving.

With recent research suggesting that half of seven year olds are not achieving the 60 minutes of daily activity recommended by the chief medical officer, now more than ever it's important to know how active our kids are.

The evidence base for children's physical activity is in its infancy when compared to what is known about adult activity so if the formal tracking of physical activity and fitness is not common place within schools as this report suggests, we will not have a baseline to track which initiatives are most effective in halting the rise of generation inactive.

Protecting and ensuring the future health of our children has to be everybody's business - families, communities, faiths, schools, voluntary organisations as well as local and national government. We cannot afford to continue to ignore the consequences of inactivity in childhood. This report is timely and deserves to be taken with the utmost seriousness. Monitoring the impact of this report is crucially important."

# Introduction

**Generation Inactive' establishes the state of the challenge ahead and highlights how little grip we currently have on the scale of the problem of childhood inactivity. It explores the current understanding of children's physical activity in Primary Schools and investigates the measures that are used to track the activity and fitness levels of pupils.**

In conducting research for this report, ukactive has surveyed, via a series of Freedom of Information requests, a regional spread of the highest performing primary schools and primary academies throughout England to discover the extent to which schools are monitoring physical activity both during schools hours and as part of the curriculum. We wanted to know the assessment that was being made of the outcomes and successes that schools were having in enhancing the health and wellbeing of their students by getting more children, more active, more often.

We found widespread attempts to assess impact. Within the 2013/14 academic year, this tracking ranged from the very basic monitoring of the amount of time children spend in PE lessons and awareness of the number of children who take part in extracurricular physical activity, to the more advanced measurement of motor skills and children's cardiovascular condition.

Our overarching finding was that more could be done to support both primary schools and primary academies on this agenda.

Primary schools are currently failing to track the fitness and activity levels of pupils, data which is essential to establish children's physical health. Current assessment and tracking of fitness and activity levels is far behind the data that is recorded for other key elements of the curriculum such as Maths, Science or English. Without this key data it is not possible to measure the impact of new strategies, set benchmarks or compare performance against similar schools, local areas or against the national average. This type of data is crucial in making any evidence based decisions in a business setting, yet decisions as important as improving the health and wellbeing of children are being taken without this support and guidance.

This stark finding comes at a time when the government has committed an additional £150 million per year towards Physical Education and Sport via the PE & Sport Premium,<sup>1</sup> and are continuing to measure the Body Mass Index of children via the National Child Weight Measurement Programme.<sup>2</sup> There is little

doubting the commitment of Government and stakeholders to address the issue of health and wellbeing of children.

Figures in 2013 show that half of seven year olds are not meeting the recommended 60 minutes of daily physical activity highlighted in the Chief Medical Officer's guidelines for children.<sup>3</sup> We know that even greater numbers fail to meet recommended guidelines as children enter their teens when drop-off rates in activity accelerate.

This drop off is most pronounced in teenage girls and results in the predicament we find ourselves in with two million fewer active women than men.<sup>4</sup> This inactivity which establishes itself in adolescence continues into adulthood resulting in the need for campaigns such as the outstanding This Girl Can by Sport England.

Physical activity is a "miracle cure"<sup>5</sup> as the Academy of Royal Medical Colleges recently stated, and is able to treat, prevent and manage up to twenty different lifestyle conditions such as many cancers, diabetes and heart disease as well as support mental health and wellbeing and the prevention of the onset of dementia.<sup>6</sup> Furthermore, an increasing body of evidence shows that young children who are more physically active are more likely to achieve higher academic success, less likely to develop mental health problems, and less likely to start participating in risky lifestyle behaviours such as smoking<sup>7</sup> than children who are more sedentary.

Such varied benefits emphasise the importance of combating the rise of a generation inactive by ingraining an appreciation for physical activity in even the most disengaged youngsters.

This debate is not simply about fatness and obesity.<sup>8</sup> The evidence in this area is clear: to address obesity we must promote portion control, enhance food quality and promote healthy snacking and incorporate an active lifestyle to maintain healthy weight and reinforce healthy habits and decisions.

To turn the tide of inactivity which leads to twice as many premature deaths as obesity, we have to target it effectively in an evidenced based way, from the earliest possible point which starts during pregnancy but reaches its peak during school years.

The report also addresses the debate around the formal measurement of children's fitness which has been an area of hot debate.

- 1 Department for Education (2014) - <https://www.gov.uk/government/news/150-million-to-boost-primary-school-sport>
- 2 Public Health England (2014), National Child Measurement Programme Operational Guidance - [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/377902/NCMP\\_operational\\_guidance.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/377902/NCMP_operational_guidance.pdf)
- 3 Griffiths LJ, Cortina Borja M, Sera F, et al. How active are our children? Findings from the Millennium Cohort Study. BMJ Open 2013; 3:e002893. doi:10.1136/bmjopen-2013-002893
- 4 <https://www.sportengland.org/our-work/national-work/this-girl-can/> (Accessed May 19th 2015)
- 5 Academy of Royal Medical Colleges(2015), Exercise: The miracle cure and the role of the doctor in promoting it
- 6 Department of Health (2011), Start Active, Stay Active: A report on physical activity for health from the four home countries' Chief Medical Officers
- 7 ukactive (2014), Start Young Stay Active, Childhood physical literacy report
- 8 Ekelund, U et al. Activity and all-cause mortality across levels of overall and abdominal adiposity in European men and women: the European Prospective Investigation into Cancer and Nutrition Study (EPIC). American Journal of Clinical Nutrition; 14 Jan 2015 - <http://www.cam.ac.uk/research/news/lack-of-exercise-responsible-for-twice-as-many-deaths-as-obesity#sthash.Wq1YpcEV.dpuf>



There is a need to significantly redefine the existing dialogue and the outcomes we are trying to achieve around children's activity and fitness.



# Introduction (continued)

This report highlights the weaknesses in the arguments against such measures and explores the numerous benefits stressed by many within the academic community.

This report comes out strongly in favour of the formal measurement of children's fitness as long as it can be done in a fun, inspiring and engaging way.

The Generation Inactive report follows ukactive's previous publication Steps to Solving inactivity, which revealed that 29 per cent of people in England are classed as physically inactive.<sup>9</sup> This means that more than one in four people fails to achieve 30 minutes of moderate intensity activity per week. Together with its preceding report, "Turning the Tide of Inactivity", it has led to inactivity being commonly recognised as a top tier public health priority, with local authority public health teams rising to the challenge to address it with substantial investment within a 12 month period.<sup>9</sup>

According to the World Health Organisation inactivity is the fourth largest cause of premature death and directly contributes to one in six deaths in the UK making it as dangerous as smoking.<sup>10</sup> Inactivity is not simply a UK problem. It is a challenge impacting every developed country across the world. As nations become more prosperous, they sit down and exert less energy.

Inactivity significantly enhances the risk of developing up to twenty lifestyle related diseases.<sup>6</sup> A recent study by Cambridge University, the largest of its kind, showed that irrespective of weight, inactivity was twice as significant an indicator of premature mortality than BMI, (Body Mass Index) the measurement for assessing obesity.<sup>8</sup>

The case for addressing the inactivity pandemic is well established. Logic would suggest that preventing its growth by stimulating fun, inspiring and engaging memories of an active childhood would lead to healthy, happy and active lifestyles in adulthood.

Despite what we know about the inactivity and the culture of sedentary behaviour in the UK, relatively little is known about the activity and fitness levels of children. The Active People Survey, the largest national investigation into levels of activity, does not capture data for children under fourteen years of age<sup>11</sup> and is

a tool designed for other purposes. Without this information we are unable to guide decisions and measure the impact of new strategies.

In an age where there are a multitude of sedentary activities and technology to keep children entertained which only makes this job harder, we need to redefine the existing dialogue and the outcomes we are trying to achieve around children's activity and fitness.

The current national ambition is to achieve at least two hours per week of high quality PE and sport in school for all aged five to sixteen.<sup>12</sup> This has been a struggle for schools to achieve despite the fact that it now has broad cross party support.<sup>13</sup>

This ambition is not bold enough. We should aim higher and demand more. Rather the focus should be on ensuring that children are given all the necessary support possible in order to achieve the 60 minutes of daily activity recommended in the Chief Medical Officer's guidelines.<sup>6</sup> This does not mean we wish to see 60 minutes of timetabled PE per day. Instead, we are calling for a focus on a "whole school approach" which is as interested in the means in which children travel to and from school, the manner in which they integrate activity as simple as standing in lessons, the development of more effective and structured use of play time opportunities, the provision of pre and post school activities. Schools which have adopted such an approach have had outstanding success in enhancing the health and wellbeing of the students as well as their educational attainment.<sup>14</sup>

It would be considered as unacceptable if a child was allowed to leave school without parents and teachers having a basic understanding of their ability in Maths and English, yet we appear willing to accept the concept of children leaving primary school without a formal understanding of their fitness levels and the impact this could have in later life in contributing to the inevitable strain on our National Health Service and a significantly worse quality of life.

The first step in turning the tide on Generation Inactive and ensuring that children of all backgrounds are given the opportunity to lead a healthy, happy lifestyle is to gain an understanding of which approaches work when it comes to getting kids active and the true extent of physical literacy in Primary Schools across the UK.

9 ukactive (2014), Steps to solving inactivity

10 World Health Organization (2010), Global Recommendations on Physical Activity for Health - [http://whqlibdoc.who.int/publications/2010/9789241599979\\_eng.pdf](http://whqlibdoc.who.int/publications/2010/9789241599979_eng.pdf)

11 <https://www.sportengland.org/research/about-our-research/what-is-the-active-people-survey/> (Accessed May 19th 2015)

12 National Institute for Health Care Excellence (2009), Promoting physical activity for children and young people - <https://www.nice.org.uk/guidance/ph17/resources/guidance-promoting-physical-activity-for-children-and-young-people-pdf>

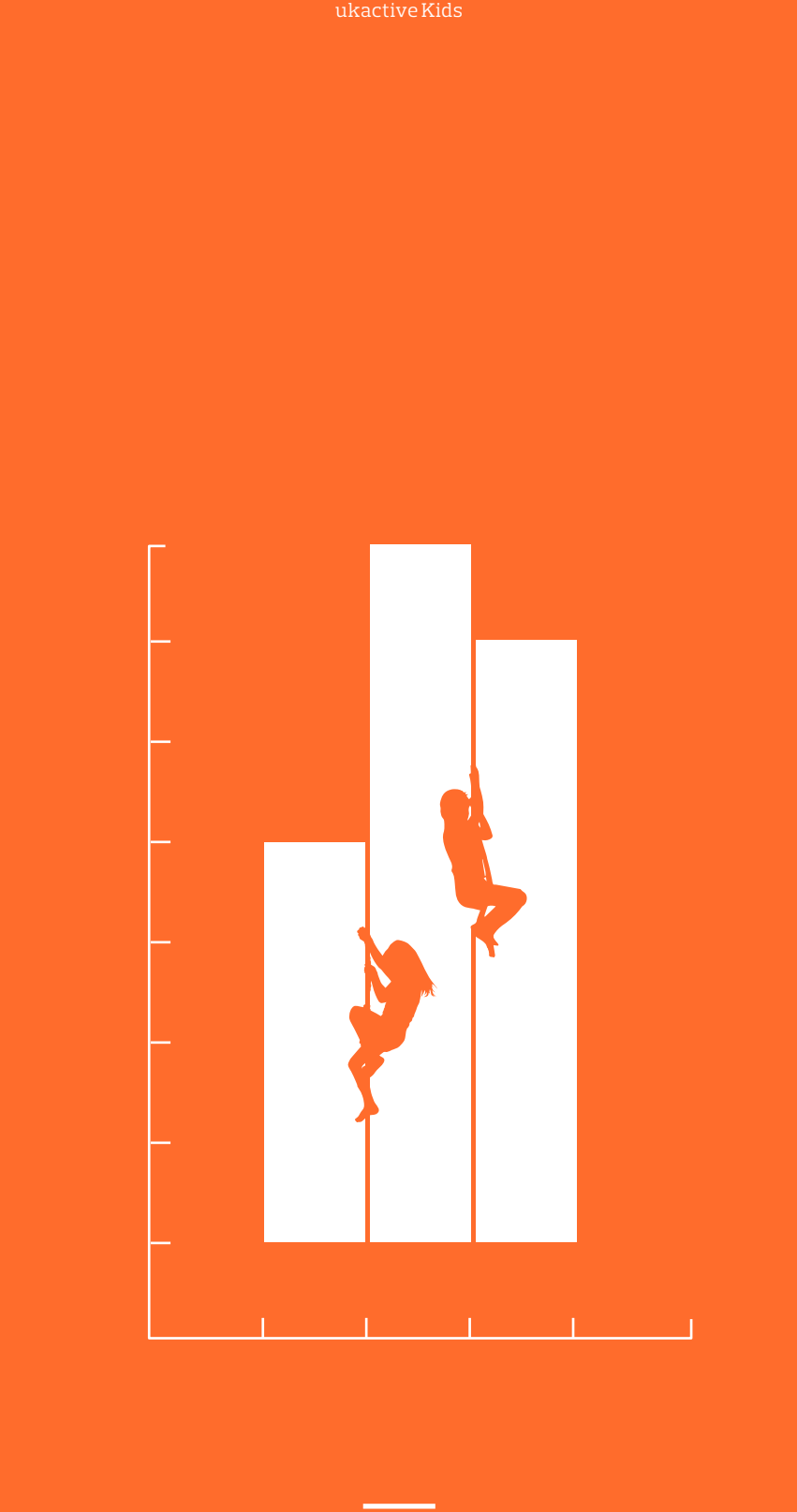
10 <http://www.telegraph.co.uk/sport/othersports/schoolsports/11343801/Alarming-fall-in-school-PE-lessons-casts-doubt-over-governments-commitment-to-tackling-obesity-crisis.html> (Accessed March 13th 2015)

11 <https://www.sportengland.org/research/about-our-research/what-is-the-active-people-survey/> (Accessed May 19th 2015)

12 National Institute for Health Care Excellence (2009), Promoting physical activity for children and young people - <https://www.nice.org.uk/guidance/ph17/resources/guidance-promoting-physical-activity-for-children-and-young-people-pdf>

13 <http://www.telegraph.co.uk/sport/othersports/schoolsports/11343801/Alarming-fall-in-school-PE-lessons-casts-doubt-over-governments-commitment-to-tackling-obesity-crisis.html> (Accessed March 13th 2015)

14 ukactive (2015), Generation Inactive, Montpellier Primary School Case Study



It would be considered as unacceptable if a child was allowed to leave school without parents and teachers having a basic understanding of their ability in Maths and English, yet we appear willing to accept the concept of children leaving primary school without a formal understanding of their fitness levels and the impact this could have in later life.

# The least active generation in history

Lord Sebastian Coe, Chairman of the London Olympic Games Commission stated in 2012 that today's children are the “least active generation in history”<sup>15</sup> and could be the first generation in existence to have a shorter life expectancy than that of their parents.

The All Party Commission on physical activity, established in October 2013, consists of a cross-party group of parliamentarians working in unison to combat physical inactivity in the UK, have stressed that there is a worrying lack of young children meeting the Chief Medical Officer's recommendation of 60 minutes of moderate to vigorous physical activity each day and the need to 'turn back this toxic tide of inactivity'.<sup>16</sup>

The millennium cohort study, the first UK-wide study of children's objectively measured physical activity found that only half of 7 year olds are meeting the CMO physical activity guidelines, with girls being significantly less likely to meet the daily guidelines (38 per cent) than boys (63 per cent). The study revealed that half of all UK 7-year-olds are sedentary for 6.4 hours or more each day.<sup>3</sup>

Objectively measured physical activity data obtained in a regional study between 2003 and 2005 indicates that a large majority of children aged 11 are not active enough. Only 2.5per cent (boys 5.1per cent, girls 0.4per cent) did more than the recommended 60 minutes of moderate to vigorous physical each day, with activity levels varying seasonally.<sup>12</sup>

The situation seems to get even worse as children enter their teens with just over one in ten girls at age 14 currently meeting official guidelines for physical activity, half the number of boys at the same age.<sup>17</sup>

From an economic perspective, Generation Inactive will be huge drain on public resources and will contribute to a situation that is simply not sustainable for the future of the UK's National Health Service. This is a ticking time bomb under the shared pledges of all political parties to maintain a NHS free at the point of need. The Government's 2014 Moving More, Living More publication cited that the estimated direct and indirect costs of inactivity in the UK total £20bn a year.<sup>18</sup> This figure is all the more staggering when we take into account that Simon Stevens, Head of NHS England has stated that to save the National Health Service an extra £8billion a year is required by 2020.<sup>19</sup>

An inactive person spends 37 per cent more days in hospital and visits the doctor 5.5 per cent more often than an active individual.<sup>20</sup> Inactive individuals are also more likely to suffer from depression, distress and dementia than physically active adults who have a 20-30 percent lower risk of being affected by such conditions.<sup>21</sup>

The cost of sustaining inactive Britons is an immense strain on the NHS and on chronically over-used local authority health and social care services. This is a stark warning that if we want to preserve the future of public healthcare in the UK we must prevent an inactive generation of children growing into inactive adults.

15 <http://www.telegraph.co.uk/news/health/news/10750433/Lord-Coe-Lazy-lifestyles-will-shorten-our-childrens-lives.html> (Accessed May 04th 2015)

16 All-Party Commission on Physical Activity (2014), Tackling Physical Inactivity – A Coordinated Approach

17 Women's Sport and Fitness Foundation (2012), Changing the game for girls - <https://www.womeninsport.org/wp-content/uploads/2015/04/Changing-the-Game-for-Girls-Policy-Report.pdf>

18 HM Government & Mayor of London (2014), Moving More, Living More, The Physical Activity Olympic and Paralympic Legacy for the Nation - [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/279657/moving\\_living\\_more\\_inspired\\_2012.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/279657/moving_living_more_inspired_2012.pdf)

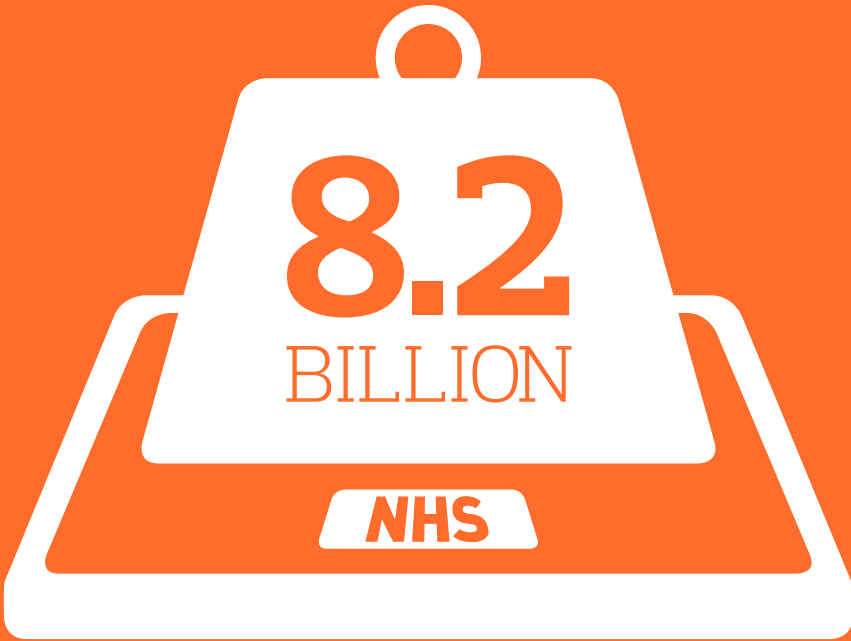
19 <http://www.england.nhs.uk/2015/05/18/fit-for-future/> (May 18th 2015)

20 Macmillan Cancer Support and The Ramblers (2014), Walking for Health - [http://www.macmillan.org.uk/Documents/AboutUs/Health\\_professionals/Physicalactivity/Walking-Works-professionals-version.pdf](http://www.macmillan.org.uk/Documents/AboutUs/Health_professionals/Physicalactivity/Walking-Works-professionals-version.pdf)

21 British Heart Foundation National Centre (BHFNC) for Physical Activity and Health, Loughborough University (2013), Costs of Physical Inactivity

# HALF

OF SEVEN YEAR OLDS ARE MEETING THE CMO GUIDELINES



It costs the UK economy £8.2billion per year to sustain inactive Britons. This figure is all the more staggering when we take into account that Simon Stevens, Head of NHS England has stated that to save the National health Service an extra £8billion a year is required by 2020.



Within the school setting, academic attainment and concentration levels are known to be positively impacted by physical activity.

# Benefits of a fit and active childhood

**The benefits of a fit and active childhood cannot be underestimated, with many behaviours established during childhood likely to continue into adulthood. These years are crucial in forming ideas and attitudes towards physical activity, and where the psychosocial benefits of activity are forged for life.<sup>7</sup>**

Physical activity in childhood has an impact on weight management, which is of great importance for a sedentary generation. A recent assessment of 13,000 children found that one in five children born at the start of the millennium was obese by the age of 11.<sup>3</sup>

It must be recognised and clearly acknowledged that any strategy to promote activity in schools solely to address obesity sells itself fatally short and misses the point. The benefits of an active childhood are far more varied than weight management alone and to think of the benefits of physical activity purely in terms of obesity is short sighted.

Within the school setting, academic attainment and concentration levels are known to be positively impacted by physical activity. Young children who play or are more physically active at this age are more likely to achieve high academic success, less likely to develop mental health problems, and less likely to start smoking than children who are more sedentary at this age.<sup>7</sup>

A study in North Carolina which raised activity levels among a group of children noted 14 per cent of students were more focused, 17 per cent were more alert and 8 per cent had improved behaviour. Similar studies have pointed to physical exercise having a positive influence on education. Once again, these formative years are an essential time in which to foster a positive engagement with activity in a safe and familiar environment.<sup>7</sup>

As physically active children get older the benefits of their active start continue to show into adolescence and adulthood with studies showing that an active child is 15 per cent more likely to go on to higher education and earn 7–8 per cent more throughout their lifetime.<sup>22</sup>

## The importance of fitness, physical literacy and motor skills

Physical fitness can be defined as the ability to carry out tasks without undue fatigue. It involves skill and health related elements of which cardiorespiratory fitness (CRF) and muscular fitness are important indicators of health in young people.<sup>23</sup>

This is not simply about being able to run a long way, run quickly or lift heavy weights. Flexibility and agility are important elements of physical literacy and movement, which are good indicators of physical fitness. Evidence suggests fundamental motor skills, physical fitness, physical activity and knowledge are interrelated to one another.<sup>24</sup>

It is also important to note that a change in habitual physical activity will almost certainly lead to appreciable changes in fitness,<sup>25</sup> meaning that capturing fitness levels before and after any intervention may enable us to understand better the effectiveness of physical activity initiatives and the quality and quantity of physical education in schools.

Children's fitness levels have been declining worldwide in recent decades as obesity levels have risen.<sup>23</sup> This is all the more worrying when we acknowledge that poor cardiorespiratory fitness is associated with reduced metabolic health and an increased risk of early death.<sup>26</sup>

Poor muscular fitness is linked to cardio-metabolic risk factors, a greater

risk of obesity and cardiovascular disease.<sup>23</sup> With these risks in mind an unfit child faces far greater and potentially life threatening dangers than simply being unable to keep up with their peers when walking, running or cycling.

In 2009 the then Chief Medical Officer, Sir Liam Donaldson recognised the importance of children's fitness in his annual CMO report.

'Having a normal body mass index (BMI) but being unfit confers greater health risks than being 'fat and fit'. This makes the trend of declining child fitness particularly alarming. It highlights the need for greater awareness of inactivity so that it sits alongside childhood obesity as a national priority'.<sup>27</sup>

The fact that a child with a normal Body Mass Index (BMI), perceived to be slim and healthy can suffer from the health risks that are associated with being unfit demonstrates why it is essential to measure fitness in addition to the measurement of BMI that currently takes place within primary schools nationally.

Any strategy to promote activity in schools inspired solely by obesity sells itself fatally short and misses the point. We have to be as interested in the health of our hearts as the size of our waists. Irrespective of weight, we've all got to find our way to move.

<sup>22</sup> Nike (2013), Designed To Move, A Physical Activity Action Agenda  
<sup>23</sup> Cohen D, Voss C, Sandercock G (2014), 'Fitness Testing' for Children: Let's Mount the Zebra! RH Journal of Physical Activity & Health © 2014 Human Kinetics, Inc.  
<sup>24</sup> Lloyd M, Colley RC, Tremblay MS (2010), Advancing the Debate on 'Fitness Testing' for Children: Perhaps We're Riding the Wrong Animal, Pediatric Exercise Science, 2010, 22, 176–182 © 2010 Human Kinetics, Inc.  
<sup>25</sup> Warburton DE, Nicol CW, Bredin SS (2006), Health benefits of physical activity: the evidence, CMAJ. 2006 Mar 14;174(6):801–9.  
<sup>26</sup> Artero EG, Ruiz JR, Ortega FB, et al. Muscular and cardiorespiratory fitness are independently associated with metabolic risk in adolescents: the HELENA study. Pediatr Diabetes. Apr 6 2011;12(8):704–712.



# Understanding the extent of Generation Inactive

## Methodology

This report provides an analysis of the existing methods that English primary schools use to measure the activity and fitness levels of their pupils. The recommendations made are a result of this analysis in addition to insight gained through research and interviews conducted by ukactive with academics, and prominent figures within the children's activity space.

Freedom of information requests were sent to over 200 primary schools and primary academies in England, with the Government's National Teaching Schools map used to provide the relevant sample.<sup>28</sup> 70 responses were received within the required time frame, providing a robust base to draw out insights into current practices.

Teaching Schools are outstanding schools who work with others to provide high quality training and development to both new and experienced school staff.<sup>28</sup> Primary Teaching Schools provide an ideal sample as they educate children of an age where attitudes towards activity are taking shape and share best practice locally. The report thus provides an insight into the existing behaviours of numerous highly rated and locally influential schools.

Generation Inactive finds that for the September 2013 – June 2014 academic year none of the schools surveyed used an outside source to directly measure children's cardiorespiratory fitness levels and 1 % formally measured children's physical literacy or motor proficiency.<sup>29</sup>

While the vast majority of primary schools surveyed carried out some basic monitoring of children's fitness and activity levels such as monitoring how much time children spend in PE, less than half of schools were aware of how much physical activity children actually did in

PE lessons when time spent changing or not being active is excluded.<sup>28</sup> Time spent changing and listening to instruction counts towards reported figures commonly cited to express the proportion of children achieving two hours of PE per week.

## Our recommendations

As a slim child does not automatically mean a fit and healthy child ukactive Kids recommend that the government extends the National Child Measurement Programme to measure fitness in addition to the current measurement of BMI. This should be done in a way that is fun, inspiring and engaging for young people.

Without diminishing the importance of school sport and PE, in reflection of the wider inactivity and health agenda, the government should rebrand the primary 'PE and Sport Premium' as the primary 'Physical Activity and PE Premium'. This will address the core issue of health and address inactivity. It will also more clearly state that this resource can support a host of fun and efficient ways that children can be active throughout the school day that lie outside of PE lessons and organised sport. This change would reflect the overriding vision of the premium which is for all pupils to leave primary school suitably equipped with the motivation and skills required to maintain a healthy lifestyle. Such a change would be well received by the Public Health community and lead to significant matched-funds in investment from Local Authority held public health resources who would share this wider aspiration to enhance the health and wellbeing of young people.

To ensure that children enter primary education with physical activity ingrained as a behavioural norm ukactive Kids recommend that the forthcoming Childcare Bill, which guarantees 30 hours free childcare a week for children aged 3-4, includes a statutory requirement for

a dedicated allocation of time for play, physical activity and cultivating physical literacy skills by trained and supported professionals.

ukactive Kids also recommend that headteachers take a whole day approach towards physical activity by ingraining it efficiently into the school day, so that even the least engaged or least physically confident children benefit significantly from increased activity levels. We are calling for a focus on a "whole school approach" which is as interested in the means in by which children travel to and from school, the manner in which they integrate activity as simple as standing into lessons, the development of more effective and structured use of play time opportunities, the provision of pre and post school activities.

Headteachers are also urged to take special measures to provide support to children who are disengaged and in need of extra support, guidance and motivation to ensure that no child is left behind.

There is an urgent need to review the physical education training that trainee teachers receive in order to ensure that it more closely matches the training received for core subjects, so that primary teachers have the confidence and knowledge base to teach physical education effectively in primary schools.

The activity sector must increase its role by offering accessible collateral to schools regarding activity opportunities and to work more closely with government and academics to develop the evidence base for children's activity.

Organisations that provide services to schools have to do so in a safe, evidence based manner that builds capacity within the school at the same time. Providers should publish their Ofsted results and have their value judged solely on the outcomes they deliver.



Generation Inactive finds that none of the schools surveyed undertake or utilise an outside source to directly measure children's cardiorespiratory fitness levels.

<sup>27</sup> Department of Health (2010), 2009 Annual report of the chief medical officer  
<sup>28</sup> <https://www.gov.uk/government/publications/teaching-schools-map> (Accessed January 2015)  
<sup>29</sup> Freedom of Information responses from 70 primary schools and primary academies in England, (2015)

# Key Findings

(Findings relate to the September 2013-June 2014 academic year)

10%

OF PRIMARY SCHOOLS SURVEYED UTILISED INDIRECT MEASUREMENT OF CHILDREN'S CARDIORESPIRATORY FITNESS LEVELS. THIS RELATES TO PRE - PLANNED MONITORING OF CARDIORESPIRATORY FITNESS LEVELS USING ESTABLISHED AND VALIDATED MEASURES SUCH AS THE MULTI STAGE FITNESS TEST OR THE SIX MINUTE RUN

1%

OF SCHOOLS FORMALLY MEASURE CHILDREN'S PHYSICAL LITERACY OR MOTOR PROFICIENCY

91%

OF PRIMARY SCHOOLS SURVEYED RECORDED OR TRACKED THE AMOUNT OF TIME CHILDREN SPEND IN PE LESSONS

54%

OF RESPONDENTS REPORTED THAT THEY MONITOR CHILDREN'S MOTOR SKILLS - I.E. RECORDING INTERNALLY OR THROUGH AN EXTERNAL PROVIDER CHILDREN'S THROWING ABILITY, CATCHING ABILITY, BALANCE ETC

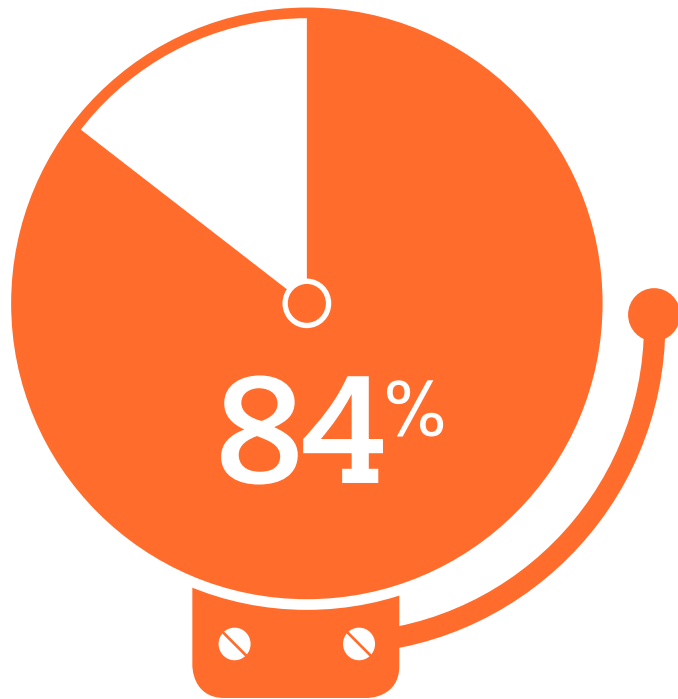
- Formalised measurement of children's fitness in primary schools is rare and at best sporadic.
- None of the schools surveyed used formal direct measurement of children's cardiorespiratory fitness levels.
- The majority of primary schools use basic informal monitoring of children's activity levels or are confident that at the very least they have an awareness of children's physical activity levels and motor skills.



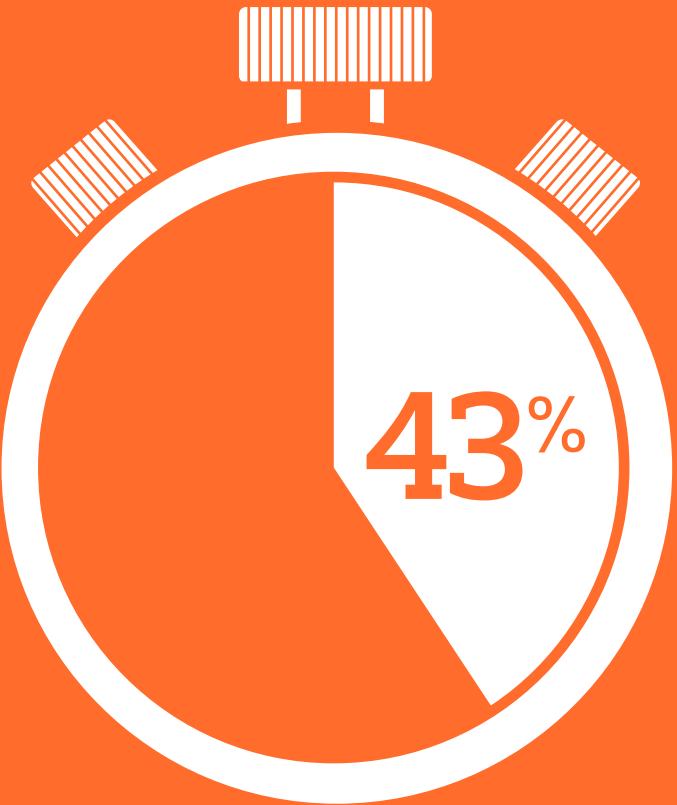
89 per cent of primary schools surveyed were aware of the numbers of children who are attending after school or extracurricular activity clubs.

# Key Findings

(Findings relate to the September 2013-June 2014 academic year)



84 per cent of primary schools surveyed had an awareness of the amount of time children spend in unstructured play – i.e. knowledge of time available in the school day for children to play freely, such as the amount of break time they have excluding time spent eating lunch or doing adult prepared activities.



Worryingly less than half of schools surveyed (43 per cent) stated that they recorded or tracked the amount of time children spend actually being physically active in PE lessons. This is the time children spend being physically active in PE excluding time spent changing into PE kit or carrying out other inactive tasks.



# Recommendations

## Government

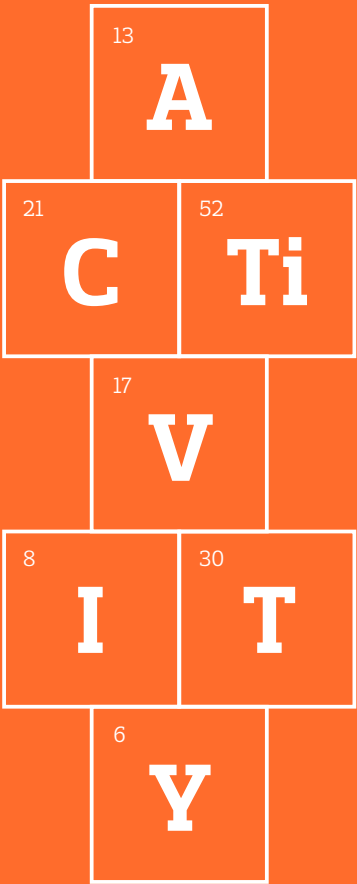
- A slim child does not automatically mean a fit and healthy child. Government should extend the National Child measurement programme to measure fitness in addition to the current measurement of BMI. We should focus on the health of our hearts, not just the size of our waists. While being informed by academic expertise and rigour, this should be developed in a way that is fun, inspiring and engaging for young people, with young people themselves central to its design as opposed to people speaking on their behalf.
- Without diminishing the importance of school sport and PE, in reflection of the wider inactivity and health agenda, the primary 'PE & Sport Premium' should be rebranded as the primary 'Physical Activity and PE Premium'. This repositioning is needed to address the core issue of inactivity and the notion that there are plenty of fun and efficient ways that children can be active throughout the school day that lie outside of PE lessons and organised sport, and can ensure they get the recommended 60 minutes of daily activity.
- Government should ensure that the competency to deliver an effective physical education curriculum is built in to teacher training alongside Maths, English and Science. Parents should expect teachers to have these basic skills.
- To ensure that children enter primary education with physical activity ingrained as a behavioural norm ukactive Kids recommend that the forthcoming Childcare Bill, which guarantees 30 hours free childcare a week for children aged 3–4, includes a statutory requirement for a dedicated allocation of time for play, physical activity and cultivating physical literacy skills by trained and supported professionals.
- In order to maximise the impact of the whole day approach to activity, Government and local authorities should ensure that walking to school becomes the norm for the majority of children and that projects and programmes which encourage a safe, enjoyable walk to school for are prioritised as part of a school's approach to health.

## Headteachers

- Headteachers should adopt a whole day approach to physical activity, ingraining it into the entire school day, incorporating a variety of lessons and subjects within the curriculum as well as unstructured and structured activity opportunities throughout a child's time at school not simply view it as a matter for PE classes. A total focus on incorporating activity before, during and after school.
- Leave no child lagging behind; in the same way that you would not leave a child struggling to read in a class full of readers, headteachers are urged to take special measures to provide support to children that are disengaged and in need of extra support, guidance and motivation.

## The activity sector

- Children's activity providers should give clear guidance to schools and local authorities on what children's activity initiatives and offers are available in their local areas by providing accessible collateral.
- We challenge school activity providers to increase the evidence base for children's activity and fitness by measuring improvement. Many of the organisations that provide physical activity within schools have access to tangible primary data that could prove ground-breaking for data collection in this area; especially if in collaboration with government and academics. Efforts should be taken to pool this data and increase our understanding of this agenda as a result.
- Children's activity providers working with schools need to ensure that their provision is safe and quality assured. They should operate in a way that builds capacity and expertise within the school itself. Where they are part of OFSTED reviews, the results should be published for schools and stakeholders to see. Their value should be judged solely on the outcomes they deliver.



It is important for headteachers to take a whole day approach to physical activity, ingraining it into the entire school day. For example students should be encouraged to be physically active whilst learning subjects other than PE.

# Physical Activity in English Primary schools

## Activity in primary schools

Primary education in England is amongst the most advanced in Western Europe but the activity levels of all children in this country do not necessarily match this.<sup>3</sup> It is particularly important for children to have as much activity as possible during the school day as it becomes more difficult to track if children are achieving the recommended 60 minutes a day of activity when they leave the school grounds.

Within the school environment activity has generally been measured simplistically in terms of hours of PE, while outside of school activity had often been viewed merely through the narrow lens of sport participation.<sup>30</sup> The 2010 PE and Sport Survey found that in the 2009/2010 academic year the average curriculum time spent on PE and sport in primary school was 127 minutes in a typical week.<sup>30</sup>

Children's physical activity levels are influenced by factors such as gender, socio-economic status and ethnic background. The PE and Sport Survey found schools where a high percentage of pupils took part in three or more hours of PE and out of hours school sport were more likely to have low numbers of pupils on free school meals, which is often linked with deprivation. Schools in deprived areas were over represented in terms of lack of participation in PE and sport. The study also revealed that schools with greater numbers of children from an ethnic minority background or with special educational needs were amongst those with the lowest participation in three hours of PE and out of hours school sport. Across all primary year groups the participation levels of boys surpassed that of girls.<sup>30</sup>

Break-times provide an opportunity for children to express themselves and provide a release from the classroom-learning environment in Primary Schools. Teaching staff have referred to the importance of break time for children in releasing energy, allowing for exercise and developing social and life skills. While our respondent data suggests that the schools surveyed are aware of the time available for free play – not all children around the country are involved in moderate to vigorous physical activity during break-time. For pupils who are already disengaged with physical activity, this time is more often than not spent sedentary.

If we take into account differences in PE and sport levels in different groups of children – and the potential for sedentary break times – it is important to make physical activity a core part of the school day using lessons other than PE or providing periods of engaging structured activity during break-times to engage even the most inactive children.

## The role of teachers

Much of the physical activity that children currently participate in within Primary Schools takes place within PE lessons, making these lessons an important element in boosting children's activity levels, improving physical literacy and instilling an appreciation and fondness for physical activity in pupils. It has been argued, however, that currently primary school teachers do not undertake enough PE training in their initial teacher training to give them the confidence and knowledge base to teach PE effectively.

Kelvin Kirk, Programme Leader for Sports Coaching & Physical Education at The University of St Mark & St John, Plymouth stated the following in his 2012 research paper on The Future for Primary Physical Education.

'Research has shown that ITT [Initial Teacher Training] amounts to a maximum of 12 hours PE subject knowledge, which falls far short of the amount required to ensure primary teachers feel confident or safe delivering PE....Furthermore, many come into ITT with preconceived views of PE, shaped from their own schooling experiences, which are difficult or impossible to change. They then replicate these views in their own teaching'.<sup>31</sup>

Currently the level of training time trainee teachers get in subjects such as Maths and English is far greater than the length of time afforded to teaching prospective teachers PE subject knowledge.<sup>32</sup> To make sure that PE lessons are as effective as possible in getting all children active and supporting the development of key movement and motor skills, government must support the country's highly qualified and capable primary teachers by ensuring that the competency to deliver an effective physical education curriculum is built in to teacher training alongside Maths, English and Science.



Many teachers come into Initial Teacher Training with preconceived views of PE, shaped from their own schooling experiences, which are difficult or impossible to change. They then replicate these views in their own teaching.

<sup>30</sup> Department for Education (2010), PE and Sport Survey 2009/10 – [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/181556/DFE-RR032.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/181556/DFE-RR032.pdf)

<sup>31</sup> Kirk K (2012), The Future For Primary Physical Education, Journal of Pedagogic Development, Volume 2 Issue

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The PE & Sport Premium

The PE & Sport Premium was introduced in 2013 and saw the government allocate funding directly to primary school headteachers in order for them to decide how to use it to best provide PE and sporting activities for pupils. The £150 million-a-year scheme led to a typical primary school with 250 pupils receiving around £9,000 in funding for each academic year.<sup>1</sup>

Analysis of the effectiveness of the Premium by Ofsted and the Department for Education (DfE) suggests that the funding has contributed to successes. Whilst the research used in the DfE investigation was limited, it exposed that the majority of schools (91per cent) reported that due to the funding there had been an increase in the quality of PE teaching. Other changes to PE and sport in the first year of the funding included an increase in the range of equipment (79per cent), and an improvement in the quality of equipment (73per cent).<sup>33</sup> The Ofsted study revealed that many headteachers were using new funding to promote wider links with a range of local sports clubs.<sup>34</sup>

Despite the positive contribution that the premium has made in boosting the quality of PE and sporting opportunities for young people, it can be argued that it has been limited in its scope as a result of its branding and positioning. A reposition to focus on health through addressing inactivity would support its growth through partnerships with stakeholders in the public health community such as Local Authority public health teams. The current brand and name fails to address the core issue of inactivity and the idea that there are numerous fun and efficient ways that children can be active throughout the school day that lie outside of PE lessons and organised sport that can ensure they get the recommended 60 minutes of daily activity. Rebranding the primary 'PE & Sport Premium' as the primary 'Physical Activity Premium' would serve to address this and open up a much broader range of partners to support. If our goal is health and 60 active minutes then we should be as interested in the way in which children get to and from school as we are in their technique in striking a hockey ball.



The PE & Sport Premium was introduced in 2013 and saw the government allocate funding directly to primary school headteachers in order for them to decide how to use it to best provide PE and sporting activities for pupils.

<sup>33</sup> Department for Education (2014), PE and sport premium: an investigation in primary schools  
<sup>34</sup> Ofsted (2014), The PE and sport premium for primary schools: Good practice to maximise effective use of the funding  
<sup>35</sup> Sandercock, GRH, Ogunleye, AA, & Voss, C. (2015) Six year changes in body mass index and cardiorespiratory fitness of English schoolchildren from an affluent area. International Journal of Obesity  
<sup>36</sup> CALE, L., HARRIS, J. and CHEN, M., 2007. Over ten years on from "The horse is dead...": surely it must be time to "dismount"? Pediatric Exercise Science, 19 (2), pp.115 - 131

The case for measuring children's fitness

According to research conducted by Dr Gavin Sandercock, Reader in Clinical Physiology at The University of Essex; the least fit child in a class of thirty tested in 1998 would be amongst the five fittest children in a class of thirty tested today.<sup>35</sup> Getting a grip on this challenge is why it is essential to track children's fitness levels so that evidence based strategies can be developed to address its decline. If you cannot measure something it cannot be managed. Schools, local authorities, government and a range of partners are deprived of the insight that such data could provide to guide the development, introduction and evaluation of strategies to address one of the greatest challenges facing the nation.

There are arguments that have been put forward against measuring children's fitness. For example some educational bodies have stressed that routine fitness measurements can negatively impact overweight children or those of lower physical ability. They state that measurements can be perceived as threatening and have the potential to embarrass children.<sup>23</sup> This in turn may result in children turning away from physical activity which is precisely the opposite of what such a programme would intend to achieve.

Another argument suggests that methods for measuring children's fitness are inaccurate and devalued because fitness is partially determined by genetics. Questions have also been raised with regards to the evidence base linking fitness measurements with improvements in activity levels and there have been concerns put forward over the potential impact such measurements may have on children's motivation to be active and attitudes toward physical activity.<sup>36</sup>

On the other hand, more recent studies have highlighted the potential for fitness testing and its role within a cohesive school strategy to promote an active childhood.<sup>24</sup> Cohen, Voss and Sandercock argue that measuring fitness in schools provides invaluable data for monitoring the health of young people and facilitating the effectiveness of physical activity promotion strategies.

'While fitness testing itself may not promote increased [physical activity] and fitness, improvements in fitness measures could detect increases in the quantity and quality of school PE or [physical activity] overall'.<sup>23</sup>

Measuring children's fitness allows us to better understand children's health and even compare internationally. We should not expect it to solve the problem of children's inactivity or poor fitness levels but rather enable us to understand the extent of the problem so we can take effective action and assess when progress is being made. We do not expect X-ray machines to fix bones, they are invaluable in helping to detect fractures that can then be treated accordingly. A national academically informed and robustly sampled approach to measuring children's fitness would do the same thing.

Many of the arguments that stress that children's self-esteem can be negatively impacted through such testing are undermined by the fact that they have failed to take the views of children into account and have been reliant on the assertions of adults alone.<sup>23</sup> Moreover leading academics have stressed that any possible issues can be negated if suitable test methods are used, goals are provided and improvement, rather than overall performance rewarded.<sup>23</sup>

The argument that fitness should not be measured because it is partially determined by genetics is weakened when we consider that the contribution of genetics to fitness is lower than it is for numeracy and literacy. However, Government and educationalists routinely and happily assess children's numeracy and literacy which is not the case for physical fitness.

It is very difficult and problematic for a school effectively develop a physical activity strategy for its pupils when our existing evidence base is so weak. Currently the National Child Measurement programme measures the height and weight of children in reception (4-5 year olds) and in year 6 (10-11 year olds). The internationally-respected programme sees trained healthcare professionals entering schools to take

the measurements. The parents of children who have a BMI which is outside the recommended levels for their age are informed and it is thought that the programme improves both public and professional understanding of children's weight issues and obesity.

However, at present the National Child Measurement Programme does not include measurements of fitness. Unfit children who are in a normal BMI range are completely ignored which is particularly dangerous when we consider that having a normal BMI but being unfit confers greater health risks than being overweight and fit.<sup>27</sup> Schools currently have a golden opportunity as they are prepared and set up for the National Child Measurement Programme checks to also to assess the fitness levels of children, by using tried and tested evidence-based approaches. A parallel fitness measurement programme could also be used.

The education system would have a far greater understanding of effectiveness of the PE and sport initiatives currently funded by the current Primary PE & Sport Premium if fitness testing was implemented. Government could begin to gather data on which initiatives were most effective in promoting children's fitness and guide schools' decision making on how best to spend the funding accordingly. What is more, whether the introduction of the premium has had any impact on fitness could then be assessed.

It is absolutely critical that such a measure is introduced and done so in a way that is fun, inspiring and engaging for children and young people, informed by the academic community but shaped by young people themselves. Any organisation that does not believe such an approach is possible lacks the belief in creativity and innovation that is needed to turn the tide of inactivity.

<sup>37</sup> Pérusse L, Lortie G, Leblanc C, Tremblay A, Thériault G, Bouchard C, Genetic and environmental sources of variation in physical fitness. Ann Hum Biol. 1987 Sep-Oct;14(5):425-34.  
<sup>38</sup> Rice T, An P, Gagnon J, Leon AS, Skinner JS, Wilmore JH, Bouchard C, Rao DC, Heritability of HR and BP response to exercise training in the HERITAGE Family Study. Med Sci Sports Exerc. 2002 Jun;34(6):972-9  
<sup>39</sup> Davis, O. S. P. et al. The correlation between reading and mathematics ability at age twelve has a substantial genetic component Nat. Commun.5:4204 doi:10.1038/ncomms5204 (2014).



# Case Studies

Extending the national child measurement programme to measure fitness alongside weight and height.

SportsLinx, a health and fitness initiative of Liverpool City Council, UK<sup>40</sup>

SportsLinx is a Liverpool City council sports development initiative. The project takes a holistic approach towards children's health and wellbeing by assessing the health, fitness and nutritional status of young people in Liverpool. Since its inception in 1996 SportLinx has grown into what is arguably the largest ongoing health and fitness project in Europe.

In addition to recording children's weight and height SportLinx uses a variety of methods to measure both health related fitness and skill related fitness.

The impact of Sportslinx fitness testing has been substantial. For example the results obtained in the 2001-2003 period of the project allowed for international comparison, revealing children in Liverpool we not as fit as those in a European study but tended to be fitter than their peers in Belfast. Fitness measurement results also facilitated the development of information packs to schools and sports clubs on how health and skill related fitness could be improved.

### Setting

Schools, leisure centres and community centres in Liverpool

### Running Length

10+ years (Concept initially developed in 1996)

### Funding

Liverpool City Council Sportslinx Project and Neighbourhood Renewal Fund.

### Age of children benefiting from initiatives

Main target group 6-12 years (fitness measurements mentioned took place on pupils in Year 5 (9-10) and Year 7 (11-12)

### Achievements

Able to compare fitness of children in Liverpool to international counterparts and results facilitated the development of collateral on how to improve health and skill related fitness.

It is important for headteachers to take a whole day approach to physical activity, engraining it into the entire school day.

Montpelier Primary School – ingraining activity throughout the school day

Montpelier Primary School is a well-established and highly successful primary school, situated in central Ealing. Upon their most recent inspection the school received an outstanding rating from Ofsted.

Senior staff at the school recognised that many children were inactive during lunchtimes and teachers were spending substantial time addressing behavioural and relationship issues at this point in the day. Staff were also aware that children (with parental support) could opt out of participating in after school clubs and even skip out on PE lessons if they made excuses such as having inadequate kit.

In order to address such issues Am Rai, headteacher at Montpelier Primary School decided to take a whole day approach to physical activity, incorporating it into the entire school day.

Using externally sourced children's activity experts, Montpelier provide pupils with the opportunity to engage in physical activity sessions before, during and after school. The behavioural and relationship issues occurring at lunchtimes were addressed by implementing structured and engaging activity at lunchtimes. The playground was organised into a range of zones that promote physical activity, social learning and healthy living. Activities for each zone are carefully designed to excite

and stimulate children and to set them challenges which enhance their physical skills and general ability to keep going and sustain activity. As well as playground work, this programme involves training staff to work with children as they eat their lunches to help them develop healthier eating habits.

Teachers at Montpelier also use engaging methods to keep children active in lessons other than PE. For example 'Kung Fu punctuation' is used in English lessons and involves children making Kung Fu style hand movements to signify where an exclamation mark or full stop should go rather than simply raising their hands or shouting out. Such an approach reduces the amount of sedentary behaviour in lesson time.

Am Rai, headteacher at Montpellier has revealed that behavioural incidents at lunch times have decreased meaning that staff time spent dealing with such issues has reduced significantly. What is more teachers report that children are more engaged and alert in lessons.

"Embedding activity into the regular curriculum has supported higher levels of attendance and reduced incidences of sporadic sickness. Most importantly, our pupils thrive within an environment where physical activity is seen as the norm". Am Rai, Headteacher, Montpelier Primary School

### Setting

Primary School, Ealing, London

### Running Length

7+ years

### Funding

Primary PE & Sport Premium, General school funds

### School Year of children benefiting

Years 1-6 (Ages 5-11)

### Number of Children at School

690

### Achievements

- Reduction in children's behavioural issues at lunchtime and teacher time spent addressing such issues during afternoon lessons
- Enhanced health and wellbeing
- Increased attendance
- Reduced incidents of sporadic sickness
- Concentration levels and engagement of pupils was also said to have increased



'Kung Fu punctuation'

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**ukactive**

4th and 5th Floor,  
26-28 Bedford Row,  
London,  
WC1R 4HE



**T** 020 7400 8600  
**F** 020 7400 8601  
**E** [info@ukactive.org.uk](mailto:info@ukactive.org.uk)  
**W** [www.ukactive.com](http://www.ukactive.com)  
**T** @\_ukactive