

# START YOUNG STAY ACTIVE



## Childhood physical literacy report



# David Stalker Foreword



**This report further highlights the issue of physical inactivity amongst children and young people across the UK. Despite the widely reported health-risks of inactivity, too many children and young people are not currently meeting the recommended levels cited by the Chief Medical Officers in England, Scotland, Wales and Northern Ireland. For the first time ever, younger generations are growing up less fit and active than their parents.**

This is having a severe impact on the health of our nation. We know that physical activity throughout childhood has substantial social benefits, improves quality of life and reduces the risk of a wide range of chronic conditions.

We also know that generally active children become active adults and that promoting active lifestyles from the earliest possible point can help us address some of the important challenges facing the UK today.

It now takes a child an average of 90 seconds longer to run a mile than it did for their counterparts 30 years ago. This is a telling statistic however this report does not focus on running faster but rather makes practical recommendations regarding how we can embed basic movement and motor skills back into childhood. This is why much of our report has focused on the changes we can make at home, as whilst changes are required across the entire system we must start at home.

I would like to thank Judy Murray for offering her support to this key issue and I sincerely hope that this report sparks the critically needed action to turn the tide of inactivity for our children and young people for good.

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# Judy Murray Foreword



**Physical activity and sport has been at the heart of my family's life ever since I can remember. We did not know it at the time, but Andy and Jamie playing in our garden ended up being a significant chapter in British sport. But for me, the made-up games and activities that went on in our home were something much different, and in many ways much more important than developing professional tennis players.**

It was about introducing my children to basic throwing, catching, jumping and running skills that would make them more confident, happier kids. Skills like agility, balance and co-ordination are not only a vital part of a healthy upbringing, but form the basis of capabilities that stay with you for a lifetime. And they are something that no child should be left without.

In Scotland, as in the rest of the UK, we now have a generation who are growing up less fit and healthy than their parents. Modern diets and the multitude of sedentary activities that kids are used to certainly do not help, but it is the fact that children are not developing the basic aptitudes for sport and exercise that is the most worrying thing for me.

It is vital that parents encourage and foster an environment where activity is considered important, but it is also vital for schools, sports providers and authorities to give parents the tools they need to instigate this process. It should be a national priority to re-embed children's physical literacy into the consciousness of parents in the same way they would monitor their children's homework.

Set4Sport is one of the tools that will allow parents to take a more active role in developing their children's physical literacy. It is a programme that is inspired by my years as a tennis coach, and by my passionate belief in activity as a basic part of a child's experience of growing up. Through this initiative and others like it, I strongly believe that we can make a difference to the national psyche when it comes to activity for kids, and offer practical hints and tips to parents as to how they can help their children enjoy a healthy, active childhood.

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**visit [www.set4sport.com](http://www.set4sport.com) for more information**

# Executive summary

## Background

**Set4Sport was launched in 2011 with the express aim of helping parents to offer their children a range of fun and free activities to develop essential skills and build a more active childhood.**

Since then, fresh information and data has shown that there is a declining standard of fitness<sup>1</sup> amongst young people across the United Kingdom, leaving a generation of children who are less fit than their parents, and are at a higher risk of several cardiorespiratory conditions.

This is alongside new information released by ukactive in its report, Turning the tide of inactivity, where the picture of adult inactivity in the UK was laid bare for the first time. Turning the tide made practical and realistic recommendations on how councils and leisure providers could work together to tackle the issue. This is a first step, but only concerns adults; equally large-scale actions need to be demonstrated for children's fitness to ensure that the next generation is more familiar with exercise than the previous.

Although central and local governments are beginning to look closely at ways to reduce the inactive population and re-embed physical activity into the DNA of the nation, there remains a lack of options for children and young people. Large groups of children continue to grow up without a good grasp of basic motor skills required for physical activity, which can lead to a lifelong absence of exercise.

This paper brings together aspects of the current academic consensus regarding levels of fitness in children, as well as practical areas where parents, teachers and legislators can work together to re-ignite the relationship between physical activity and childhood. All of this comes under the umbrella of Set4Sport, which continues to support and inform parents who want their children to be active but are unaware of ways they can go about it.

Above all, it is essential to the future health of the nation that a physical education is given the same emphasis as other aspects of education. Rather than being solely focused around the school, new government policy should include physical education as part of the homework curriculum, thereby involving parents as well as children themselves in learning to be active.



# Findings and recommendations

## Overview

- » Physical activity during the early years and childhood are strong indicators of future behaviours including educational attainment, health and happiness
- » The introduction of simple games during early childhood helps to improve co-ordination, confidence and instil a sense of achievement
- » Sedentary behaviour can lead to an increase in social and emotional health concerns
- » Most literature has to this point focussed on school-based activity and interventions
- » Parents' attitudes to physical activity – even before children start school – can make a big impact on a child's future perception of exercise

## Recommendations

- » Parental involvement in the monitoring and development of their children's physical literacy should be considered to be as important as parental support for homework
- » Resources should be available to new parents upon leaving hospital, or even earlier at pre-natal appointments, which will help them to understand the importance of developing early physical literacy and give suggestions and examples of how they can do this
- » Extend the National Child Measurement Programme to include the measurement of children's physical activity and fitness levels alongside weight and height

# Introduction

**The case for promoting and encouraging a lifestyle that includes physical activity is incontrovertible, and as a nation, the steady decline of an active lifestyle in our young people is inexcusable.**

**There are already a host of ways in which children can get active, whether through school-based activities, community sports clubs and activity providers, or charitable bodies.**

But, as figures released in 2013 show, the numbers of young boys and girls meeting the Chief Medical Officer's (CMO) physical activity guidelines has fallen below one in five. This is less about the number of children who are playing sport and more about the number of children growing up without the aptitude for basic motor and coordination skills learned through childhood activity.

New evidence also suggests we as a nation are undervaluing one of the key environments for children's physical development – the home. A study by Cambridge University published in *Pediatrics* in March 2014 found that children are not just 'naturally active' or inactive, but that they take their parents' lead in developing healthy exercise habits early on.

While the study recognised the competing priorities and increased time pressures for new parents, it concluded that more should be done to engage new mothers in developing their children's physical literacy.

This information was released in the same week that the Chief Medical Officer spoke about overweight being the 'norm.' 77% of parents who had overweight children didn't recognise them as overweight, according to Dame Sally Davies. Both of these announcements point towards a culture in which parents are comparatively unaware of their children's activity levels and the impact they have on later life, as well as their own role in promoting positive behaviour.

Start Young, Stay Active brings together aspects of the current academic consensus regarding physical literacy in children, as well as practical areas where parents, teachers and legislators can work together to re-kindle the relationship between physical activity and childhood.

It also calls on government to recognise the unique position of parents in sustaining an active household and to implement programmes which enable new parents to have the knowledge and support to do this.

The challenge is so great that it is essential that the home becomes the focus for positive early experiences of physical activity.

## Case study

"Obesity obsession overshadowing more serious problem" – Dr Gavin Sandercock Reader in Sport and Exercise Science, University of Essex

For this study, Dr Gavin Sandercock, a reader in sport and exercise science at the University of Essex and the principle investigator for the East of England Healthy Hearts Study, sampled 8550 children (age 10–16 years) from 24 schools in the East of England. During scheduled PE lessons the researchers made measurements of height, weight and cardiorespiratory fitness using the 20 m shuttle run test.

Data were calculated for:

- » BMI and obesity
- » Age and sex-specific shuttle-run score
- » Each child's fitness level

Low fitness was defined as a shuttle-run score giving a  $\text{Vo}_2\text{peak}$  <35 ml/kg/min in girls or <40 ml/kg/min in boys. They also calculated the percentage of obese and low-fit children according to whole-year age and for each school as well as the school-level values for obesity and low fitness against one another.

The results of the research showed that from 8,550 participating children:

- » At all ages, low fitness was more prevalent than obesity
- » 11.2% were classified as being obese
- » 20% of children had low fitness
- » Obesity was most prevalent in 10 year-olds (13%) but declined across age groups to 8% in 15 year-olds.
- » Only 15% of 10 year-olds had low fitness rising to reach 40% in 15 year-olds.
- » Obesity prevalence by school ranged from 6%–20% while low fitness ranged from 4–45%.
- » At school level, the correlation between the prevalence of obesity and low fitness was not statistically significant ( $r=0.24, p=0.41$ )

# Start Young, Stay Active



## The benefits of activity

There is a wealth of evidence that is still growing detailing the health benefits of regular exercise amongst the general population.

Physical activity raises levels of norepinephrine, the hormone responsible for concentration and endorphins. Evidence shows that exercising just twice a week lowers an individual's likelihood of experiencing depression, anger, stress or cynical distrust.

"Turning the Tide of Inactivity", a report released by ukactive, recently unearthed a strong link between inactivity and premature deaths, particularly in areas with a high level of socio-economic deprivation.

For children, the benefits of exercise can be viewed across three main stages of development; the early years, young children and adolescents. However, the early years may even be too late, as a recent study suggests that 20 minutes of exercise three times a week during pregnancy stimulates brain development in offspring.

Regular physical activity during the early years provides immediate and long-term benefits for physical and psychological wellbeing. However it is difficult to overemphasise the importance of this time in a child's life to influence future behaviours.

There is a need to establish healthy patterns of behaviour during the early years to protect against possible health detriments in the future, even at this early stage. Excessive sedentary behaviour in the early years is associated with poor cognitive development as well as physiological problems.

This is the first, but certainly not the last occasion where parental attitudes and motivations play an important role in fostering the earliest positive memories of activity – such as floor and water-based play and exploration.

In young children, the introduction of basic games can be beneficial in learning co-ordination, confidence, achievement and other lessons.

These years are again exceptionally important in formulating ideas and attitudes towards physical activity, and where the psychosocial benefits of activity begin to become significant. Young children who play or are more physically active at this age are more likely to achieve higher academic success, less likely to develop mental health problems, and less likely to start smoking than children who are more sedentary at this age. A study in North Carolina which raised activity levels amongst a group of children noted 14.8% of students were more focussed, 17% were more alert and 8% 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.

However as it stands, many parents are not fully aware of the importance of physical literacy and basic movement skills in the early years.

Adolescence is another crucial stage of life in which to develop physical literacy. However the evidence points to a decline in activity levels at this time.

A key factor in helping adolescents sustain their interest in physical activity – whether organised sports, outdoor pursuits or exercise – is understanding their natural aptitudes as they develop. All children enjoy different things, and there is overwhelming evidence that they are more likely to enjoy activities to which they are naturally suited. Effective monitoring and evaluation of their fitness levels and aptitudes as they grow enables better targeted and tailored activities, which take into account a child's natural abilities and differences. It can also ensure more effective PE and school sport provision than the traditional model of "one size fits all" teaching (which can be counterproductive in forcing children to participate in activities for which they are not suited, and which in turn can put them off physical activity in the future).

Being active seems comparatively easier for a young child than an adolescent.

Keeping active throughout adolescence can increase educational attainment, build and maintain social skills, deter the onset of mental health conditions and is associated with lower incidence of health-risk behaviours, such as smoking.

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## The statistics worryingly show a huge drop off in the amount of children completing the recommended amount of physical activity as they move into adolescence.

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Decreased social competence, a higher risk of developing health complications, and an increased risk of several mental health issues are just some of the potential outcomes for children who have not had a positive engagement with physical activity at a young age.

In some cases, children can spend up to 54% of their time engaged in sedentary activities at the weekend. This can decrease social competence by 8% and lead to an increase in social or emotional health concerns. In contrast, aerobic exercise has been shown to have a significant positive relationship with creativity, and high levels of exercise in children are shown to boost self-esteem and reduce the likelihood of suffering with mental illness such as depression. Some studies have even shown that an exercise intervention has a huge impact upon teenagers who suffer with depression.

# Start Young, Stay Active

## Start at home

**The case for including physical activity as part of a balanced lifestyle is overwhelmingly strong; however numbers of young people engaging with activity is still in decline.**

**This report presents a case for the home to become an essential part of fostering a positive attitude to activity, as it traditionally has been in the past.**

Home-based exercise interventions, and encouraging parents and carers to play with their children and provide safe and enjoyable environments in which to do so, are an overlooked but incredibly effective way of encouraging a positive attitude to exercise.

Some studies that have focussed on school-based interventions (as most of the literature on activity in children does), even recommend that in order to see lasting changes in a child's behaviour, it is important to involve a supportive carer.

Parents must be more encouraged to take an active interest in promoting activity to their children, rather than an over-reliance on school programmes, with which there are limitations. In order for this to be realised, parents need more resources to fully understand the effect their own activity levels have on determining their child's, but also extent to which a child's activity levels can affect their educational and personal development.

It is also important that parents understand their child's physical development and their natural fitness levels and aptitudes. Testing and monitoring not only provides parents with more insights into their child's fitness – going beyond the clumsy measure of "BMI" – but also shows parents their child's natural aptitudes, allowing them to encourage and plan activities which will suit them.

The amount of TV-time taken by a parent, as well as their attitude to activity in general, can have a lasting effect on a child's perception of being active. One study notes that 'parents and families have an incomparably strong influence on children's levels of physical activity, through both modelling and re-enforcement of exercise behaviours.'

Another states that the level of encouragement received from a parent or guardian, as well as a parent's own exercise pattern may also contribute [to a child's level of activity.] Furthermore, children from families with less active parents are likely to follow similar activity levels to their parents.

There needs to be more support given to parents by both healthcare professionals in the maternity setting and education professionals to present viable ways to help them understand their child's physical abilities and provide activities their children can enjoy.

One study, which presented a list of questions to teachers, parents and health professionals regarding activity and obesity in children, produced some interesting results. 99% of parents believed that childhood obesity was an important issue; however 38% of parents said they did not believe that being physically active influences a child's risk of future health problems, compared to 6% of teachers who said the same. If we agree that parental attitudes are one of the most important determinants of a child's likelihood to be active, then this must change.

This is not to say that parents must be the primary agent of activity provision. With increased working hours, social pressures and a range of other time-limiting factors, it is unrealistic to expect parents to be able to provide the same level of structured activity as, for example, a school or sports club. But what is absolutely clear is that parent-child interactions and role modelling, from a very young age, have a huge impact on a child's future perception of activity.

## Case study

The PEEK (Possibilities for East End Kids) Project's Street Play programme has been running for three years at 12 different sites around northw-east Glasgow. Its Free Play sessions are attended by 20–30 children aged between five and 13 each week.

In January 2013, PEEK piloted their new Active Play programme at three of its Street Play sites, giving children access to various physical games and sports to support the development of their fundamental movement skills.

Participants are introduced to sports such as tennis, basketball and athletics in a free play setting with professional coaches. The pilot is currently being funded for one year by the Scottish Government and Inspiring Scotland.

PEEK's Youth Programme gives young people aged 11 and above access to a wide variety of sporting activity using community halls and supporting them to take advantage of wider opportunities in and around Glasgow.

StreetGames has been supporting the PEEK Project in conjunction with Youth Scotland since the beginning of January 2012. As part of StreetGames' Give and Go programme which gave young people the opportunity to attend top-level sporting events during the summer of 2012, PEEK took 19 young people to the Olympic football matches at Hampden Park.

Michaela Munro, a Senior Play Ranger at Peek, admitted that the sense of inclusion into the StreetGames network will really benefit PEEK in the future.

She said: "It makes what you are doing much more worthwhile because you know it is happening UK-wide, that you are not alone and that you can pick up the phone to StreetGames and they can put you in contact with organisations in England, Wales and Northern Ireland who are doing similar work to PEEK. You can bounce ideas off each other.

"What StreetGames is offering is more of a supporting role. It complements our current work rather than duplicating it. Through the StreetGames Training Academy PEEK has been able to improve the skill sets of our staff. This has enabled us to lay on table tennis sessions as well as sporting events and tournaments in the heart of our communities.

"We've also been able to recruit volunteers through The Co-operative StreetGames Young Volunteer programme to support the sessions we lay on.

The PEEK Project is ideally situated geographically to welcome the 2014 Commonwealth Games to Glasgow and to benefit from the promises to bequeath the east end of the city with a sporting legacy.

Michaela added: "It's a massive goal for the PEEK Project to get as many young people as possible involved in the Commonwealth Games and StreetGames is fundamental to helping us sustain the legacy.



# Supporting schools

**Physical Education and sport in schools is and always will be a vital tool for encouraging active and healthy lifestyles in our children and young people, but there is only so much that should be expected of teachers and sport educators within the school setting. What really matters is that the habit of a healthy, active lifestyle is embedded from the earliest possible age.**

The huge drop off in activity levels in school-leavers, combined with differing aptitude and activity levels on entering school highlights the fact that no matter how great the work done by schools, it is not enough on its own to inspire a generation of active children.

For example, we know that 76% of 15-year-old girls want to do more physical activity. So what's the barrier? 23% say that school-based PE has put them off doing physical activity, whereas 50% of girls recognise they do not enjoy school sport, 43% citing it is too competitive. In order to re-dress this, it is essential that a new balance of options for understanding, monitoring and engaging with activity and exercise are available to young people both inside and outside of the school system, with the home and the school acting in partnership to develop healthy, active children.

The Chief Medical Officer's report from 2011 agreed with this sentiment, suggesting that home-based activity offers some significant advantages, e.g. privacy from social pressure and the freedom to enjoy activity without a stigma (that might be felt by those unused to regular physical activity) and that this may be needed to foster positive associations.

The impact of school sport and the structured physical education opportunities that exist as part of the curriculum will remain one of the most important arenas where children develop a love of sport and exercise, however without the formulation of early positive experiences of activity – which can be built in the home – there is a danger that increasing numbers of children will be left behind.

It is clear that low levels of activity in the nation's children are a huge cause for concern to individuals and health authorities alike.

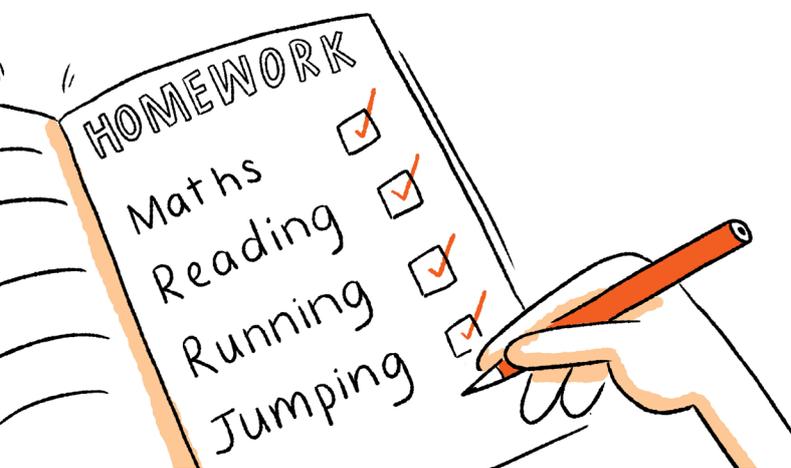
In order to change this picture over the coming years, it is essential that this issue continues to be taken seriously at the very highest levels of government. But that is not all. In order to address this issue, government should provide practical, realistic measures that will help parents understand the importance of their child's physical literacy and their role in promoting it.

Recent increases in school sport programmes should also be commended for the vast unrivalled benefit that occurs from PE lessons across the UK every day.

However the benefits of activity do not stop at sport; there are so many children who still miss out on the social, mental and physical aspects of wellbeing because lack of appropriate activities for their fitness levels and abilities. To change this picture, more work needs to be done by all parties to ensure that all children are given the chance to understand and engage with wider physical literacy so they can be active in an environment that is safe, enjoyable and engaging for them.

We need to include parents, teachers and lawmakers in this essential debate, and to encourage researchers and academics to prioritise research that improves our understanding of inactivity in children and its devastating effects.

It is a huge challenge for all those involved; however it is one that will shape the lives of children across the UK.



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