



The social value of sport and physical activity in England

Secondary value – 2024 | Year two report

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Disclaimer:

While every effort has been made to ensure that the information herein is accurate, the authors do not accept any liability for error of fact or opinion which may be present, nor for the consequences of any decision based on this information.

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Glossary

Active adult

Taking part in moderate-intensity equivalent physical activity for at least 150 minutes per week

Direct costs

Medical costs associated with treatment and management of disease e.g. NHS costs

Fairly active adult

Taking part in moderate-intensity equivalent physical activity for 30–<150 minutes per week

Inactive adult

Doing <30 minutes of moderate-intensity equivalent physical activity per week

Indirect costs

Non-medical costs related to health care including social care, informal care and productivity losses

Mortality

Incidents of death

Morbidity

Incidents of illness or disease

Moderate intensity activity

Moderate activity is defined as where you raise your breathing rate

Moderate-intensity equivalent

The number of minutes of physical activity is calculated based on 'moderate-intensity equivalent' minutes, where vigorous intensity exercise counts as double

MVPA

Moderate or vigorous-intensity physical activity

NCD

Non-communicable diseases that are not spread through infection or through other people. Typically related to unhealthy behaviours

Primary value

Direct benefits to individuals through improved wellbeing

Secondary value

Wider value to society, including the state

Social capital

Social networks (including bridging, bonding and linking capital), trust and reciprocity

Vigorous-intensity activity

Vigorous activity is where you are out of breath or are sweating

Executive summary

Context

In 2023, Sport England commissioned a consortium of research partners to create an updated model of the social value of sport and physical activity in England for 2023 (Year 1) and 2024 (Year 2). This project builds on two previous social return on investment (SROI) studies conducted by Sheffield Hallam University for Sport England, which used participation and volunteering data from 2013/14 and 2017/18.

The previous Sport England SROI model¹ measured the value of sport and physical activity against four outcomes linked to *Sporting Future*, the former UK Conservative Government strategy for sport, published in 2015. These outcomes were: physical and mental health, mental wellbeing, individual development, and social and community development. The new social value study takes a slightly different approach, aligning where possible to guidance provided by HM Treasury Green Book. The updated social value model disaggregates social value into primary and secondary value. Primary value represents direct benefits to individuals through improved wellbeing. Secondary value refers to the wider value to society including the state.

This report focuses on the secondary value of sport and physical activity for England in 2024 (Year 2), and specifically on the measurement and value of **health** outcomes. The health valuation was led by sports economists from Sheffield Hallam University and Manchester Metropolitan University.

¹ <https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/2020-09/Social%20return%20on%20investment.pdf?VersionId=5BgVln09jwpTesBJ4BXhVfRhV4TYgm9E>

Methodology

The health valuation builds on the approach used to measure health outcomes in the previous Sport England SROI study, although the findings of the 2023 and 2024 models are not directly comparable with the 2017/18 estimates as we have incorporated a broader range of health outcomes, used more cautious assumptions for reduced risk of disease associated with physical activity based on updated evidence, identified costs from alternative data sources, and included/excluded certain types of costs. We also caution against making direct comparisons between the 2023 and 2024 iterations as we have further updated disease prevalence rates, physical activity rates, and some unit cost data, and included productivity losses due to morbidity, which skews the comparison.

Seventeen health outcomes were included in the health model. These were reduced risk of coronary heart disease, stroke, type 2 diabetes, seven types of cancer, dementia, depression, hip fractures, and back pain, as well as reduced GP visits and mental health services, and sports injuries.

Health outcomes were only valued for the adult population (aged 16+), among those who were either 'active' (doing 150+ minutes of moderate-intensity equivalent activity per week) or 'fairly active' (doing 30- <150 minutes of moderate-intensity equivalent activity per week), reflecting the current scientific evidence.

Most health outcomes were valued using a prevalence-based approach, where the reduced number of cases of disease through sport and physical activity were estimated using the relative risk of disease, the population-level prevalence/incidence rates and physical activity levels. The number of cases prevented were then multiplied by the associated direct (healthcare) and indirect (social care, informal care and productivity losses due to morbidity) cost per case. Other health outcomes were measured by estimating reduced health service usage (appointments) as a result of self-reported good health. The cost of sports injuries was calculated using the number of sport-related Accident and Emergency admissions.



Key findings

The study revealed that sport and physical activity generates significant health-related value for society. The overall health value of sport and physical activity in England is circa **£15.9bn**. To put this estimate into context, the net health value in 2023 was estimated at £10.5bn, albeit this figure excluded productivity savings, which are included in the 2024 estimate. Most of the overall health value (~89%) is generated by adults who are active for at least 150 minutes per week.

We estimated that more than **three million** cases of non-communicable diseases (NCDs) or ill-health were prevented among active or fairly active adults in England in 2024. The largest number of cases prevented were for depression (1.3m cases), followed by back pain (0.9m cases) and type 2 diabetes (0.7m cases).

On a 'per participant' basis, the health value of sport and physical activity for an active adult (16+) is **£478**, and for a fairly active adult it is **£330**.

The health element of the social cost of inequality is **£2.4bn**. This is the annual amount by which the overall health value could increase if the entire adult population in England had similar activity levels to adults with zero characteristics of inequality.



Recommendations

Based on the findings of the secondary value model presented in this 2024 (Year 2) report, and the 2023 (Year 1) report, we identify several recommendations for developing future health-related valuation work. These recommendations include further examination of the health evidence relating to the differential risk reductions of various thresholds of activity, including below 150 minutes of moderate-equivalent activity (and above the 150 minutes threshold); updating the analysis of cost savings related to reduced medical service usage; and re-examination of the health evidence relating to the participation of children and young people.

Beyond health outcomes, we recommend that Sport England prioritise investigation of other areas of secondary value, specifically how sport and physical activity impact on community social capital, education and crime outcomes. While these outcomes remain challenging to measure, they merit further investigation to enable a fuller understanding of the true value of sport and physical activity to society.

The wider health/secondary value of sport and physical activity

The report measures 17 health outcomes for adults aged 16+ who are 'active' and 'fairly active'. The health outcomes measured are:

Health outcome	Cases prevented	Value
Coronary heart disease	151,000	£1.03 billion
Stroke	109,000	£0.94 billion
Type 2 diabetes	726,000	£1.92 billion
Cancer (7 types)*	15,000	£0.34 billion
Dementia (65+ years)	65,000	£0.86 billion
Depression	1,311,000	£8.43 billion
Hip fractures (65+ years)	28,000	£0.56 billion
Back pain	930,000	£0.61 billion
Sub-total (prevention of 14 diseases)		£14.70 billion
Reduced GP visits		£0.57 billion
Reduced mental health service usage		£0.82 billion
Sports injuries ²¹		-£0.15 billion
TOTALS	3.34 million	£15.93 billion



£15.9 billion

Total annual health value of sport and physical activity participation in 2024

£14.2 billion

Value of 'active' participants

£1.7 billion

Value of 'fairly active' participants

Average health value per participant:

'Active' adult



'Fairly active' adult



* The seven types of cancer include: breast cancer, colon cancer, bladder cancer, endometrium cancer, oesophagus cancer, gastric cancer, and renal cancer.

Chapter 1

Introduction



1.1 Background and context

In 2023, Sport England commissioned a consortium of research partners to develop an updated model of the social value of community sport and physical activity for England for 2023 (Year 1) and 2024 (Year 2). The approach builds on two previous social return on investment (SROI) studies conducted by Sheffield Hallam University for Sport England, which used participation and volunteering data from 2013/14 and 2017/18.

The current Sport England strategy, *Uniting the Movement*², outlines the important role of sport and physical activity in improving the physical and mental health of the nation, supporting the economy, reconnecting communities, tackling inequalities, environmental sustainability, and rebuilding a stronger society for all. The updated social value of sport and physical activity model incorporates the latest research, data and methodologies to help Sport England and other stakeholders measure the impact of the sector and confidently advocate the value of community sport.

*Get Active*³, and its predecessor *Sporting Future*⁴, were sport strategies published under the former UK Conservative Government in 2015 and 2023 respectively. Both strategies focused on the contribution of sport and physical activity to five outcome categories: physical wellbeing; mental wellbeing; individual development; social and community development; and economic development. The previous Sport England SROI model⁵ measured the value of sport and physical activity against the first four outcomes. The updated social value model takes a different approach, where possible aligning to the guidance provided by the HM Treasury Green Book⁶. It disaggregates social value into primary and secondary value.

- **Primary value** represents direct benefits to individuals through improved wellbeing.
- **Secondary value** refers to the wider value to society, including the state.

This technical report focuses on the secondary value of sport and physical activity for England in 2024 (Year 2). It specifically focuses on the measurement and valuation of **health outcomes**. The secondary value research was led by sports economists from Sheffield Hallam University and Manchester Metropolitan University.

The technical report on primary value, as well as a summary report on the overall social value of sport and physical activity in 2024, and the Year 1 reports can be found on the Sport England website⁷.



² https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/2021-02/Sport%20England%20-%20Uniting%20the%20Movement%27.pdf?VersionId=7JxbS7dw40CN0g21_dL4VM3F4PIYJ5RW

³ <https://www.gov.uk/government/publications/get-active-a-strategy-for-the-future-of-sport-and-physical-activity/get-active-a-strategy-for-the-future-of-sport-and-physical-activity>

⁴ https://assets.publishing.service.gov.uk/media/5a74a48240f0b61df47774bf/Sporting_Future_ACCESSIBLE.pdf

⁵ <https://sportengland-production-files.s3.eu-west-2.amazonaws.com/s3fs-public/2020-09/Social%20return%20on%20investment.pdf?VersionId=5BgVln09jwpTesBJ4BXhVfRhV4TYgm9E>

⁶ <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government/the-green-book-2020>

⁷ www.sportengland.org/socialvalue

1.2 Measuring the secondary value of sport and physical activity

Previous SROI studies of sport and physical activity in England (2013/14 and 2017/18) included secondary value resulting from improved health, reduced criminal incidences, enhanced educational attainment, and improved social capital. However, as noted in these studies, and as remains the case, the quality of evidence underpinning these social outcomes varies considerably. For the updated social value models for 2023 and 2024, the research consortium and Sport England made the decision to prioritise the valuation of those outcomes with high-quality scientific evidence. Consequently, we limited the scope of the secondary valuation element to only include health outcomes.

Table 1.1 below shows the health outcomes included in the two previous SROI models for sport and physical activity in England. The health valuation presented in the 2023 and 2024 models build on these previous studies and incorporate additional health outcomes (five other types of cancer), which will be discussed in the next chapter. This upward

trend reflects the developing empirical evidence on physical activity and health outcomes between the various iterations of the model.

As for the 2023 model, the health component of the 2024 model remains aligned with the Sport England MOVES tool⁸, to help ensure consistency and use of the best possible evidence around

health valuations, despite each model serving different purposes. The MOVES tool is designed to be used by people within the sport and physical activity sector to estimate the return on investment of projects, programmes and interventions for the health sector. In contrast, the health modelling presented in this report is focused on population-level activity.

Table 1.1 Health outcomes included in previous Sport England SROI models

Health outcome	SE SROI models	
	2013/14	2017/18
Coronary heart disease	✓	✓
Stroke	✓*	✓
Type 2 diabetes	✓	✓
Breast cancer (Female)	✓	✓
Colon cancer	✓	✓
Dementia	✓	✓
Depression	✗	✓
MSK (hip fracture) (65+)	✗	✓
MSK (back pain)	✗	✓
Reduced medical service usage (GP visits)	✓	✓
Reduced medical service usage (psychotherapy service usage)	✗	✓
Sports injuries	✗	✓

*Combined with CHD

⁸ <https://www.sportengland.org/guidance-and-support/measuring-impact?section=moves-section>

1.3 Scope of study

The scope of the study is consistent with the 2023 (Year 1) secondary value model.

The secondary value model provides a 'snapshot' of the health value of sport and physical activity in 2024⁹. It does not take account of any future savings resulting from people being active in the year of study.

The target population of the study remains adults aged 16+. For some health outcomes, the target population was older adults aged 65+. The age parameters reflect those for which sufficiently robust empirical evidence on the health impact of sport and physical activity participation exists. There continues to be insufficient robust evidence to support the inclusion of health outcomes for children in this modelling.

For the purposes of this research, we were guided by the definition of sport and physical activity adopted by Sport England. We include all physical activities considered to be active recreation, such as fitness activities, dance, and recreational walking, but exclude household activities not related to formal sport and exercise, such as gardening. We included active travel in the calculation of health outcomes if done at moderate-equivalent intensity.



1.4 Structure of this report

Chapter 2 outlines the overarching research approach used to value the contribution of sport and physical activity to health. It details the evidence used to identify the health outcomes included in the secondary valuation, the data sources for disease prevalence and incidence, the data used to estimate activity levels and costs of disease.

Chapter 3 summarises the overall findings, including the cases of disease prevented, the direct and indirect cost savings, the value per participant, and the overall health value of participation. It also provides a high-level estimate of the health element of the social cost of inequality using data from Sport England's Inequalities Metric¹⁰.

Chapter 4 concludes the report and identifies potential areas of secondary valuation for further investigation in the future.

⁹ The presentation of health value as a 'snapshot' conflates the dynamic process of continued investment and participation in sport and physical activity, which results in the generation of longer-term benefits. It makes the simplifying assumption that investment of resources (time and money) today produces health benefits in the future, and investments in previous years result in the benefits experienced today.

¹⁰ <https://www.sportengland.org/research-and-data/research>

Chapter 2

Research approach and data sources

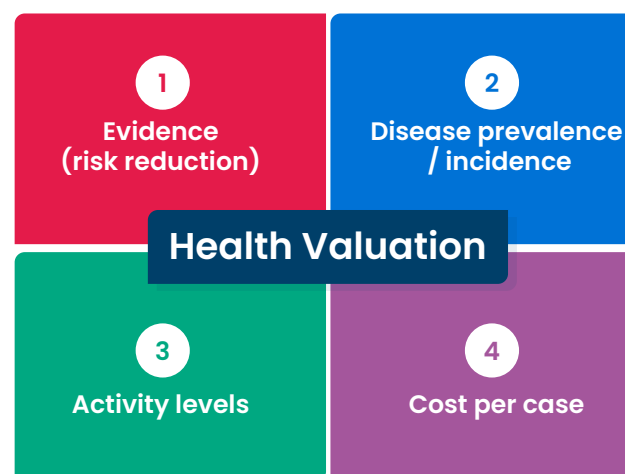


2.1 Overview

Most health outcomes (14 of 17 outcomes) were valued using a prevalence-based approach. Figure 2.1 outlines the key components of the health valuation model. The first step was to identify the evidence linking participation in sport and physical activity to improved (or diminished) health outcomes. For most outcomes, this evidence was considered alongside data on the general prevalence (or incidence) of disease¹¹, and the levels of physical activity in the England population, to estimate the number of cases of disease averted among the physically active population. The direct (healthcare) and indirect (social care, informal care and productivity^{12,13}) costs per case were then used to convert the number of cases prevented to a monetised estimate of annual cost savings.

The evidence relating to a minority of outcomes necessitated a bespoke approach to their valuation. The data sources and assumptions for the different health outcomes are documented in the following sections.

Figure 2.1 Health valuation overview



The health valuation in the new social value model (2023 and 2024) is not directly comparable with the 2017/18 estimates as we have incorporated a broader range of health outcomes, used more cautious

assumptions for reduced risk of disease associated with physical activity based on updated evidence, identified costs from alternative data sources, and included/excluded certain types of costs. The price year used is also different and adjustments for inflation in the current study are made using standard GDP deflators¹⁴ rather than Consumer Price Index (CPI) data.

We caution against making direct comparisons between the 2023 and 2024 findings. Both include the same health outcomes and the relative risk reduction of diseases associated with being physically active. However, in the 2024 model we have updated disease prevalence rates, physical activity rates, and some unit cost data, and included productivity losses due to morbidity, which skews the comparison. Moreover, the 2023 model was developed initially for 2022 and the 'per participant' values derived were then adjusted for inflation and extrapolated using 2023 participation data.

¹¹ In most cases, disease prevalence (total number of cases in the population in a given year) was used in the calculation of the health value. However, for cancers, only incidence data (new cases diagnosed in a given year) are recorded.

¹² We only considered health-related productivity losses due to morbidity, rather than general productivity losses or those related to mortality.

¹³ It is assumed that there is minimal overlap between the productivity savings in the secondary value model and the wellbeing values in the primary value work because the latter controls for health. It is assumed that the health-related savings are also distinct from economic value reported in the sport satellite account for the UK 2024.

¹⁴ <https://missioneconomics.shinyapps.io/timetoggle>

2.2 Evidencing health outcomes

The health outcomes included in this report are consistent with those measured in 2023.

We identified several health outcomes for which there is scientific evidence of a lower relative risk among adults who are physically active. Most of these outcomes were identified initially from the *2018 Physical Activity Guidelines Advisory Committee (PAGAC) Report*¹⁵ prepared for the US Department of Health and Human Services by a panel of physical activity and health experts, based on a systematic review of the literature on disease prevention and health promotion benefits of physical activity. Although written for the development of the American Physical Activity Guidelines, the PAGAC report is widely accepted by the international scientific community as an up-to-date synthesis of international evidence on physical activity and health outcomes. It is utilised as a reliable evidence source within guidance issued by Public Health England (now the UK Health Security Agency)¹⁶.

The body of evidence for some outcomes was graded¹⁷ in the PAGAC report as either *strong* – for coronary heart disease (CHD), stroke, type 2 diabetes, seven types of cancer (breast, colon, bladder, endometrium, oesophagus, gastric and renal) – or *moderate* – for dementia and depression. Relative risk reductions for these outcomes were sourced typically from the PAGAC (2018) report or extracted from specific publications cited within it (see Appendix 1 for details).

In certain cases, where a quantitative figure was not available via the PAGAC report or its underpinning sources, more recent data sources were used to establish the lower relative risk associated with physical activity (for dementia and depression). Where alternative estimates of relative risk reductions were reported for a given health outcome, we have used either: the lower (conservative) estimate, the estimate that relates to the general population, or the estimate that corresponds to recreational physical activity.

Additional health outcomes that were included in the 2017/18 iteration of the model, but not reported in the PAGAC report, were also included in the current version. These were musculoskeletal conditions (hip fractures and chronic back pain), health service usage (GP visits and mental health services) and sports injuries. The evidence for these outcomes was not as robust as the outcomes drawn from the PAGAC report, but they were considered sufficiently strong to include in the updated model.

The relative risk reductions¹⁸ among physically active adults associated with specific health outcomes are presented in Table 2.1 (their data sources are listed in Appendix 1). For some of these health outcomes, the evidence of lower relative risk is limited to a sub-sample of the adult population – females (for breast cancer and endometrium cancer) and older adults (for dementia and hip fractures).

¹⁵ [2018 Physical Activity Guidelines Advisory Committee Scientific Report \(health.gov\)](#)

¹⁶ [Health matters: physical activity – prevention and management of long-term conditions – GOV.UK \(www.gov.uk\)](#)

¹⁷ PAGAC graded evidence as either 'strong', 'moderate', 'limited', or 'not assignable' based on several criteria: applicability; generalizability; risk of bias/study limitations; quantity and consistency of results across studies; and, magnitude and precision of effect. The generalizability aspect was assessed by PAGAC in relation to the US population specifically, but the scientific evidence itself is not geographically restricted.

¹⁸ A relative risk of 0.86 means a relative risk reduction of 14%. This means a 14% reduction in the relative risk of a specified outcome (e.g. CHD) in the treatment / exposed group (active) compared with the control group (inactive).

For musculoskeletal conditions, we have defaulted to the relative risk reductions utilised in the 2017/18 model as there is no new evidence to support the use of different values. The evidence for the health outcomes of reduced GP visits and reduced mental health service usage over the last 12 months as a result of self-reported good health associated with sport participation is informed by a study commissioned by DCMS¹⁹. The evidence for sports injuries is confined to cases presenting at Accident and Emergency (A&E) departments²⁰.



Table 2.1 Relative risk reductions associated with physical activity

Health outcome	PAGAC Grade	Relative risk reduction
CHD	Strong	14%
Stroke	Strong	16%
Type 2 diabetes	Strong	26%
Breast cancer (Females)	Strong	12%
Colon cancer	Strong	19%
Bladder cancer	Strong	15%
Endometrium cancer (Females)	Strong	20%
Oesophagus cancer	Strong	21%
Gastric cancer	Strong	19%
Renal cancer	Strong	12%
Dementia (65+)	Moderate	20%
Depression	Moderate	25%
Hip fractures (65+)	n/a	52%
Back pain	n/a	25%

Note: The relative risk reductions are average values for all adults except where stated otherwise.

See [Appendix 1](#) for data sources.

¹⁹ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/446273/Health_and_educational_benefits_of_sport_and_culture.pdf

²⁰ [AE1920_National_Data_Tables v1.1.xlsx \(live.com\)](#)

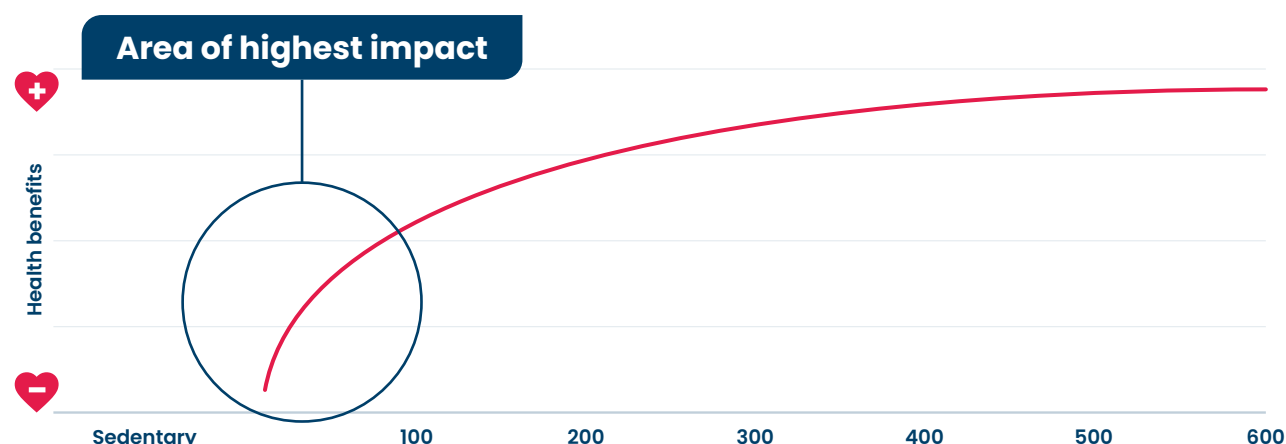
We have assumed that the health benefits of being physically active will accrue in the year in which the activity is undertaken. The health valuation is focussed on a single year based on the population-level physical activity relating to that year. Lifetime benefits are not quantified or monetised.

It is assumed that the threshold of physical activity required to achieve the full reduction in relative risk of disease for each health outcome is at least 150 minutes per week at moderate intensity or 75 minutes per week at vigorous intensity (or a combination of the two), which is consistent with the UK Chief Medical Officer's (CMO) Physical Activity Guidelines²¹. The specific threshold of 150 minutes has been widely adopted internationally, and therefore has good research evidence supporting the benefits of undertaking that amount of activity. The CMO Physical Activity Guidelines also state that health benefits are achieved at levels both below and above the guidelines.

We have assumed that for adults who meet the definition of being 'fairly active' (moderate-equivalent activity for 30–<150 minutes per week) as per the Active Lives Survey (ALS), the relative risk for each health outcome is directly proportionate to the amount of activity that they undertake i.e. a linear relationship. This is a cautious

assumption given that the CMO guidelines indicate there is curvilinear dose-response relationship between physical activity and health outcomes (see Figure 2.2), which suggests that proportionately the greatest benefits come from achieving moderate levels of activity which are below the threshold of the guidelines.

Figure 2.2 Dose-response curve of physical activity and health benefits



Source: UK CMO Physical Activity Guidelines

²¹ <https://assets.publishing.service.gov.uk/media/5d839543ed915d52428dc134/uk-chief-medical-officers-physical-activity-guidelines.pdf>

2.3 Disease prevalence/incidence

Data relating to general prevalence/incidence of disease in the England population were identified from two main sources:

1. Prevalence data for several diseases were sourced from the Office for Health Improvement & Disparities – Public Health Profiles²².
2. Cancer-specific incidence rates were sourced from NHS England – Cancer Registration Statistics²³.

Because the prevalence/incidence rates for some health outcomes relate to the entire England population, it is likely that they underestimate the risk of disease among adults. For some health outcomes (cancers), differentiated data are available for males and females. Where such gender differentiation is not available, it is assumed that the overall rates reported in the data sources are applicable equally to men and women. The relevant data are presented in Table 2.2.

Table 2.2 Disease prevalence/incidence in England

Health outcomes	Population group	Males (%)	Females (%)
CHDI ^{1*}	All ages	2.97	2.97
Stroke ^{1*}	All ages	1.86	1.86
Type 2 diabetes ^{1*}	17+	6.99	6.99
Breast cancer ²	Females 15+	–	0.21
Colon cancer ²	15+	0.06	0.05
Bladder cancer ²	15+	0.06	0.02
Endometrium cancer ²	Females 15+	–	0.04
Oesophagus cancer ²	15+	0.03	0.01
Gastric cancer ²	15+	0.01	0.01
Renal cancer ²	15+	0.03	0.02
Dementia ^{1*}	65+	4.24	4.24
Depression ^{1*}	18+	13.25	13.25
Hip fractures ^{1*}	65+	0.55	0.55
Back pain ^{1*}	All ages	9.40	9.40

1 Office for Health Improvement & Disparities – Public Health Profiles

2 NHS England – Cancer Registration Statistics

* Differentiated values not available for males and females

²² <https://fingertips.phe.org.uk>

²³ <https://digital.nhs.uk/data-and-information/publications/statistical/cancer-registration-statistics/england-2022#resources>

2.4 Activity levels

Data on levels of sport and physical activity among adults in England were sourced from the ALS online tool²⁴ for the period November 2023–24. Table 2.3 shows the proportion and number of the adult population (aged 16+) who met the threshold of being ‘active’ (150+ minutes of moderate equivalent activity per week) and ‘fairly active’ (30–<150 minutes of moderate equivalent activity per week).

Using ALS 2023–24 data, the average minutes of moderate equivalent activity per week for ‘fairly active’ males and females was around 84 minutes, which is 56% of the duration required to reach the ‘active’ threshold of 150 minutes. Applying this percentage to the relative risk reduction for type 2 diabetes of 26% (see Table 2.1) gives an adjusted relative risk reduction of 14.5% for ‘fairly active’ adults. A similar approach was followed to estimate relative risk reductions among this cohort for other health outcomes.

Weighted relative risk reductions were then calculated for adults who were either ‘active’ or ‘fairly active’, taking into account the proportion of people meeting each activity threshold. For example, the overall weighted risk reduction for type 2 diabetes across ‘active’ or ‘fairly active’ males was calculated at 24.5% and the corresponding statistic across ‘active’ or ‘fairly active’ females was 24.1%.

Table 2.3 Number of ‘active’ and ‘fairly active’ adults in England in 2024

Activity level		Male			Female		
		16+	16–64	65+	16+	16–64	65+
Active	%	66.3	68.8	58.0	61.4	64.9	50.9
	People	15,112,600	12,172,000	2,950,700	14,625,400	11,633,100	2,985,600
Fairly active	%	10.0	9.8	10.7	12.4	11.9	13.7
	People	2,277,500	1,737,400	543,100	2,946,000	2,136,400	806,900

Note: Excludes the ‘other’ gender category. The number of adults aged 16–64 and 65+ who are either ‘active’ or ‘fairly active’ may not aggregate to the 16+ age category due to rounding of population estimates in ALS results.

²⁴ <https://activelives.sportengland.org/Result?queryId=121857#>

2.5 Estimating disease prevention

The number of cases of disease prevented was estimated by taking into account the following:

- the reduced relative risk of disease among physically active adults (Table 2.1);
- the actual prevalence/incidence of disease in the England population (Table 2.2); and,
- the proportion and number of adults in England who were 'active' or 'fairly active' (Table 2.3).

Using type 2 diabetes as an example, the prevalence of disease among adult males in England was 6.99%, the percentage of males aged 16+ who were 'active' was 66.3%, and the relative risk reduction for this health outcome at the 'active' threshold was 26%. It is assumed that this reduced relative risk applies to the year in which adults meet this threshold of activity. Using this data, it was possible to derive differential disease prevalence rates for males who are 'active' and those who did not meet this criteria (6.5% v 8.6% respectively). The difference between these differential prevalence rates was then multiplied by the number of 'active' adult males (15.1m) to estimate the potential cases of type 2 diabetes averted among this cohort. A similar process was followed to calculate the number of cases prevented among 'active' females. This analysis was then reproduced for adults who were doing at least 30 minutes of moderate equivalent activity per week. The differential prevalence/incidence rates calculated for each health outcome are presented in Appendix 2.

2.6 Estimating cost savings

In order to estimate the cost savings that can be attributed to participation in sport and physical activity by adults in England, the number of potential cases of disease averted among the physically active population ('active' or 'fairly' active) was multiplied by the average annual cost per case for each health outcome. The following type of direct and indirect costs were included in the calculation²⁵:

- direct healthcare costs (for all 17 outcomes);
- indirect costs for:
 - social care (for seven outcomes) and informal care (for ten outcomes); and,
 - productivity costs due to morbidity (for 11 outcomes). For 10 outcomes, we also considered mortality-related productivity costs – but these potential savings were excluded from the final calculation as they would accrue in future years, and they are reported separately.

²⁵ Indirect and productivity costs due to morbidity were not available for all outcomes.

For seven health outcomes, health and social care costs were sourced from PHE (2020)²⁶, including differentiated costs for males and females. Informal care and productivity costs for these seven outcomes, and the health, informal care and productivity costs associated with the wider set of health outcomes, were identified or approximated using other sources (see Appendix 3). Some of these costs were not gender-specific.

Because the 'per case' productivity costs are related to the working population (16–64 years), the number of averted cases of disease to which these costs were applied was adjusted to account for two factors. First, the proportion of 'active' and 'fairly active' adults aged 16–64 (80% of males and 78% females according to ALS). Second, the employment rate for 16–64 year-olds in the UK (78% for males and 72% of females according to the Labour Force Survey²⁷). This approach was considered pragmatic and cautious on the basis that depression accounted for the bulk of the

estimated productivity savings and there is evidence that the prevalence of moderate to severe depressive symptoms is higher among younger adults²⁸.

The derivation of the number of cases prevented that were included in the productivity savings estimate is illustrated using the example below for depression. According to the data presented in Table 3.1 later in this report, it is estimated that some 0.7m cases of depression were prevented among physically active adult males (aged 16+). Based on the 2024 Active Lives Adult Survey, 80% of physically active adult males were aged 16–64 (i.e. of working age). The employment rate for men aged 16–64 in the UK in 2024 (Oct-Dec data) was 78% according to the Labour Force Survey. Using these data points, we estimate that around 0.4m of the cases prevented among physically active adult males were among employed adult males of working age (i.e. $0.7\text{m} \times 80\% \times 78\%$). A similar process was followed for females.

The costs associated with sports injuries were counted as being incurred rather than savings (i.e. aggregate injury costs were deducted from the overall cost savings associated with the other health outcomes).

The 'per case' cost figures used in the calculation are presented in Table 2.4 and their associated data sources are listed in Appendix 3. The most recent cost data from credible sources was used. All costs were expressed in 2024 prices using standard GDP deflators²⁹.



²⁶ [The health and social care costs of a selection of health conditions and multi-morbidities \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

²⁷ [A05 SA: Employment, unemployment and economic inactivity by age group \(seasonally adjusted\) - Office for National Statistics](https://www.ons.gov.uk/economy/employmentandunemployment)

²⁸ [Cost of living and depression in adults, Great Britain - Office for National Statistics](https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/mentalhealth)

²⁹ <https://missioneconomics.shinyapps.io/timetoggle>

2.7 Valuing other health outcomes

The health outcomes related to reduced health service usage were assessed differently because their underpinning evidence was based on the predicted reduction in GP visits and usage of mental health services as a result of self-reported good health associated with sport participation: *Sport participants are 14.1% more likely to (self) report good health than non-participants; in turn, people in good health are 25.4% less likely to frequently visit GPs and 8.4% less likely to have used psychotherapy services in the last year than those who are not in good health*³⁰.

For these outcomes, the number of 'active' and 'fairly active' adults in England was multiplied by the annual cost savings per sport participant resulting from reduced GP visits and mental health service usage available from the underpinning data source (the inflation-adjusted financial proxies are shown in Table 2.4).

Using data from *Hospital Accident and Emergency Activity*³¹ the total number of sports injuries in England was estimated at 24,664 (equivalent to around 0.1% of all A&E attendances). This figure was multiplied by the average cost of an injury³² (see Table 2.4).

We acknowledge that A&E attendances only represent the most serious sports injuries and that the true extent of sports injuries is likely to be higher if we consider other health service usage such as physiotherapy. However, to the best of our knowledge, currently there is no national data available to enable this wider usage to be valued.



³⁰ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/446273/Health_and_educational_benefits_of_sport_and_culture.pdf

³¹ [Hospital Accident & Emergency Activity - NHS England Digital](#)

³² [impact of injuries on health service resource use and costs in primary and secondary care in the English NHS | Journal of Public Health | Oxford Academic \(oup.com\)](#)

Table 2.4 Annual average cost per case (2024 prices)

Health outcomes	Healthcare (£)		Social care (£)		Informal care (£)		Productivity – Morbidity (£)		Productivity – Mortality (£)	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
CHD	2,656	2,614	129	656	3,146	3,096	1,176	1,157	4,125	4,060
Stroke	4,394	3,592	969	1,754	3,222	2,635	549	449	1,724	1,410
Type 2 diabetes	2,140	2,255	192	293	-	-	341	360	319	336
Breast cancer	-	12,159	-	257	-	7,358	-	2,150	-	19,500
Colon cancer	8,562	8,295	179	248	7,358	7,358	2,150	2,150	19,500	19,500
Bladder cancer	17,432	17,432	-	-	7,358	7,358	2,150	2,150	19,500	19,500
Endometrium cancer	-	17,432	-	-	-	7,358	-	2,150	-	19,500
Oesophagus cancer	17,432	17,432	-	-	7,358	7,358	2,150	2,150	19,500	19,500
Gastric cancer	17,432	17,432	-	-	7,358	7,358	2,150	2,150	19,500	19,500
Renal cancer	17,432	17,432	-	-	7,358	7,358	2,150	2,150	19,500	19,500
Dementia	4,628	3,357	3,978	5,505	3,862	5,344	-	-	-	-
Depression	1,855	2,246	201	169	-	-	6,426	7,781	-	-
Hip fractures	20,032	20,032	-	-	-	-	-	-	-	-
Back pain	659	659	-	-	-	-	-	-	-	-
GP visits	18	18	-	-	-	-	-	-	-	-
Mental health services	24	24	-	-	-	-	-	-	-	-
Injuries (incurred)	6,130	6,130	-	-	-	-	-	-	-	-

Note: See Appendix 3 for data sources

Chapter 3

Secondary valuation findings



3.1 Cases of disease prevented

Based on the data sources and assumptions outlined in Chapter 2, we estimate that more than **3.3m** cases of disease (or ill-health) were prevented among ‘active’ or ‘fairly active’ adults in England in 2024 – see Table 3.1. The highest number of cases prevented were for depression (1.3m), followed by back pain (0.9m) and Type 2 diabetes (0.7m).



Table 3.1 Cases of disease prevented among physically active adults in England (2024)

Health outcome	Males	Females	Overall
CHD	75,809	74,862	150,671
Stroke	55,069	54,333	109,402
Type 2 diabetes	366,391	359,699	726,090
Breast cancer (Females)	–	4,424	4,424
Colon cancer	2,235	1,946	4,182
Bladder cancer	1,624	509	2,133
Endometrium cancer (Females)	–	1,325	1,325
Oesophagus cancer	1,151	433	1,584
Gastric cancer	411	259	669
Renal cancer	639	333	972
Dementia (65+)	31,625	32,981	64,607
Depression	661,524	649,790	1,311,314
Hip fractures (65+)	13,842	14,021	27,862
Back pain	469,316	460,991	930,306
Totals	1,679,636	1,655,904	3,335,541

Note: A fuller breakdown is available in Appendix 4.

3.2 Cost savings

Table 3.2 shows annual cost savings associated with the disease prevention estimate for the 14 health outcomes listed in Table 3.1 at 2024 prices. Overall, these savings are estimated at **£14.7bn**, including £6.7bn in direct healthcare costs (~46%). Savings linked to indirect costs for social care and informal care are estimated at £0.9bn and £1.2bn respectively, and some £5.8bn of productivity losses due to morbidity were avoided. The corresponding estimate for mortality-related productivity losses avoided is circa £0.8bn – this estimate is excluded cautiously from the £14.7bn overall figure because productivity savings linked to reduced mortality are likely to materialise in the future, and therefore beyond the scope of the study.



Table 3.2 Value of health outcomes from diseases prevented by sport and physical activity (2024 prices)

Health outcome	Direct		Indirect		OVERALL (£)
	Healthcare (£)	Social care (£)	Informal care (£)	Productivity (£)	
Coronary heart disease	397,022,870	58,883,194	470,293,352	104,485,671	1,030,685,087
Stroke	437,146,132	148,638,628	320,579,269	32,666,012	939,030,040
Type 2 diabetes	1,595,262,069	175,766,587	-	151,055,401	1,922,084,057
Breast cancer	53,789,550	1,137,811	32,548,810	5,351,813	92,827,984
Colon cancer	35,283,413	881,601	30,766,816	5,360,867	72,292,696
Bladder cancer	37,187,058	-	15,695,882	2,800,285	55,683,226
Endometrium cancer	23,092,885	-	9,747,025	1,602,647	34,442,557
Oesophagus cancer	27,608,982	-	11,653,175	2,071,554	41,333,711
Gastric cancer	11,667,940	-	4,924,794	865,257	17,457,990
Renal cancer	16,943,730	-	7,151,595	1,262,266	25,357,591
Dementia	257,073,781	307,368,922	298,388,688	-	862,831,391
Depression	2,686,674,783	243,090,517	-	5,504,534,977	8,434,300,276
Hip fractures	558,143,771	-	-	-	558,143,771
Back pain	612,696,868	-	-	-	612,696,868
Totals (14 outcomes)	6,749,593,830	935,767,260	1,201,749,406	5,812,056,749	14,699,167,245

A further **£1.4bn** was saved through a reduction in medical service usage (£0.6bn for reduced GP visits and £0.8bn for reduced mental health service usage). To avoid potential double-counting with the health values associated with disease prevention, we adjusted the calculation of costs saved through reduced GP visits to discount the number of averted cases that have been accounted for already in the valuation of the 14 specific

health outcomes in Table 3.2. Similarly, we removed the number of averted cases accounted for in the valuation of depression when estimating the costs saved through reduced use of mental health services.

The healthcare cost incurred due to sports injuries was estimated at **£0.15bn**. This figure was calculated by multiplying the estimated number of A&E attendances recorded as sports injuries by the average cost of an injury.

The *net* cost savings (i.e. direct and indirect costs avoided less injury costs incurred) across all 17 health outcomes amount to **£15.9bn** as shown in Table 3.3.

Table 3.3 Net cost savings (2024 prices)

Health outcome	Direct		Indirect		OVERALL (£)
	Healthcare (£)	Social care (£)	Informal care (£)	Productivity (£)	
Disease prevention (14 outcomes)	6,749,593,830	935,767,260	1,201,749,406	5,812,056,749	14,699,167,245
Reduced GP visits	569,342,087	–	–	–	569,342,087
Reduced mental health service usage	816,549,702	–	–	–	816,549,702
Gross cost savings	8,135,485,618	935,767,260	1,201,749,406	5,812,056,749	16,085,059,034
Less: Sport injuries	(151,197,640)	–	–	–	(151,197,640)
Net cost savings	7,984,287,979	935,767,260	1,201,749,406	5,812,056,749	15,933,861,394

3.3 Value per participant

Dividing the *net* annual cost savings of £15.9bn by the total number of 'active' and 'fairly active' adults in 2023/24 (circa 35m people) gives an average value per participant of **£456**. The differential per participant values for 'active' and 'fairly active' adults are £478 and £330 respectively.

The healthcare, social care and informal care costs saved and the injury costs incurred reported above relate to adults aged 16+. However, the productivity losses avoided relate to adults aged 16–64. Table 3.4 shows the differential 'per participant' values derived including healthcare, social care and informal care and injury costs, but excluding any productivity losses avoided.

The average value across all participants (excluding productivity savings) is £290. Among adults who are 'active', the average value increases to £301 and it reduces to £223 among the 'fairly active' population. The fluctuations in the value per participant between males and females are relatively modest. However, given that the cost savings associated with dementia and hip

fractures apply only to older adults (aged 65+) in the model, the average value per participant for the 65+ age group is consistently higher compared with the 16–64 age group (active: £467 v £260; fairly active: £343 v £181). The value of a 'fairly active' older adult is higher than the value of an 'active' person aged 16–64 (£343 v £260).

Table 3.4 Net value per participant – excluding productivity (2024 prices)

	Males (£)	Females (£)	Overall (£)
Active:			
Aged 16+	290	313	301
Aged 16–64	250	270	260
Aged 65+	452	482	467
Fairly active:			
Aged 16+	213	231	223
Aged 16–64	175	185	181
Aged 65+	333	353	343
All participants:			
Aged 16+	280	299	290
Aged 16–64	241	257	249
Aged 65+	433	454	444

Table 3.5 presents a breakdown of the value per participant for productivity losses avoided (savings related to morbidity only). There are no values for adults aged 65+ as the productivity estimates relate to participants of working age. For completeness, these values are presented for both the 16-64 and 16+ age groups.



Table 3.5 Gross value per participant – productivity losses avoided (2024 prices)

	Males (£)	Females (£)	Overall (£)
Active:			
Aged 16+	171	183	177
Aged 16-64	212	230	221
Fairly active:			
Aged 16+	107	108	107
Aged 16-64	140	148	145
All participants:			
Aged 16+	162	170	166
Aged 16-64	203	217	210

For completeness, Table 3.6 combines the 'per participant' values from Table 3.4 and Table 3.5 for the different cohorts of physically active adults.

Table 3.6 Net value per participant – including productivity (2024 prices)

	Males (£)	Females (£)	Overall (£)
Active:			
Aged 16+	460	496	478
Aged 16-64	462	500	480
Aged 65+	452	482	467
Fairly active:			
Aged 16+	320	338	330
Aged 16-64	316	333	326
Aged 65+	333	353	343
All participants:			
Aged 16+	442	470	456
Aged 16-64	444	474	459
Aged 65+	433	454	444

3.4 Health element of the social cost of inequality

Sport England's Inequalities Metric measures how different personal, social, and economic characteristics combine to influence activity levels³³. It categorises the population according to how many characteristics of inequality they possess – 41% of adults have zero characteristics of inequality, 40% have one characteristic and 19% have two or more characteristics. Those having more characteristics of inequality demonstrate lower activity levels. To illustrate this point, 74% of adults with zero characteristics are active, compared with 62% of adults with just one characteristic and 42% for those with two or more characteristics.

Using this differentiated participation data together with the 'per participant' secondary values produced from the health valuation, it is possible to derive a high-level estimate of the health element of the social cost of inequality. The underlying assumption here is that physical activity levels in the adult population will mirror that of people having zero characteristics of inequality (i.e. 74% active and 10% fairly active).

Under this hypothetical scenario, the secondary value estimate for health in 2023/24 increases to **£11.6bn** excluding productivity savings from reduced morbidity, and further to **£18.3bn** if morbidity-related productivity savings are included, as shown in Table 3.7. The health element of the annual social cost of inequality is calculated as the difference between these projected figures and the corresponding estimates based on existing activity levels in the adult population (reported in Table 3.3 earlier), which equates to circa **£1.5bn** excluding productivity and **£2.4bn** including productivity.

This additional value should be treated as indicative as it only accounts for differences in activity levels linked to characteristics of inequality. Differential average health values for adults with zero, one or 2+ characteristics of inequality are not available.



³³ At the time of our analysis, the characteristics included in the inequalities metric for adults were: disabled people and those with a long-term health condition; people aged 65 or over; those from lower socioeconomic groups (NS SEC 6-8); Asian, Black, and Chinese adults; adults of Muslim faith; and, pregnant women and parents of children under one year.

Table 3.7 Projected cost savings using activity levels for adults with zero characteristics of inequality (2024 prices)

Group	Projected population (16+)	Value per person (£)	Value per person (£)	Total value (£)	Total value (£)
		(excluding productivity)	(including productivity)	(excluding productivity)	(including productivity)
Active adults	34,952,206	301	478	10,526,940,611	16,699,248,807
Fairly active adults	4,845,326	223	330	1,080,918,950	1,600,876,491
All participants	39,797,532			11,607,859,560	18,300,125,298
Actual net cost savings (from Table 3.3)				10,121,804,645	15,933,861,394
Health-related social cost of inequality (health)				1,486,054,915	2,366,263,904

Chapter 4

Conclusions and recommendations



4.1 Conclusions

Based on the findings presented in this report, the key insights from the secondary value study are as follows:

1. Sport and physical activity generate significant secondary (health-related) value for society.
2. The overall (net) health value of sport and physical activity in England in 2024 is circa **£15.9bn**. To put this estimate into context, the net health value in 2023 was estimated at £10.5bn, but this figure excluded productivity savings.
3. Most of the overall health value of sport and physical activity is generated by participants who are active for 150+ minutes per week – £14.2bn (~89%).
4. The cost of sports injuries is circa **£151m**. This figure is likely to underestimate the cost of sport and physical activity as it only includes admissions to Accident and Emergency Units.
5. Direct health care costs account for £6.7bn (46%) of gross cost savings associated with the prevention of certain Non-Communicable Diseases (NCDs) and other chronic health conditions in 2024.
6. The proportion of health-related cost savings that are accounted for by direct healthcare costs saved in 2024 is lower than reported for 2023 (66%), but this finding can be explained by the inclusion of a wider range of indirect costs (mainly productivity savings). Indirect costs are still not available for all diseases/health conditions and for some health outcomes indirect costs need to be approximated, given the nature of the cost data available in the public domain.
7. We estimate that some **3.3m** cases of disease or ill-health were prevented among active or fairly active adults in England in 2024.
8. The largest number of cases prevented were for depression (1.3m cases), followed by back pain (0.9m cases) and type 2 diabetes (0.7m cases).
9. On a 'per participant' basis, the average annual health value for an active adult is **£478** including productivity savings (£301 without productivity savings). The corresponding value for a fairly active adult is **£330** including productivity savings (£223 without productivity savings).
10. If we exclude productivity savings, the overall value per participant for the 65+ age group is higher compared with the 16-64 age group (active: **£467** v £260; fairly active: **£343** v £181). This variation is primarily because some additional health outcomes are valued for older adults.
11. If we include productivity savings for the working-age population (16-64), the overall value per participant is marginally higher for this age group (£459) relative to the 65+ age group (£444).
12. The health element of the social cost of inequality is estimated at **£1.5bn** (excluding productivity savings) – this is the annual amount by which the overall health value could increase if the entire adult population in England had similar activity levels to adults with zero characteristics of inequality.
13. The health element of the social cost of inequality including productivity savings is circa **£2.4bn**.

4.2 Recommendations

Based on the findings of the secondary value model presented in this 2024 report, and the 2023 report, we identify the following recommendations for developing future health-related valuation work.

1. The underlying health evidence, prevalence rates and costs that feed into the health valuation model do not change materially year on year. Therefore, we recommend that the health valuation is fully updated every three to five years. Mid-cycle or annual estimates could be produced using updated participation data and average values per participant.
2. More thorough consideration of how the health model and the evidence, data sources and key assumptions that inform the calculations align with the Department of Health and Social Care's SPHERE Modelling Platform and Public Health Grant ROI Tool.
3. Further investigation of health evidence relating to the differential risk reductions of various thresholds of activity, including below 150 minutes of moderate-intensity equivalent physical activity (and above the 150 minutes threshold).
4. Updating the analysis of cost savings related to reduced medical service usage using more recent waves of the Understanding Society dataset³⁴.
5. Re-examination of evidence relating to the participation of children and young people and health outcomes. This remains an omission from the health valuation work, but is dependent on the wider development of scientific evidence in this field.

Our final recommendation is that Sport England prioritise investigation of other areas of secondary social value beyond health, specifically how sport and physical activity impact on community social capital, education and crime outcomes. Social outcomes in all these areas were included in previous SROI studies in 2013/14 and 2017/18, albeit with cautious and conservative assumptions. While these outcomes remain challenging to measure, they merit further investigation to enable a fuller understanding of the true value of sport and physical activity to society.

³⁴ <https://www.understandingsociety.ac.uk/>

List of appendices

- Appendix 1** Relative risk reduction sources
- Appendix 2** Estimated disease prevalence/incidence by activity level
- Appendix 3** Cost data sources
- Appendix 4** Breakdown of cases of disease prevented

Appendix 1 Relative risk reduction sources

Health outcomes	Data sources
CHD	Dose-Response Between Physical Activity and Risk of Coronary Heart Disease: A Meta-Analysis – PMC (nih.gov)
Stroke	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4979358/
Type 2 diabetes	https://link.springer.com/article/10.1007/s10654-015-0056-z
Breast cancer	Medicine & Science in Sports & Exercise (lww.com) Physical activity and risk of breast cancer: a meta-analysis of prospective studies – PubMed (nih.gov)
Colon cancer	Medicine & Science in Sports & Exercise (lww.com) https://bjsm.bmj.com/content/50/6/372
Bladder cancer	Medicine & Science in Sports & Exercise (lww.com) The association between physical activity and bladder cancer: systematic review and meta-analysis (nature.com) Physical Activity and Cancer Fact Sheet – NCI
Endometrium cancer	Medicine & Science in Sports & Exercise (lww.com) Physical Activity and Cancer Fact Sheet – NCI A systematic review and meta-analysis of physical activity and endometrial cancer risk – PubMed (nih.gov)

Health outcomes	Data sources
Oesophagus cancer	Medicine & Science in Sports & Exercise (lww.com) Physical Activity and Cancer Fact Sheet – NCI
Gastric cancer	Medicine & Science in Sports & Exercise (lww.com) Physical Activity and Cancer Fact Sheet – NCI Physical Activity and Gastric Cancer Risk: A Systematic Review and Meta-Analysis – PubMed (nih.gov)
Renal cancer	Medicine & Science in Sports & Exercise (lww.com) Physical Activity and Cancer Fact Sheet – NCI The association between physical activity and renal cancer: systematic review and meta-analysis – PubMed (nih.gov)
Dementia	Physical activity as a protective factor for dementia and Alzheimer’s disease: systematic review, meta-analysis and quality assessment of cohort and case-control studies British Journal of Sports Medicine (bmj.com)
Depression	Association Between Physical Activity and Risk of Depression: A Systematic Review and Meta-analysis Depressive Disorders JAMA Psychiatry JAMA Network
Hip fractures	The state of musculoskeletal health 2019 Social return on investment.pdf (sportengland-production-files.s3.eu-west-2.amazonaws.com)
Back pain	The state of musculoskeletal health 2019 Social return on investment.pdf (sportengland-production-files.s3.eu-west-2.amazonaws.com)

Appendix 2 Estimated disease prevalence/incidence by activity level

Health outcomes	Males				Females			
	Inactive	Fairly active or active	Inactive or fairly active	Active	Inactive	Fairly active or active	Inactive or fairly active	Active
CHD	3.31%	2.87%	3.28%	2.82%	3.29%	2.86%	3.25%	2.80%
Stroke	2.10%	1.78%	2.08%	1.75%	2.09%	1.78%	2.06%	1.73%
Type 2 diabetes	8.60%	6.49%	8.45%	6.25%	8.50%	6.46%	8.32%	6.16%
Breast cancer					0.23%	0.20%	0.22%	0.20%
Colon cancer	0.07%	0.06%	0.07%	0.06%	0.06%	0.05%	0.06%	0.05%
Bladder cancer	0.07%	0.06%	0.07%	0.06%	0.02%	0.02%	0.02%	0.02%
Endometrium cancer					0.04%	0.03%	0.04%	0.03%
Oesophagus cancer	0.03%	0.03%	0.03%	0.03%	0.01%	0.01%	0.01%	0.01%
Gastric cancer	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Renal cancer	0.03%	0.03%	0.03%	0.03%	0.02%	0.02%	0.02%	0.01%
Dementia	4.87%	3.96%	4.80%	3.84%	4.81%	3.94%	4.73%	3.78%
Depression	16.15%	12.35%	15.88%	11.91%	15.98%	12.28%	15.65%	11.74%
Hip fractures	0.82%	0.42%	0.78%	0.38%	0.79%	0.42%	0.74%	0.36%
Back pain	11.46%	8.76%	11.27%	8.45%	11.33%	8.71%	11.10%	8.33%

Appendix 3 Cost data sources

Health outcomes	Data sources
CHD	Health & social care: The health and social care costs of a selection of health conditions and multi-morbidities (publishing.service.gov.uk) Informal care and productivity: bhf-statistics-compendium-2023.pdf
Stroke	Health & social care: The health and social care costs of a selection of health conditions and multi-morbidities (publishing.service.gov.uk) Informal care & productivity: bhf-statistics-compendium-2023.pdf
Type 2 diabetes	Health & social care: The health and social care costs of a selection of health conditions and multi-morbidities (publishing.service.gov.uk) Productivity: Estimation of the direct health and indirect societal costs of diabetes in the UK using a cost of illness model
Breast cancer	Health & social care: The health and social care costs of a selection of health conditions and multi-morbidities (publishing.service.gov.uk) Informal care & productivity: Economic burden of cancer across the European Union: a population-based cost analysis – ScienceDirect
Colon cancer	Health & social care: The health and social care costs of a selection of health conditions and multi-morbidities (publishing.service.gov.uk) Informal care & productivity: Economic burden of cancer across the European Union: a population-based cost analysis – ScienceDirect

Health outcomes	Data sources
All other cancers	Health, informal care & productivity: Economic burden of cancer across the European Union: a population-based cost analysis - ScienceDirect
Dementia	Health & social care: The health and social care costs of a selection of health conditions and multi-morbidities (publishing.service.gov.uk) Informal care: Projections of care for older people with dementia in England: 2015 to 2040 Age and Ageing Oxford Academic (oup.com)
Depression	Health & social care: The health and social care costs of a selection of health conditions and multi-morbidities (publishing.service.gov.uk) Productivity: Paying the Price: the cost of mental health care in England in 2026 - McCrone, Dhanasiri, Patel, Knapp, Lawton-Smith - The King's Fund, May 2008
Hip fractures	Healthcare only: https://www.ncbi.nlm.nih.gov/books/NBK385602/
Back pain	Healthcare only: The economic burden of back pain in the UK - PubMed (nih.gov)
GP visits	Healthcare only: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/446273/Health_and_educational_benefits_of_sport_and_culture.pdf
Mental health service usage	Healthcare only: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/446273/Health_and_educational_benefits_of_sport_and_culture.pdf
Sports injuries	Healthcare only: impact of injuries on health service resource use and costs in primary and secondary care in the English NHS Journal of Public Health Oxford Academic (oup.com)

Appendix 4 Breakdown of cases of disease prevented

Health outcomes	Males		Females		Overall	
	Active	Fairly active	Active	Fairly active	Active	Fairly active
CHD	69,331	6,478	66,589	8,273	135,920	14,751
Stroke	50,294	4,776	48,247	6,086	98,541	10,862
Type 2 diabetes	332,073	34,317	316,466	43,233	648,540	77,550
Breast cancer	-	-	3,941	482	3,941	482
Colon cancer	2,037	198	1,724	223	3,761	421
Bladder cancer	1,485	140	452	57	1,937	196
Endometrium cancer	-	-	1,172	153	1,172	153
Oesophagus cancer	1,047	104	383	50	1,430	154
Gastric cancer	374	36	229	30	603	66
Renal cancer	585	54	297	36	882	90
Dementia	28,335	3,291	28,216	4,765	56,551	8,056
Depression	600,056	61,468	572,257	77,533	1,172,313	139,001
Hip fractures	12,017	1,824	11,549	2,472	23,566	4,296
Back pain	425,707	43,609	405,985	55,005	831,692	98,614
TOTALS	1,523,341	156,295	1,457,508	198,397	2,980,849	354,692



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