



Department  
for Transport

# Walking and Cycling Statistics 2017: Notes and Definitions

## About this release

This document provides information about the Department for Transport (DfT) statistical release Walking and Cycling Statistics 2017: England.

The publication uses two main data sources, drawing figures on the proportion of adults participating in walking and cycling from the Active Lives Survey and figures on walking and cycling behaviours from the National Travel Survey.

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## Active Lives Survey (ALS)

### Overview

The Active Lives Survey (ALS) is an annual household push-to-web survey administered by Sport England, an agency of the Department of Digital, Culture Media & Sport (DCMS). The first ALS was conducted between November 2015 and November 2016, and runs bi-annually. The survey follows the Active People Survey (APS), which has been discontinued.

Following the completion of each survey wave, ALS microdata is placed on the UK Data Archive here: <http://www.data-archive.ac.uk/>

## ALS Methodology

### Data collection

The ALS is a mixed-mode (push-to-web) self-completion design involving online (desktop, laptop, tablet or smart phone) and paper methods for those households that either do not have internet access or prefer to complete the survey this way. The survey mostly includes people aged 16 and over, with some aged 14 and 15 years old also taking part (although our analysis only covers people aged 16 and over). The survey year runs from mid-November to mid-November. Interviews in each local authority are spread over the 12 month period to avoid seasonal bias. Data collection is carried out by Ipsos MORI.

A letter is sent to a household – selected from the Royal Mail's Postal Address File (generally regarded as the “Gold Standard” for population surveys) – inviting up to two people per household to take part in the survey, either online or by requesting a paper version of the questionnaire. There is also the option to take part via telephone for those whose first language is not English.

For this survey (November 2016 - November 2017), 53% took part online and 46% filled in a paper questionnaire. The standard sample size is around 500 interviews in each county district, metropolitan borough or unitary authority. A small number of local authorities each year fund a “boost” to give a larger sample size in their area. The Isles of Scilly and the City of London are the two smallest local authorities by population, with around 1,000 and 4,000 households respectively. For these authorities, the target is to achieve as many interviews as possible.

More detailed information about the data collection methodology can be found in the technical note, which is available here: <https://www.sportengland.org/research/active-lives-survey/the-active-lives-survey/>

## Data weighting

Weighting is required to reduce the bias in survey estimates. Weights are produced to make the weighted achieved sample match the population as closely as possible. The sample sizes quoted in table [CW0306](#) are weighted sample sizes.

## Confidence intervals

The proportions for walking and cycling participation are estimated from samples of people and as such, they may not be exactly the same as the true proportion existing in the population. If a different sample were drawn from the population, the result obtained would differ slightly, due to sampling variability.

Confidence interval half widths are presented in the tables to demonstrate the statistical reliability of the results. These can be added to, and subtracted from, the estimate to produce a 95% confidence interval, – that is, if the same sized sample were to be drawn repeatedly from the population, we would expect the result to lie within the confidence interval 95% of the time, or 19 times out of every 20. They have been calculated using the complex survey package in SPSS, which takes account of design effects.

## Significance Testing

In tables CW0302 and CW0303, we have compared the proportion of adults that walk or cycle at least once a week for ALS Year 1 (2015-16) and ALS Year 2 (2016-17), to identify whether there has been a statistically significant change in the underlying walking/cycling rate. Where a statistically significant change has not been identified, this suggests that it is more likely that the difference in the observed walking/cycling rate is simply due to random variation in the samples, rather than a genuine change in the underlying rate.

If a result is statistically significant then we can be confident that the difference seen in those sampled are reflective of the population.

## The Isles of Scilly and City of London

The target sample sizes for the Isles and Scilly and the City of London are around 250. These are smaller than for other areas and therefore results for these areas may not be statistically robust, which is reflected in the wider confidence intervals given. The unusually small populations of Isles of Scilly and City of London also mean that they are not directly comparable with other authorities. Therefore caution is needed when interpreting the results for these two areas.

## Differences between Sport England and DfT estimates

Sport England publish their own results from the ALS, which can be found here: <https://www.sportengland.org/research/active-lives-survey/>

### Intensity

The ALS includes questions about the pace of walking and cycling, and the effort that was put into these activities (for example, whether it was enough to make the respondent out of breath). Sport England's measure of activity uses this data to only include physical activity that is intense enough to contribute to the respondent's health.

DfT's walking and cycling estimates do not use the intensity information, which generally makes the proportion of adults walking and cycling slightly different to DfT figures.

### Exercise bikes

Sport England use a broader term "Cycling for leisure and sport", which is similar to DfT's "cycling for leisure", but includes the use of exercise bikes, i.e. cycling on a machine indoors. Whilst this definition works for measuring physical activity, the DfT estimates do not include this activity.

## ALS Definitions

For the purposes of the walking and cycling statistics derived from the ALS, the following definitions are used:

**Walking:** In the tables, "walking" refers to any continuous walk of at least ten minutes and covers walking for leisure and travel and rambling or Nordic walking. However, walking around shops, hiking, and mountain/hill walking are excluded.

**Cycling:** In the tables, "cycling" refers to cycle rides of any length and covers cycling for leisure and travel, as well as including a number of specific recreational types: BMX, mountain biking, road cycling or racing, track cycling, and cyclo-cross. However, the use of exercise bikes or cycling indoors are excluded.

**Time usually spent walking and cycling:** In the tables, the time “usually” spent walking and cycling is the total time they most regularly or frequently walked or cycled on each day. It is not necessarily the average time they spent walking or cycling on those days.

## Purpose

“**Travel**” refers to getting from place to place using walking or cycling, for example commuting or going to a friend’s house.

“**Leisure**” refers to walking or cycling that is for purposes of recreation, health, competition or training purposes, i.e. not just for getting from place to place.

**Frequency of cycling and walking:** In the survey, respondents are asked to state the number of days in the past 4 weeks (28 days) that they did a particular walking or cycling activity. These answers are used to derive the frequency measures presented in the tables (e.g. “at least once per month”). We assume that the number of days relates to frequency as follows:

- At least once per month = at least one day in 28
- At least once per week = at least four days in 28
- At least 3 times per week = at least 12 days in 28
- At least 5 times per week = at least 20 days in 28

**Area of residence:** Estimates are grouped according to the area where respondents live, which may not be the same as the area where they walked or cycled in their responses to the survey. Therefore, caution is needed when interpreting the figures, particularly in large urban areas where there are multiple local authorities in a relatively small area.

**Rural / Urban:** 2011 Rural-Urban Classifications and an explanation of how they are defined is available from DEFRA: <https://www.gov.uk/government/statistics/2011-rural-urban-classification>

**Disability:** In the ALS, respondents are asked two questions:

1. Do you have any physical or mental health conditions or illnesses that have lasted or are expected to last 12 months or more?
2. Do these physical or mental health conditions or illnesses have a substantial effect on your ability to do normal daily activities?

This allows the respondents to be classified into three groups:

- **No disability** - those that answer 'No' to the first question.
- **Non-limiting disability** – those that answer 'Yes' to the first question, but 'No' to the second.
- **Limiting disability** – those that answer 'Yes' to both questions.

This definition of disability is consistent with the Equalities Act 2010.

## National Travel Survey (NTS)

### Overview

The National Travel Survey (NTS) 2017 is the latest in a series of household surveys designed to provide a rich source of data on personal travel. It is part of a continuous survey that began in July 1988, following ad hoc surveys since the mid-1960s. The survey is primarily designed to track long-term development of trends; therefore care should be taken when drawing conclusions from short-term changes.

NTS data is collected via two main methods. Firstly, face to face interviews are carried out with all members of the household to collect personal and household characteristics, along with information on all of the vehicles to which they have access. Each household member is then asked to record details of all their trips over a seven-day period in a travel diary, allowing travel patterns to be linked with individual characteristics. The NTS covers travel by people in all age groups, including children.

The NTS surveys around 7,000 households, covering around 16,000 individuals. This sample size is insufficient for analysis at local authority level but can provide insights at national and regional levels, however differences in methodology and definitions between the NTS and ALS means that their results are not directly comparable.

For more information on the NTS, please see here: <https://www.gov.uk/government/statistics/national-travel-survey-2017>

## NTS Methodology

### Sample size

During 2017, 6,135 households in England participated fully in the survey by providing information via interview and completing a seven-day travel diary. An additional 759 households participated in

the interviews but did not all complete a diary. Although these cases cannot be used for trip-level analysis, their data is included in all analysis at household, individual and vehicle level.

**Diary sample:** Analysis of travel data is based on the diary sample. This comprises all 'fully co-operating households', defined as households for which the following information is available: a household interview, an individual interview for each household member, a seven day travel diary for each individual and, where applicable, at least one completed vehicle section. Weights were produced to adjust for non-response, and also for drop-off in recording observed during the seven day travel week.

**Interview sample:** This sample comprises all fully co-operating households included in the diary sample, together with some additional 'partially co-operating households'. Generally these partially co-operating households had co-operated fully with the various interviews but not all household members had completed the travel diary. Prior to the introduction of the weighting methodology, data from partially co-operating households was not included in NTS analyses but the weighting strategy offers the opportunity to use this expanded data set for analyses which do not require data from the seven day travel record.

## Points of consideration

### Cycling estimates

Due to the low prevalence of cycling, the number of people in the NTS sample that cycle is small. The figures provided on cycling should be treated with caution, especially when examining trends.

### Walking estimates

Historically, in the NTS, short walks (walks of more than 50 yards and less than 1 mile) were only recorded on the seventh day of the travel diary, and weights are generated to account for this. The 2016 data (published in 2017) were based on the results of an experiment to collect short walks (those walks of less than a mile in length) on day 1 for half of the sample, and day 7 for the other half of the sample. This was a significant methodological improvement, as previous research had concluded that collecting short walks on day 7 results in an under-reporting of these types of trips. From 2017, short walks are being recorded on day 1 of the diary for the whole sample.

The figures for 2016 have been weighted using the information from both samples to produce NTS results as if all the respondents for 2016 had reported short walks on day 1. More information on the weighting of short walks is available in the [NTS Technical Report](#).

Figures for 2002 to 2015 have also been reweighted based on the 2016 experiment. More information on this is available on page 35 of the [NTS statistical release](#).

## NTS Definitions

For the purposes of the walking and cycling statistics derived from the NTS, the following definitions are used:

**Trip:** The basic unit of travel, a trip, is defined as a one-way course of travel with a single main purpose. Outward and return halves of a return trip are treated as two separate trips. A trip cannot have two separate purposes, and if a single course of travel involves a mid-way change of purpose then it, too, is split into two trips. However, trivial subsidiary purposes (e.g. a stop to buy a newspaper) are disregarded.

**Stage:** A trip consists of one or more stages. A new stage is defined when there is a change in the form of transport or when there is a change of vehicle requiring a separate ticket.

**Distance travelled:** The length of any trip stage is the distance actually covered, as reported by the traveller, and not the distance 'as the crow flies'.

**Main mode of travel:** The main mode of a trip is that used for the longest stage of the trip by distance. With stages of equal length the mode of the latest stage is used.

**Walking:** All walks over 50 yards on the public highway are included as walks in the NTS.

**Cycling:** All cycles on the public highway are included as cycle in the NTS.

For more definitions, please see the notes and definitions document here: <https://www.gov.uk/government/statistics/national-travel-survey-2017>