THE INACTIVITY TIME BOMB

The economic cost of physical inactivity in young people

A StreetGames / Cebr report

April 2014

www.streetgames.org

Young People's Health Partnership

Cebr

Introduction from Jane Ashworth OBE

CEO, StreetGames

Over 4.5 million 11 – 25 year olds in England do not achieve the Chief Medical Officer's recommended levels of physical activity. The consequences of failing to address this inactivity are very serious. There is an economic cost, which this report quantifies as more than £53billion across the lifetimes of today's young people. There is also a human cost. Inactivity is a cause of a reduced span of healthy life and early death. 17% of all deaths in the UK are due to low cardio-vascular fitness, which is the direct impact of being inactive.

Jane Ashworth OBE, CEO, StreetGames

Almost all young people would benefit from participating in sport more often, but those from lower income households - where health inequalities are greatest and where participation in sport is lowest – would benefit most from a more active lifestyle. A young man growing up in one of the UK's disadvantaged communities 2007-10 is expected to die almost 15 years earlier than a more affluent peer.

Regular participation in sport is lowest in these areas where physical activity is lowest and early morbidity highest. According to Sport England surveys, young people from the lowest socio-economic group are around half as likely to regularly play sport compared with those in the highest socio-economic group.

Sport is not the same as physical activity. It is a subset that many disadvantaged people want to make a component of their healthier, more active lifestyle. They are denied the chance to take part because of their socio-economic status. Many organisations, including StreetGames, reduce this sporting inequality. The latest Sport England survey data shows that since April 2012 the number of young people from the lowest socio-economic groups in England taking part in sport every week has risen by 51,100, from 1,140,600 to 1,191,700. But there is much more we can all do to help the remaining 1.2 million inactive disadvantaged youngsters to get moving.

From the largest Government departments to the smallest community project, organisations need to support more people to get active and to stay active. In doing so, we can create not only a healthier and happier society but a richer one too.

Please get in touch via Twitter **@StreetGames** or contact me directly jane.ashworth@streetgames.org

Foreword from Dr William Bird

CEO, Intelligent Health

This report serves as a valuable reminder that our nation's youngsters are not getting the activity they need to stay strong, fit, healthy and happy – something which will inevitably affect them in later life.

The reason physical activity is so important is that our bodies have evolved to be active. As soon as we become sedentary our aging process accelerates and we create a perfect environment to initiate disease.

The changes take place in mitochondria—the batteries of our cells which are absolutely critical to life. Physical activity also releases anti-inflammatory enzymes from muscle that bathe all cells of the body with an anti-inflammatory medicine ensuring that the body's inflammation is reduced. It is chronic inflammation that causes so many diseases.

More attention must be focused on getting young people active. It matters more than many other things that tend to grab the headlines, such as obesity. It's much better to be active and overweight than inactive and normal weight.

Getting active not only brings physiological benefits – it can improve mental health too. Active young people are more alert, and less likely to suffer from stress or depression. For young people, physical activity is fundamental to their happiness and normal development.

I commend StreetGames for commissioning this report and hope that by quantifying the economic impact of inactivity, it will serve to drive greater awareness of this critical issue.

Dr William Bird , CEO, Intelligent Health

Support for the report

"This report is a welcome contribution to the evidence base by demonstrating how the cost to our communities of insufficient physical activity amongst young people is borne socially and economically, not just in health terms. I also applaud the focus on inequalities, as levels of inactivity are not uniform across our society. We need to have particular focus on individuals and communities with the lowest levels of physical activity and therefore greatest need. The work of StreetGames exemplifies the need to recognise, support and harness the diversity of forms and places in which people do physical activity in communities. We look forward to continue working with them and others to enable everybody to be active every day." **Dr Ann Hoskins, Director of Children and Young People at Public Health England**

"There is well documented evidence that low levels of physical activity are associated with an increased risk of health problems including chronic heart disease, strokes and type II diabetes. This report clearly emphasises the economic case for investment in physical activity as a preventative health measure and tool in tackling health inequalities, particularly in the most deprived areas. It is further evidence that we must increase awareness of the health benefits of physical activity and facilitate more opportunities for young people to engage in sport from an early in age. We must recognised it is often the most deprived areas which are the least active and acknowledge both the economic and health benefits when implementing strategies to improve health." ***Shirley Cramer CBE, Chief Executive, Royal Society for Public Health***

"Collaboration with organisations such as StreetGames is important for NHS England so that we practice what we preach, share ideas and knowledge, listen carefully and thoughtfully, address failure and celebrate success. Together we can achieve greater things to support young people and tackle social inequalities. In partnership we can promote better emotional and physical wellbeing for all." ***Kath Evans, Head of Patient Experience – Maternity, Newborn, Children and Young People, NHS England***

"This report clearly shows that getting our young people more active will have a major impact on their health and wellbeing for the whole of their lives. We know from our work as the strategic partner for youth to the Department of Health that preventative work is so important in keeping young people healthy and averting long term health conditions. There are also massive savings generated for the NHS as the prevalence of diseases such as diabetes, coronary heart disease and colon cancer is significantly reduced." ***Faiza Khan MBE, Deputy CEO, National Council for Voluntary Youth Services (NCVYS) and Coordinator of the Young People's Health Partnership***

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Executive summary

Physical inactivity

- Nearly half of all 11-25 year olds in England fail to achieve the Chief Medical Officer's recommended levels of physical activity – over 4.5m individuals
- Overall, young women are less likely than young men to meet recommended levels of physical activity
- Children from lower income households are less likely to take part in sport. The poorest households spend just a tenth of the amount that the richest households spend on sport each week

Costs of physical inactivity

- Physical inactivity is associated throughout life with an increased risk of diseases including stroke, type II diabetes, colon cancer and chronic heart disease
- Physical inactivity among today's 11-25 year olds will cost £53.3 billion over their lifetimes in today's prices, through an increased burden of diseases linked to inactivity, reduced quality of life, and lower life expectancy

Executive summary

Benefits of increasing physical activity

- Taking up sport as a child or young person is associated with an increased likelihood of physical activity in adulthood, and a reduced likelihood of diseases associated with physical inactivity (CASE 2010)*
- For an 11-15 year old who moves from inactivity to recommended levels of activity, the reduction in expected healthcare costs, improved quality of life and higher life expectancy create savings of around £19,000 over their lifetime. For a 16-29 year old, the expected savings are even higher, at £40,000
- A 1% increase in the number of 11 to 25 year olds meeting physical activity recommendations could save £800 million in today's prices over their lifetimes
- A 10% increase in the number of children and young people meeting physical activity recommendations could reduce the cost of physical inactivity by £7.9 billion over the lifetime of today's 11 to 25 year olds

*To estimate the cost of physical inactivity among children and young people, Cebr have drawn upon existing research by CASE, the Culture and Sport Evidence Programme set up by the Department for Culture, Media and Sport in 2008. The CASE research presents the results of model-based analysis which considers the likelihood that a person will be affected by a particular illness given their activity levels.

Physical inactivity among young people

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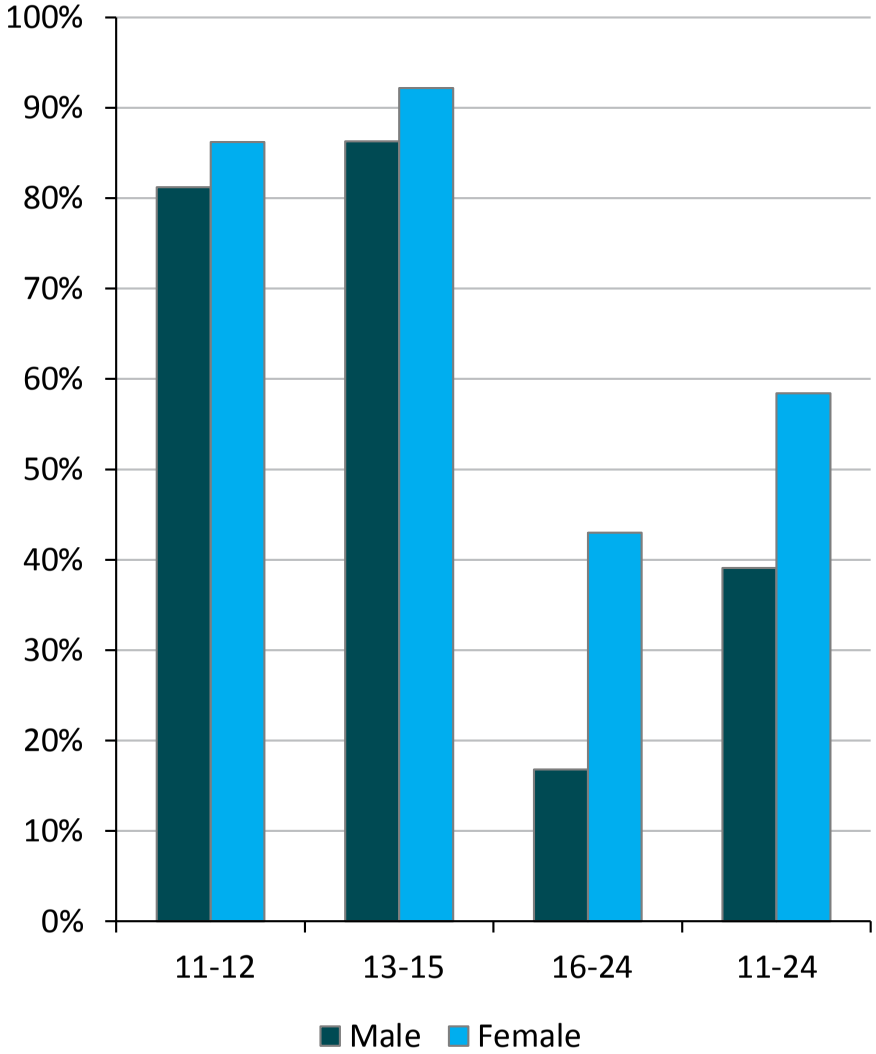
Nearly half of 11-24 year olds don't get enough exercise

- Official guidelines recommend that children and young people aged 11-18 spend an hour of every day being physically active*. This includes 'moderate intensity' activities, such as playground games, cycling and walking to school, or 'higher intensity' activities like running and football.
- More than four-fifths of 11-12 year olds do not meet these recommendations, according to the Health Survey for England published by the Health and Social Care Information Centre.
- A total of 86.3% of male 13-15 year olds fail to achieve these recommended levels, and the epidemic of inactivity is even more prevalent among young women aged 13-15, with fewer than one in ten taking the recommended amount of exercise.
- For those between the age of 19 and 25, at least two and a half hours of moderate activity (e.g., cycling or fast walking) or 75 minutes of vigorous activity (e.g., tennis) – or an equivalent mixture of the two – is recommended each week.
- It is also recommended that all groups should minimise the amount of time spent being sedentary (sitting).
- The Health Survey for England 2012 found that 43.0% of young women aged 16-24 and 16.8% of young men fail to meet recommended levels of physical activity. In all likelihood, this measure understates the problem of physical inactivity in 16-19 year olds, as the survey measures this age group against recommended levels of activity for those over 19, rather than the higher official requirements for those under 18.
- Overall, girls and young women are less likely to meet recommended levels of physical activity than boys and young men: 39.1% of boys and young men fail to meet activity recommendations, compared to 56.3% of girls and young women.

Percentage of age group not achieving the recommended amount of physical exercise (2012)



Source: Self-reported activity levels, Health Survey for England 2012, Cebr Analysis

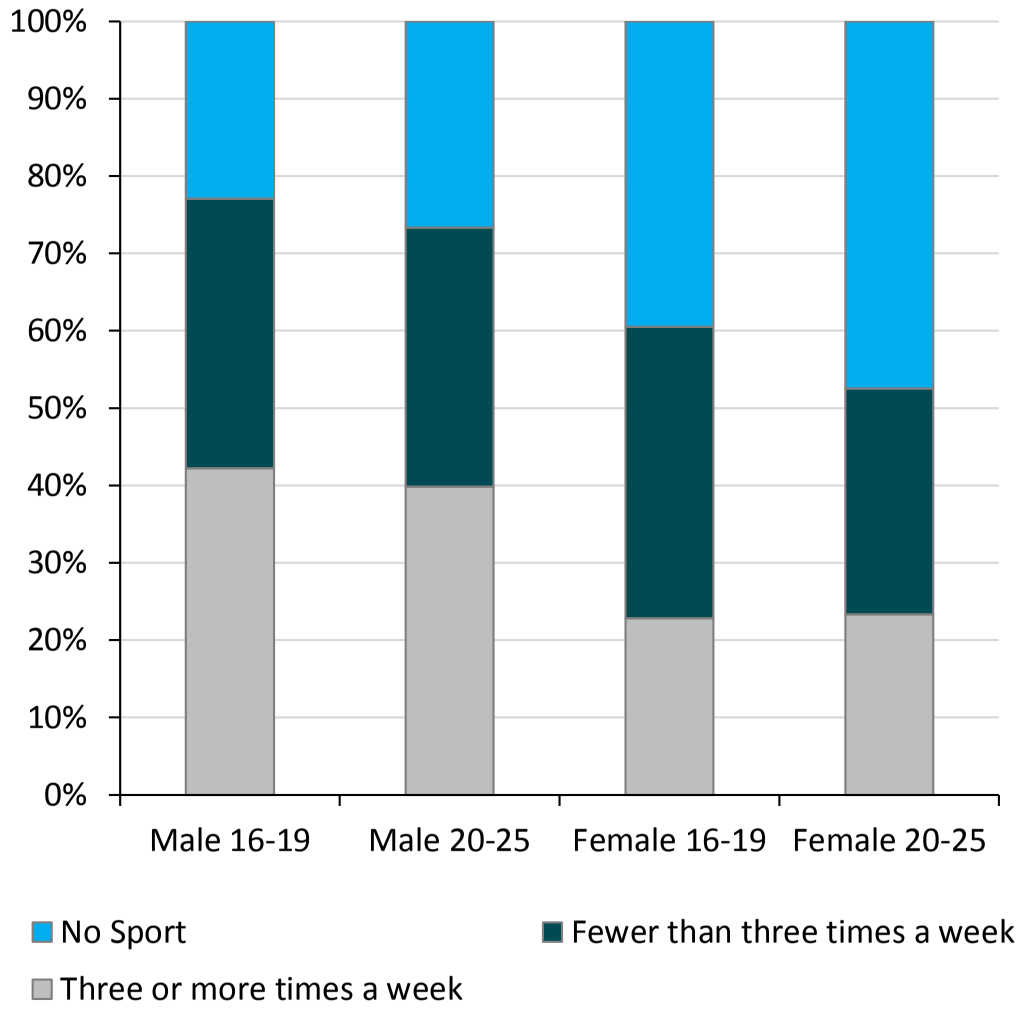
* These guidelines were set jointly by the four UK Chief Medical Officers, https://www.gov.uk/government/news/new-physical-activity-guidelines

Almost a third of 16-25 year olds play no sport at all

- Sport England's Active People survey provides additional evidence of inactivity among young people, drawing on a larger sample size which also provides evidence of those taking part in no sport at all.*
- These data suggest that in 2012/13, nearly a third of all 16-25 year olds (32.7%) did not take part in any sport at all.
- The data also reveal that young women are less active than young men. Just under a quarter of young men (24.2%) play no sport, compared to 41.6% of young women.
- Young men are nearly twice as likely as young women to take part in sport three times a week.
- The proportion of those playing sport three or more times a week stays almost the same across age groups. This suggests that those who play sport regularly while young tend to maintain this habit as they get older.

*It is important to note that this analysis of activity levels is based on self-reported data, which can be inaccurate. Accelerometry data collected alongside self-reported activity levels by the Heath Survey England 2008 suggests that self-reported data overstates activity levels. As the analysis presented In the rest of this report is based on self-reported achievement of recommendations, the benefits are likely to be a lower bound estimate.

Self-reported sport participation by age and gender, 2012-2013



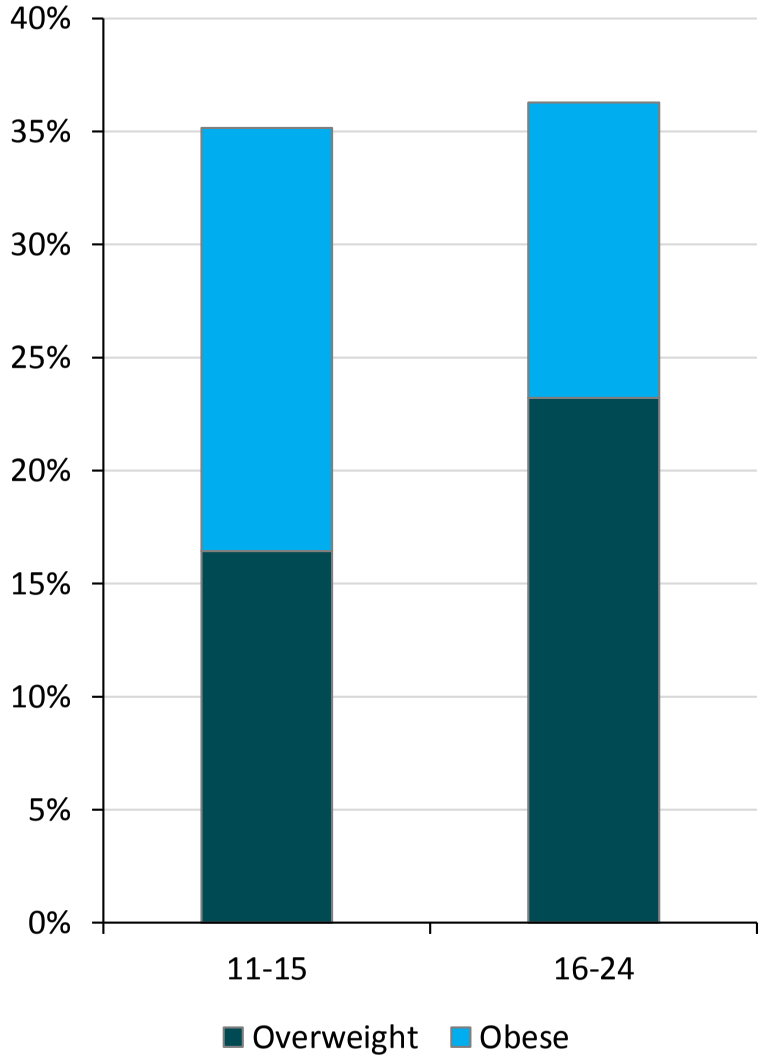
Source: Sport England Active People Survey 2012-2013, Cebr Analysis
Data has been adjusted to remove data points with no response

More than a third of all 11-25 year olds are overweight or obese

- Physical inactivity in itself poses a major risk to health, independent of any other factor, such as obesity. Low cardio-respiratory fitness (the direct impact of physical inactivity) is the cause of 16% of all early deaths. [1]
- There is a two-way link between physical inactivity and obesity: being physically inactive increases the likelihood of being obese or overweight[2], but obesity can also be a cause of physical inactivity.
- The increase in obesity over recent years cannot be solely related to the rise of sedentary behaviour and lack of physical activity, but this certainly plays a role. More than 85% of girls aged 11-15 who are overweight or obese fail to meet recommended levels of activity, as do 82% of overweight and obese boys of the same age.
- For children, being overweight is defined as having a Body Mass Index (BMI) between the 85th and 95th percentiles of all children of the same age and sex. Those children with a BMI at or above the 95th percentile are considered obese.
- This means that any child with a BMI in the highest 15% of the distribution for their age group and sex is considered to be at risk of chronic disease and even social and psychological problems.
- Over a third of all children and young people between the ages of 11 and 24 are overweight or obese.
- More than one in ten (13.1%) of all 16-24 year olds are obese, while almost another quarter (23.2%) are overweight. Of those between the ages of 11 and 15, 18.7% of children are obese, while a further 16.4% are overweight.

1. Blair (2009), *Physical inactivity: the biggest public health problem of the 21st century,* British Journal of Sports Medicine 43, pp1-2
2. 2. Lakka & Bouchard *Physical activity, obesity and cardiovascular diseases*. Handbook of Experimental Pharmacology Vol. 170, 2005

Percentage of children and young people who are overweight or obese by age group, 2012



Source: Health Survey England 2012, Cebr Analysis

Physical inactivity by household income

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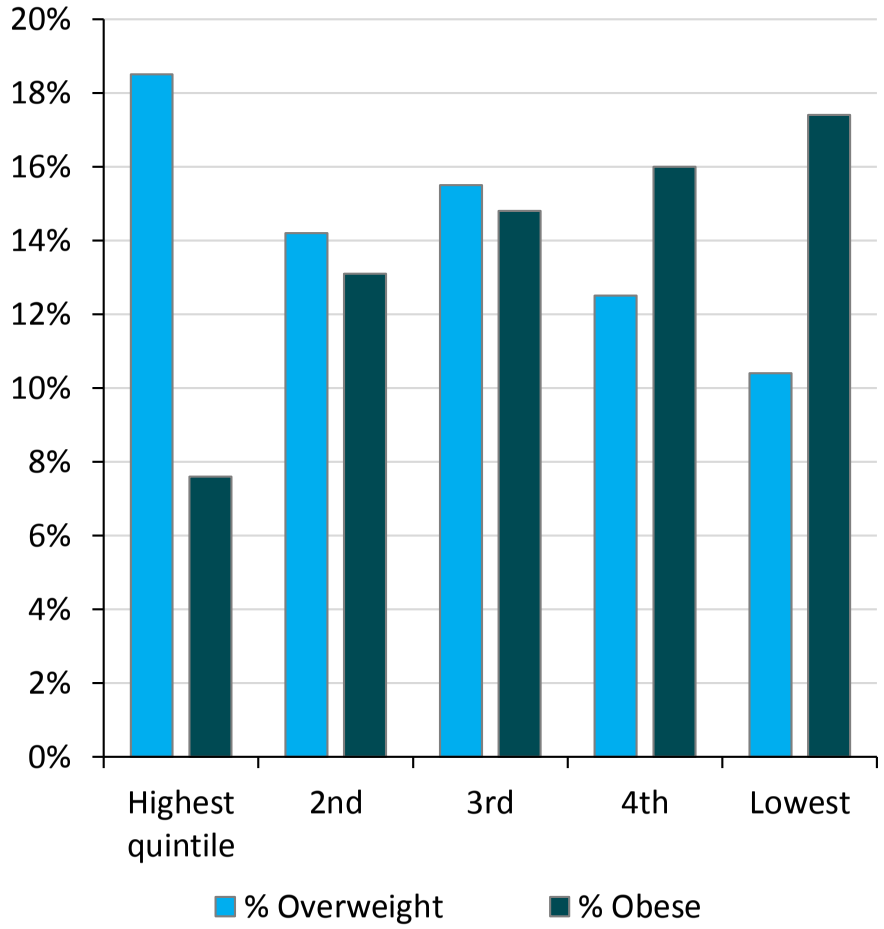
Obesity rates among children from the poorest households are double those of the wealthiest

- Being overweight is a problem across all demographics. Even in the highest income quintile, over a quarter of children (26.0%) are overweight or obese.
- The proportion of children who are obese is higher in poorer households, rising from fewer than one in ten (7.6%) in households in the highest income quintile to 17.4% in the households with the lowest incomes.
- The distribution of overweight and obese children is similar to that for adults, with obesity again being a problem chiefly associated with the poorest households.
- It is important to note that the disease risk factor associated with obesity is much more severe than that associated with being overweight. This means that the poorest households are at the greatest risk of disease and related health problems.

Proportion of children aged 2-15 who are overweight or obese, by income quintile, 2012

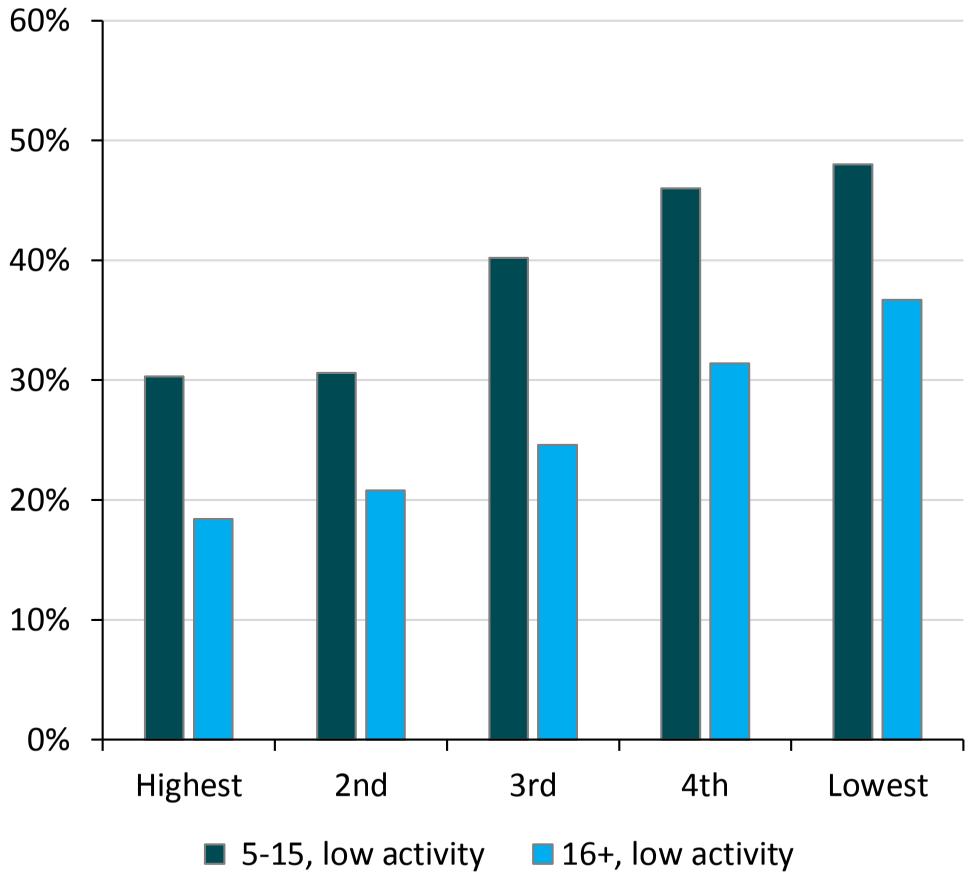


Source: Health Survey England 2012, Cebr Analysis

Lowest-income households most likely to have less active children

- There is little variation in the proportion of children who meet recommended levels of physical activity across income quintiles.
- However, children in poorer households are more likely to engage in sedentary behaviours. Just a third of children in highest-income households have low levels of physical activity (defined as less than 30 minutes of daily physical activity), rising to nearly half (48.0%) for children in households in the lowest income quintile.
- Moreover, this pattern seems to carry across into adulthood. Adults in lower income households are also more likely to have low activity levels (less than 59 minutes of moderate activity or 29 minutes of vigorous activity a week). The proportion of inactive adults in households in the lowest income quintile is double that of households in the highest income quintile.
- The proportion of adults meeting recommended levels of physical activity also declines with income. Just half of over-16s in the lowest income households achieve recommended levels of physical activity, compared to nearly 70% in the highest income households.

Percentage of children with low activity levels and adults with low activity levels, by equivalised income quintiles, 2012

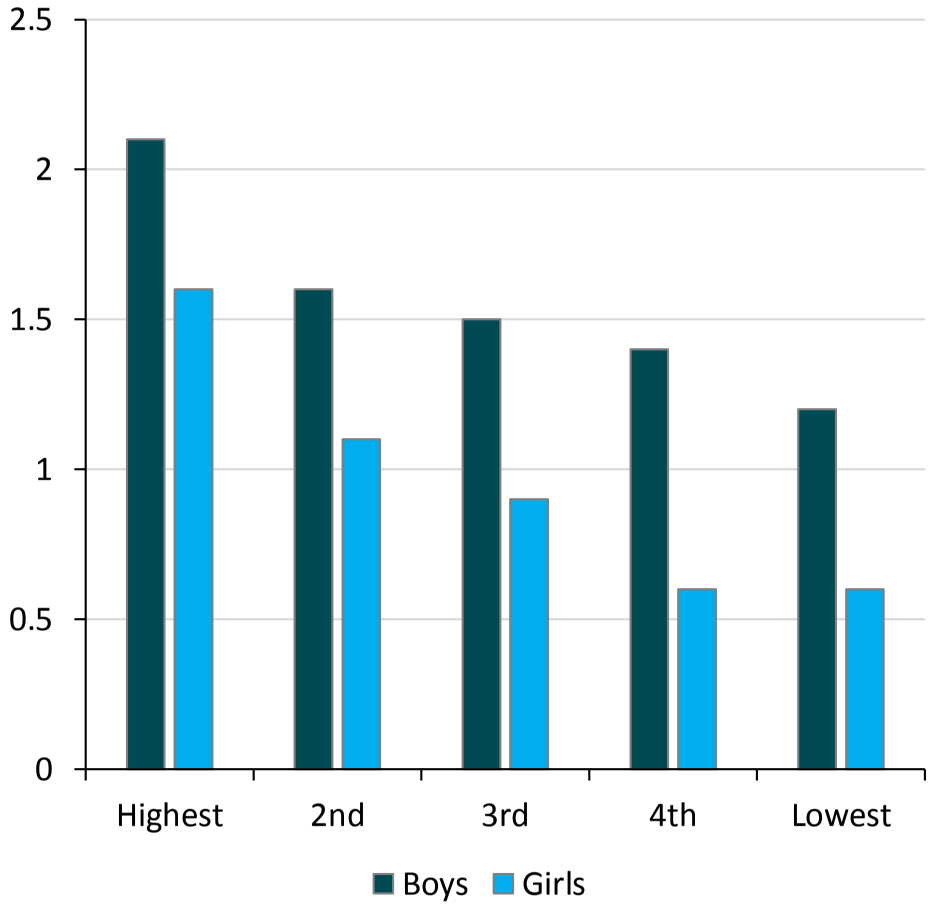


Source: Health Survey England 2012, Cebr Analysis

Children from the lowest income households spend the least time in formal sports activities

- There is a stark difference in the type of activities to which children from different income quintiles[1] have access.
- In particular, children from lower income households are less likely to take part in formal sports activities.
- Boys aged 2-15 in the households in the lowest income quintile take part in just 1.2 hours of formal sports activity each week – about half the amount enjoyed by their peers in the most affluent households.
- While boys spend more time in formal sports activities than girls at all levels of income, the difference is particularly stark in poorer households. In the highest income households, boys do a third more sport than girls, rising to more than twice as much sport in the lowest two income quintiles.
- Given that formal sports provide additional benefits beyond those of more informal physical activity (for example, the development of team-work skills, discipline and self-esteem), this suggests children from underprivileged backgrounds are missing out on more than just exercise.
- Children from lower income backgrounds are thus more likely to have low activity levels and less likely to engage in sport. This, in turn, makes it more likely that they will be inactive in adulthood.

Mean number of hours per week spent in formal sports activities by children aged 2-15, by equivalised income quintiles, 2012

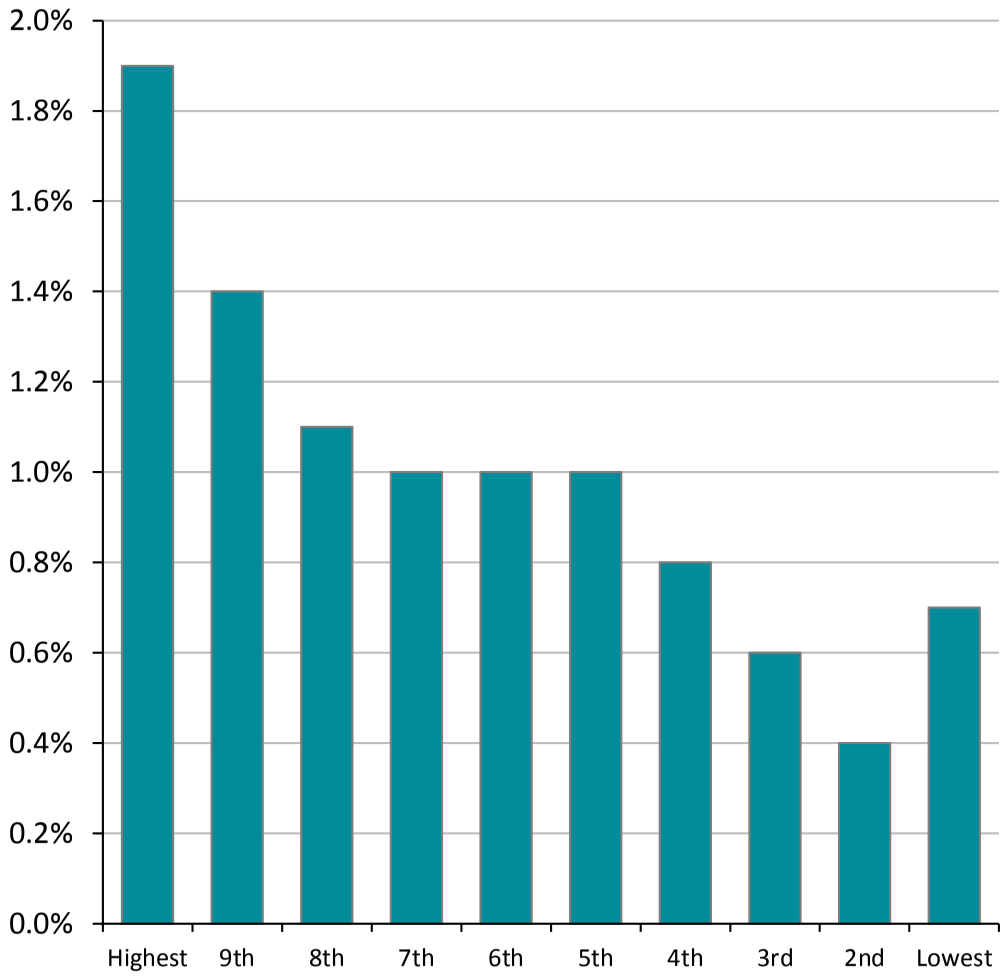


Source: Health Survey England 2012, Cebr Analysis

The poorest households spend less than £2 a week on sport on average

- The Office for National Statistics' Family *Spending Survey* details the amount that households spend on a variety of goods and services – including sports activities, services and equipment.
- According to the survey, there is a strong negative relationship between household income and the proportion of total spending on recreational sport. While for highest earning households sport makes up 1.9% of total expenditure, this falls to less than 1.0% for those with an income lower than the median.
- For the lowest income group , this equates to £1.40 per week spent on sport admissions, subscriptions , activities and equipment – compared to £189 per week spent on all goods and services in this group.
- This implies that organised sport and related specialist physical activity cannot – due to the associated costs – be as readily enjoyed by the poorest as other household needs take precedence.
- This change in household spending on sport is dramatic, with the top income decile spending more than ten times more on sport per week than the bottom quintile in absolute terms.
- A strong prevalence of paid-for sport and leisure facilities and services in the UK could serve to alienate the poorest households – and children from such activity.

Average weekly expenditure on sports admissions; subscriptions; leisure class fees and equipment hire as a percentage of total household expenditure, by income decile



Source: Family Spending Survey 2012

Physical inactivity by region

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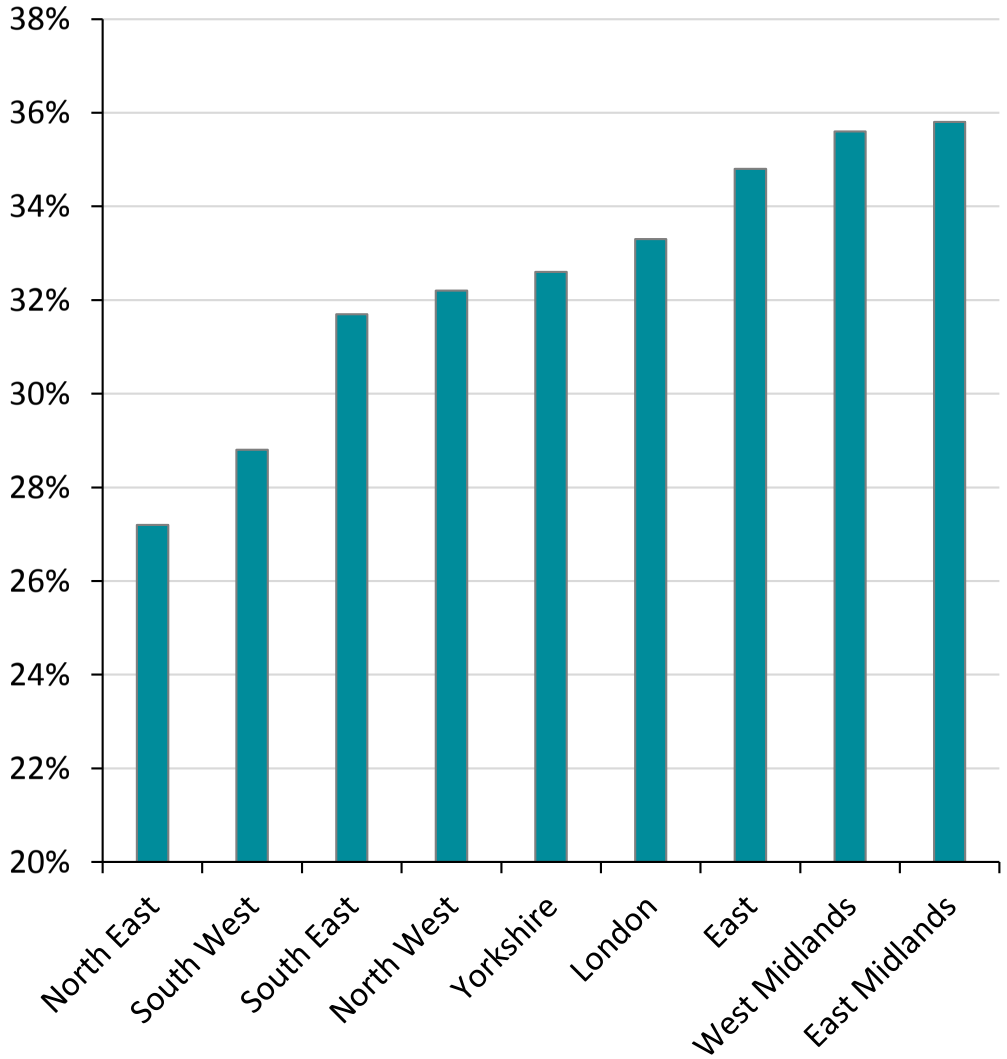
16-25 year olds in the Midlands play the least sport

- The 2012-2013 Active People Survey conducted by Sport England indicates moderate regional disparity in levels of sport engagement among 16 to 25 year olds.
- 16 to 25 year olds are most likely to participate in sport in the North East, South West and South East.
- The Midlands have the highest proportion of young people not taking part in any sport. Health Survey for England 2012 data also suggests that children are particularly inactive in these regions: children aged between 5 and 15 in the West Midlands are the least likely to meet the government recommendation of 1 hour per day of activity.
- In comparison, 5 to 15 year olds living in London are most likely to meet official recommendations according to the Health Survey for England 2012 data.

Proportion of 16-25 year olds who play no sport, by region, 2012/2013

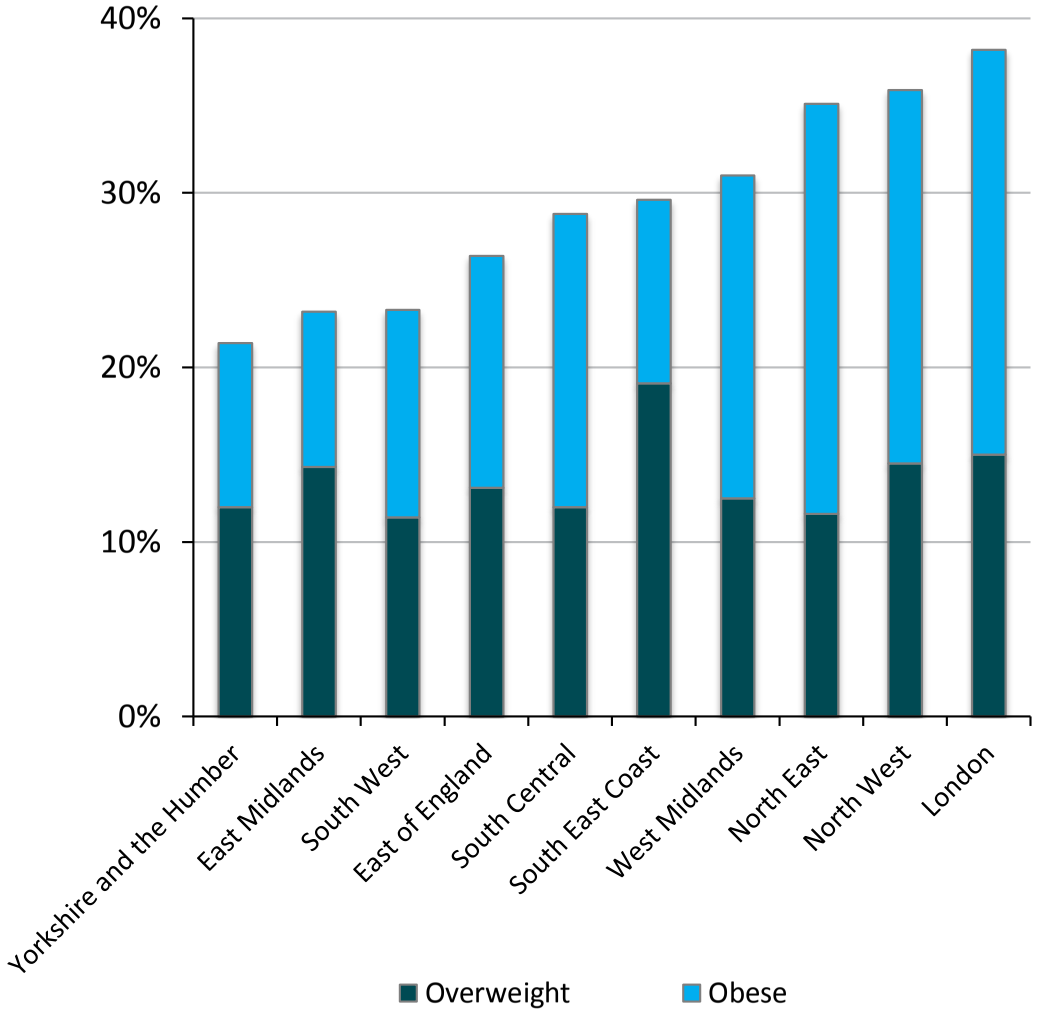


Source: Sport England Active People Survey 2012-2013, Cebr Analysis

Child obesity is most severe in London and the North of England

- According to the Health Survey for England (2011), the region with the lowest proportion of children who are overweight or obese is Yorkshire and the Humber. Even here, however, more than a fifth (21%) of children are overweight or obese.
- The equivalent proportion is almost twice as high in London, at 38.2%.
- London has the highest childhood obesity rate in England, at 23.2%. The obesity rate is also high in the North East and North West, at 23.5% and 21.4% respectively.
- Adults living in London, by contrast, are less likely to be either overweight or obese compared to those in other regions. Nearly a third of adults in London are overweight (32.3%), while a further 20.6% are obese.
- Adult obesity is highest in the North East and North West; 27.0% of adults in both regions are obese. More than a further third of adults in both these regions are also overweight (36.4% and 39.2% respectively).

Proportion of 2 to 15 year olds who are overweight or obese, by region, 2011



Source: Health Survey for England 2011, Cebr Analysis

Costs of physical inactivity

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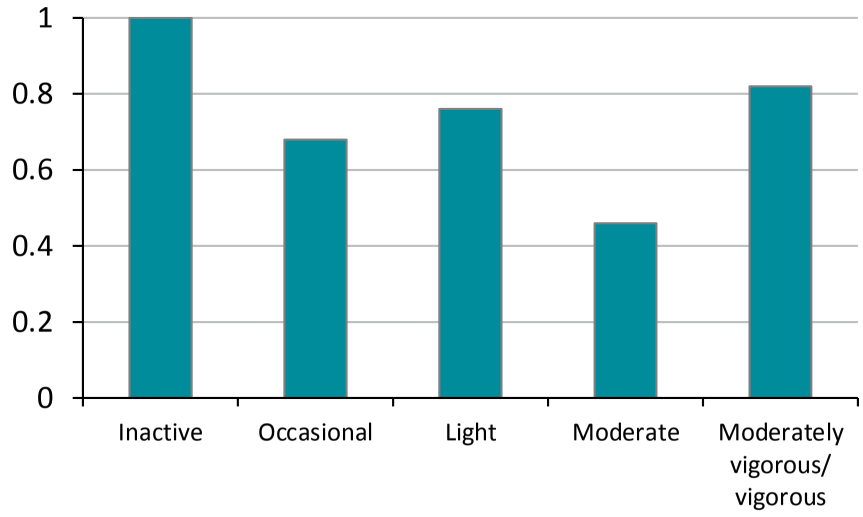
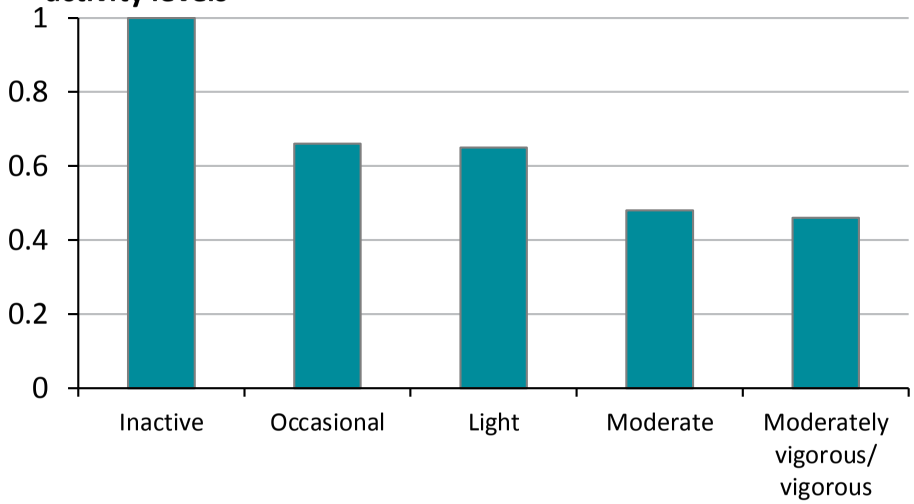
Physical activity can significantly reduce the risk of disease

- According to the World Health Organisation, physical inactivity is the 4th leading risk factor for global mortality, and is directly responsible for 6% (about 3.2 million) of deaths globally. [1]
- Researchers at the London School for Hygiene and Tropical Medicines have determined that, by achieving a minimum level of 150 minutes of physical activity a week, an adult could potentially experience a 19% reduction in mortality risk. Furthermore, this reduction in mortality risk is reported to increase to 24% if an adult achieves seven hours of physical activity per week. [2]
- This result is supported by analysis undertaken by physiologists at the University of British Columbia, who report that those adults who are most active[3] may enjoy a 31% lower risk of mortality (derived from chronic disease) than those who are least active.
- The effect of physical activity on specific diseases has also been examined in a variety of research papers; in particular, Wannamathee et al. (2000) note that as individuals increase their daily exercise routines toward moderate levels of physical exertion,[4] the incidence of both coronary heart disease and type II diabetes are observed to fall - as illustrated by the graphs opposite.

Relative risk of CHD in men, with varying physical activity levels



Relative risk of Type II Diabetes in men with varying physical activity levels



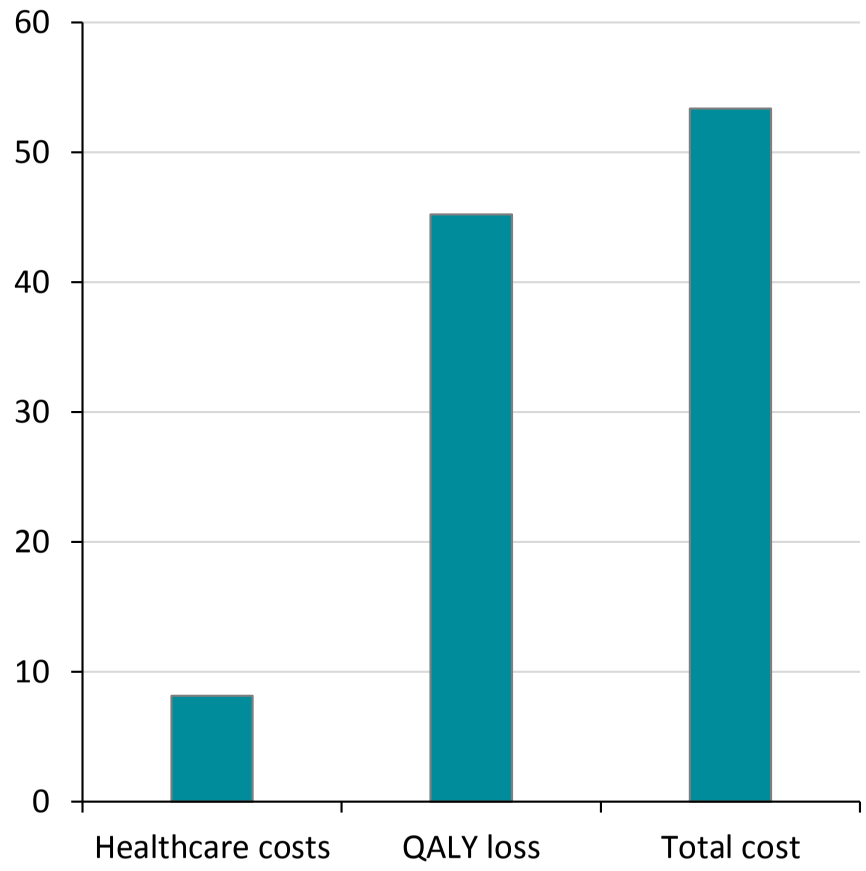
Source: Wannamanthee et al. (2000). Relative risks of disease in men free of Physician-Diagnosed CHD, Stroke or Diabetes, with varying adjustments made,

1. World Health Organisation (2009), *Global Health Risks: Mortality and burden of diseases attributable to selected major risks*
2. Woodcock et al (2011), *Non-vigorous physical activity and all-cause mortality: systematic review and meta-analysis of cohort studies*, International Journal of Epidemiology 40(1), pp121-38
3. "Most active" here is indicative of those who spend on average more than half an hour a day in vigorous exercise.
4. The authors describe moderate levels as *cycling, or very frequent weekend recreational activities plus regular walking or sporting activity once a week*

Physical inactivity among today's 11-25 year olds will cost £53.4 billion over their lifetimes

- Given physical activity levels among today's 11-25 year-olds, the costs of healthcare to treat diseases, and the reduced quality and length of life lost to these illnesses, are expected to amount to £53.3 billion over their lifetimes, measured in 2013 prices.[1]
- This is equivalent to nearly £12,000 per child or young person who is currently failing to meet recommendations for physical activity.
- Of these costs, £8.1 billion are directly related to the healthcare expenditures that will be needed to deal with the burden of Type II diabetes, chronic heart disease, stroke and colon cancer among this cohort as they age.
- This is equivalent to £1,800 in additional healthcare costs for each child and young person who is currently inactive, and more than half the total budget of NHS England in 2013-14.[2]
- The cost of reduced quality of life and lower life expectancy (measured in QALYs and valued at the lower bound rate of £20,000) is even higher than these healthcare costs, at nearly £10,000 per child or young person. This amounts to £45.2 billion over the total population of children and young people who are currently failing to meet recommended levels of activity.

Lifetime cost of physical inactivity among today's 11-25 year olds, £ billions, 2013 prices



[1] This figure is the aggregate lifetime cost, calculated in 2013 constant prices, and discounted to present value (PV) terms using a discount rate of 3.5%

[2] NHS England, Cebr analysis

Source: CASE 2010, ONS 2012 mid-year population estimates, Cebr Analysis

Benefits of increasing physical activity

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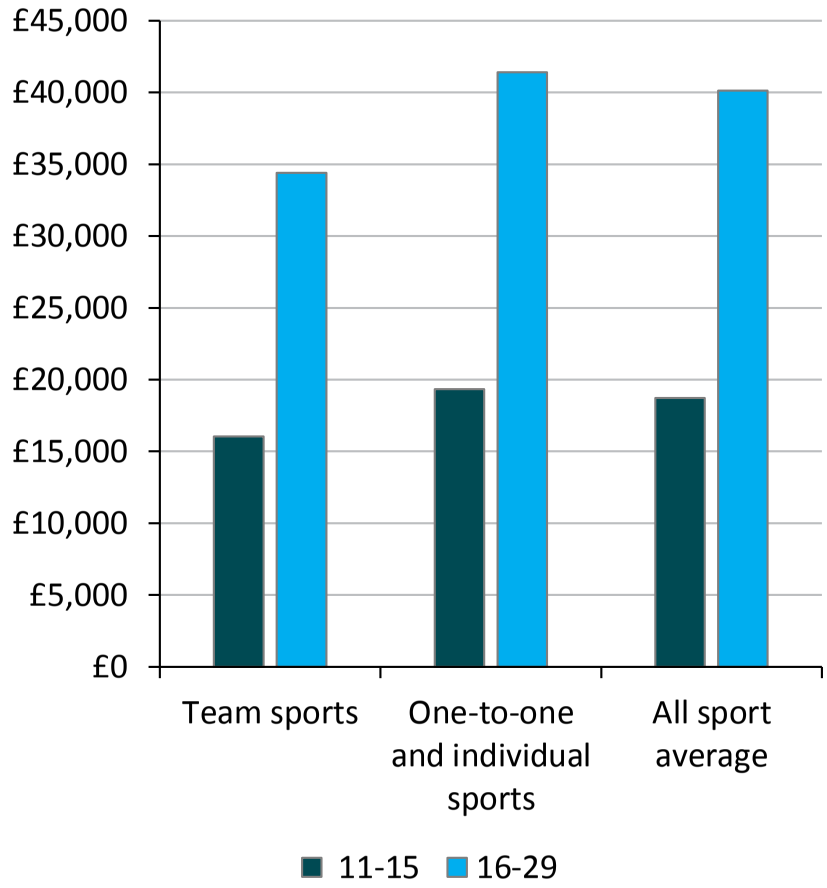
Each inactive young person who reaches recommended activity levels can save over £40,000

- Taking up sport as a child or young person is associated with an increase in the probability that they will be active as an adult (CASE 2010*).
- Physical activity in adulthood is associated with a reduced likelihood of certain diseases later in life, and therefore a reduction in expected healthcare costs, and an increase in expected length and quality of life.
- This means when physical activity levels among children and young people increases, the expected costs of healthcare in future, and the cost of lost quality and quantity of life, is expected to fall.
- An inactive child who takes up sport to recommended levels between the ages of 11 and 15 is expected to create savings of £18,700 in healthcare costs and QALYs over their lifetime (2013 prices). The potential benefit for an inactive young person is higher, at £40,100. This is because those who become active between the ages of 16 and 29 are more likely to maintain these levels of activity into later adulthood.
- The expected benefits are highest from sports played one on one – like tennis and squash – and individual sports. Both are expected to create savings of £19,300 per 11-15 year old who moves from inactivity to recommended levels of physical activity, and £41,400 for those who move from inactivity to recommended levels of physical activity between the ages of 16 and 29.

Lifetime savings associated with move from inactivity to recommended activity levels for different types of sport, per person, £, 2013 prices



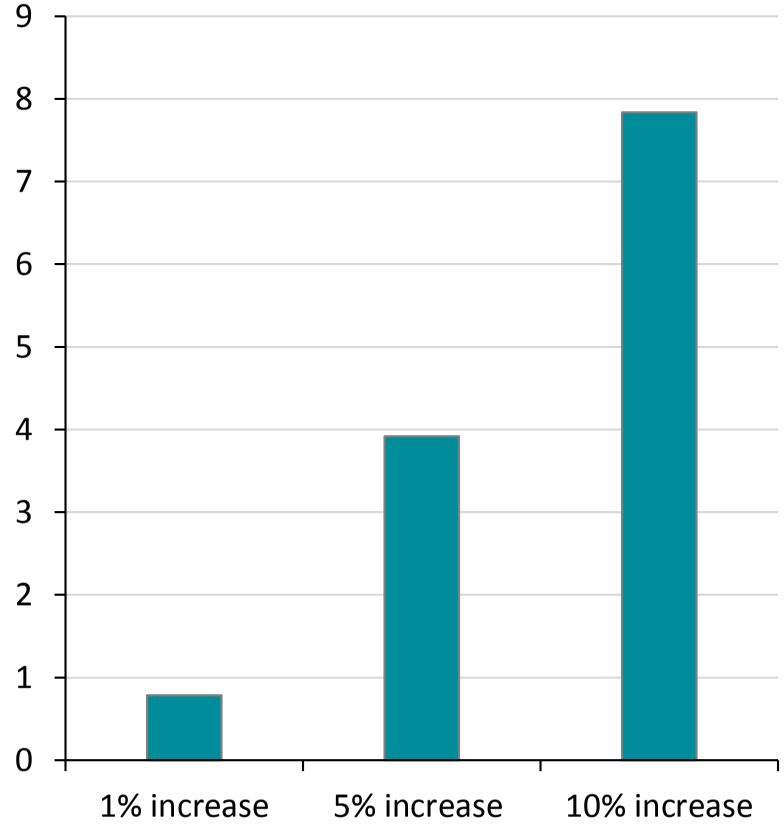
Source: CASE 2010, Cebr Analysis

*Independent evidence of this relationship is provided by Telama et al (2005), *Physical activity from childhood to adulthood: a 21 year tracking study*, American Journal of Preventative Medicine 28(3).

A 10% increase in the number of 11-25 year olds meeting exercise recommendations would save £7.8 billion

- If the total number of today's children and young people who meet recommended levels for physical activity could be increased by just 1.0%, £0.8 billion could be saved in reduced healthcare costs, improved quality of life and increased life expectancy.
- A 5% increase in the number of 11-25 year olds achieving recommended levels of physical activity would reduce the cost of healthcare and lost productive life years by £3.9 billion.
- If the number of children and young people meeting recommended activity levels was increased by 10% from current levels, £7.8 billion could be saved.
- Any additional increase in the amount of physical activity undertaken by young people in this age group, even if they continue to fail to meet recommendations, would also bring a commensurate reduction in the expected lifetime costs of physical activity.
- For example, a completely inactive young person aged 16-25 who takes up football and achieves recommended levels of activity could be expected to create savings of £34,406 over their lifetime. Even if they do not exercise enough to meet activity recommendations,* society could still realise a gain of £23,556.[1]
- Equally, a completely inactive 11-15 year old who takes up health/fitness activities and meets recommended activity levels could release savings of £25,890 over their lifetime, or £18,290 if activity recommendations aren't met.[2]

Savings associated with percentage increase in the number of 11-25s meeting physical activity recommendations, £ billions, 2013 prices



Source: CASE 2010, ONS 2012 mid-year population estimates, Cebr Analysis

Values of activity below recommended levels refer to the average actual intensity and duration of engagement as reported in the *Taking Part* survey.

[1] CASE (2010), converted to 2013 prices

[2] Ibid.

Evidence suggests that participation in sport can also improve academic attainment, social skills, employability and reduce anti-social behaviour

- Involvement in organised sport can contribute to significant improvements in children's literacy and numeracy skills.[1] The CASE review of the effects of sport participation[2] found that young people who participate in sport see their numeracy scores improve by 8% on average, compared to non-participants. This effect is even stronger for underachieving young people, who see a 29% increase in numeracy test scores.
- These effects are likely to raise the chances that children and young people achieve well academically and go on to fulfilling, productive careers.
- According to Crabbe (2006), sport and related activities have value beyond their intrinsic appeal to young people when undertaken with a 'developmental approach' which focuses on the needs of the individual and develops personal and social skills as well as sporting abilities[3].
- A review of studies by CASE (2010) finds that sports activities also improve the transferable skills of young people. Dobosz and Beaty (1999) also find a positive relationship between teenage participation in sport and leadership ability. Improvements in self-confidence and motivation, particularly among those disengaged with education, are associated with an improvement in well-being, reduction in substance misuse, lower likelihood of teenage pregnancy and can also improve long-term employment prospects[4].
- Delaney and Keaney (2005) suggests that there is a strong positive link between sports participation and social trust. In line with this finding, in Sported's *Sportworks* (2012) report, it is calculated that the work of groups who take a developmental approach to sports with young people can save on average £724.87 per participant per year, by reducing costs associated with crime and anti-social behaviour.
- Sport can thus build stronger communities and is an important element of urban regeneration.[5]

1. This has been demonstrated by DfES's *Playing for Success* initiative, the success of which has been evaluated in Sharp, C., Chamberlain, T., Morrison, J. & Filmer- Sankey, C. *Playing for Success: An Evaluation of its Long Term Impact, Department for Education and Skills, Research Report RR844* (2007)
2. CASE (2010), *Understanding the impacts of engagement: a systematic review on learning impacts for young people*, Department for Culture, Media and Sport
3. Crabbe.T. (2006), *Knowing the score: Positive futures case study research: final report*, Crime Concern
4. Aiming high for young people: a ten year strategy for positive activities, DCFS/HM Treasury, 2007.
5. Strong and prosperous communities, The Local Government White Paper, Department for Communities and Local Government, 2006

Methodological appendix

Cebr

Methodological appendix

- To estimate the cost of physical inactivity among children and young people, Cebr have drawn upon existing research by CASE, the Culture and Sport Evidence Programme. This research programme, set up by the Department for Culture, Media and Sport in 2008 in collaboration with Arts Council England, English Heritage and Sports England, has already undertaken significant research into the health implications of physical inactivity and lifetime health costs.
- The analysis presented in the remainder of this report draws upon CASE's July 2010 technical report: "Understanding the value of engagement in culture and sport".
- In this report, CASE presented estimates of the value of benefits of longer-term engagement in sport in monetary terms. The analysis was designed to inform official appraisals of policies, and as such all the analysis is in line with H.M. Treasury's Green Book – the official guide to government methodology for policy evaluation.
- Two elements of the benefits of participation in sport are considered: reductions in healthcare costs and the increase in quality-adjusted life years. Quality-adjusted life years are a standardised measure of health gain, which takes into account both length and quality of life. This allows the measurement to reflect the potentially counteracting effects of the length of life and quality of life on a single scale – for example, QALYs provide a way to compare the value of a longer life of limited quality due ongoing illness and a shorter life of higher quality.

Methodological appendix (continued)

- The CASE research presents the results of model-based analysis which considers the likelihood that a person will be affected by a particular illness given their activity levels. The relationships between diseases and activity levels, and the costs of various illnesses are based on various medical studies synthesised by Matrix (2006).
- The model explicitly considers the costs of chronic heart disease, strokes, colon cancer and type II diabetes.
- QALYs gained as a result of engaging in sport are valued monetarily at the National Institute for Clinical Excellence's lower bound of £20,000.
- Physical activity levels as a child or young person is recognised as influencing the probability of being physically active later in life. Nearly eight in ten children who are inactive between the ages of 11 and 15 will also be inactive as adults, while 80% of those who partake in vigorous exercise at the same age will continue to maintain these levels of activity into adulthood.
- The model considers these relationships and calculates, based on the likelihood that a young person is active between the ages of 11 and 29, the chances that they will be physically active from the age of 30 onwards. These activity levels then influence the probabilities of gaining diseases.
- Cebr have used the estimates of lifetime savings associated with achieving recommended levels of physical activity presented in this report, along with data from Health Survey England 2012 on the proportion of young people failing to meet recommendations to calculate the potential costs of physical inactivity among children and young people in the UK.
- The figures presented in the following analysis provide an insight into the potential cost savings in terms of the reduced healthcare costs and improved length and quality of life as a result of a decrease in illnesses associated with inactivity if the proportion of children and young people who are physically active is increased.

About StreetGames

StreetGames (www.streetgames.org) is an award-winning national sports charity launched in 2007. A national partner of Sport England and a national centre of expertise for developing sport in disadvantaged communities, the charity helps to make sport accessible to all young people, regardless of their income or social circumstances. It does this by supporting and establishing local projects around the UK that deliver doorstep sport, i.e. positive activities and sport provided to young people when they want it, where they want it and how they want it. Over 2.4 million attendances have already been generated by StreetGames projects.

StreetGames' ongoing work to change sport, communities and lives has been recognised by The Chief Medical Officer's Public Health Awards, The Charity Awards, The Business Charity Awards and Beyond Sport. Additionally, in 2011, StreetGames' Chief Executive Jane Ashworth was awarded an OBE for services to community sport. These commendations demonstrate StreetGames' effectiveness in sport and wider impact on crime, health and community development.

About Cebr

Cebr is the Centre for Economics and Business Research, one of the UK's leading economics consultancies. Cebr was founded in 1993 by Professor Douglas McWilliams, the former Chief Economic Adviser of the CBI and Chief Economist at IBM UK. Cebr delivers macroeconomic analysis and forecasts to a wide array of retained private and public sector clients, and provides bespoke economic impact analysis of different policies, at whole economy, sector and individual company levels. In our twenty year history we have worked with hundreds of private and public sector organisations, helping to influence company strategy, government policy and the public debate.

About the Young People's Health Partnership

The Young People's Health Partnership is a seven-strong consortium of organisations working as the strategic youth sector partner to the Department of Health, Public Health England and NHS England. The partners in the consortium are: National Council for Voluntary Youth Services, Addaction, The Association for Young People's Health, Brook, CLIC Sargent, StreetGames and Youth Access.
http://www.ncvys.org.uk/project/the-young-peoples-health-partnership

Recognition for StreetGames

Winner

CHIEF MEDICAL OFFICER'S PUBLIC HEALTH AWARDS

James Wilson Awards 2010

Winner

2013 charitytimes Awards

Best New Charity

Winner

RSPH ROYAL SOCIETY FOR PUBLIC HEALTH VISION, VOICE AND PRACTICE

Wellbeing Award 2013

Winner

The Queen's Diamond Jubilee Volunteering Award 2012

Queen's Diamond Jubilee Volunteering Award 2012

Winner

BIG SOCIETY AWARDS 2013

Outstanding Contribution to Community

Winner

The National Lottery Life changing

Us Girls - Best Sport Project 2013

Winner

2013 charitytimes Awards

Big Society

Winner

THE CHARITY AWARDS 2013

Children & Youth 2013

Winner

Children & Young People Now Awards 2013

Youth Volunteering Award

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