



National Travel Survey 2014: Multi-stage trips

The National Travel Survey is the Department for Transport's key source of data for understanding personal travel patterns.

This factsheet looks at the proportion of trips that include more than one form of transport (multi-stage trips).

Key definitions

A **trip** is defined as a one-way course of travel with a single main purpose.

A new **stage** is defined where there is a change in the mode of transport.

Walks under 50 yards and off the public highway are not captured.

Multi-stage trips

72 multi-stage trips per person per year on average

27% of all walking stages in the NTS are as part of a trip by another mode

8% of all trips recorded in the NTS are multi-stage

89% of NTS trips where surface rail is the main mode involve another stage



Average number of stages per trip by main mode

Trips by public transport are likely to involve several stages, whereas most trips by private modes involve only one stage.

Public modes

Surface Rail **2.75**

London Underground **2.49**

London bus **1.74**
 Bus elsewhere **1.46**

Private modes

Car **1.03**

Cycling **1.01**

Walking **1.00**

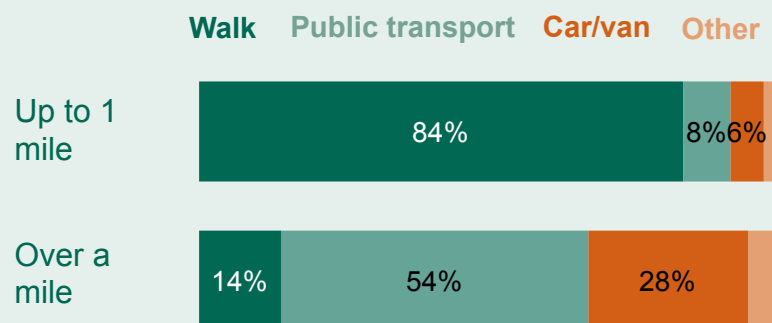
Walking as part of multi-stage trips

Main mode of trip



Rail trips

Walking is most common method of getting to a rail station when the distance to the station is up to one mile...



This factsheet summarises findings from the [National Travel Survey \(NTS\) 2014](#) on trips which involve more than one form of transport.

Definitions

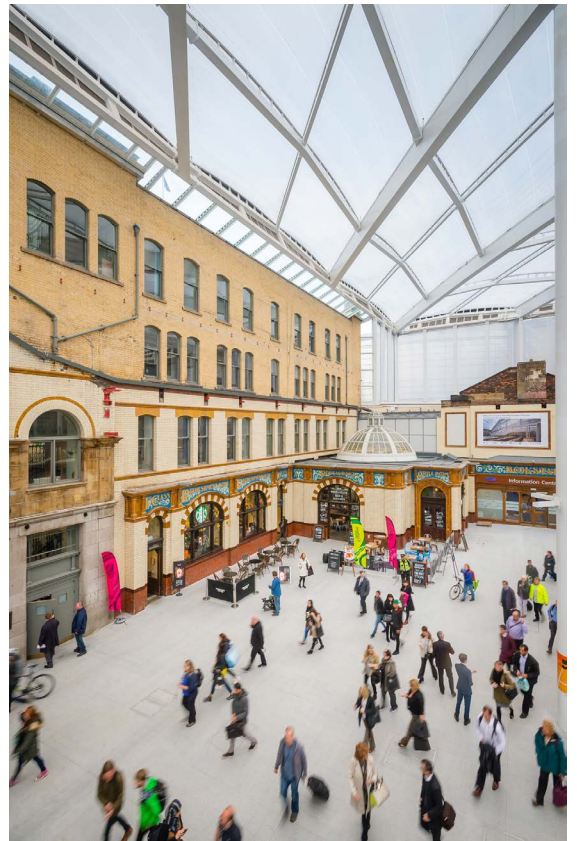
In the NTS, a **trip** is defined as a one-way course of travel with a single main purpose. A trip can involve one or more stages.

A new **stage** of a trip is defined where there is a change in the mode of transport (or a change of vehicle requiring a separate ticket). For the purpose of this factsheet a **multi-stage trip** refers to a trip which involves more than one stage, and therefore more than one form of transport.

The **main mode** of a trip is the mode used for the longest part of the trip, by distance.

Important notes

The analysis presented here is based largely on data from the final day of the NTS travel diary as this is the only day on which walks under 1 mile are recorded. Except where stated, figures are for years 2010-2014 combined to provide a larger sample size. In the NTS, walks under 50 yards, or away from the public highway, are excluded. In addition, distances are estimated by respondents, with relatively few walks below 0.1 miles recorded. **This is likely to mean that the proportion of trips which involve walking is underestimated, on the whole, in these figures.**



Trips and stages

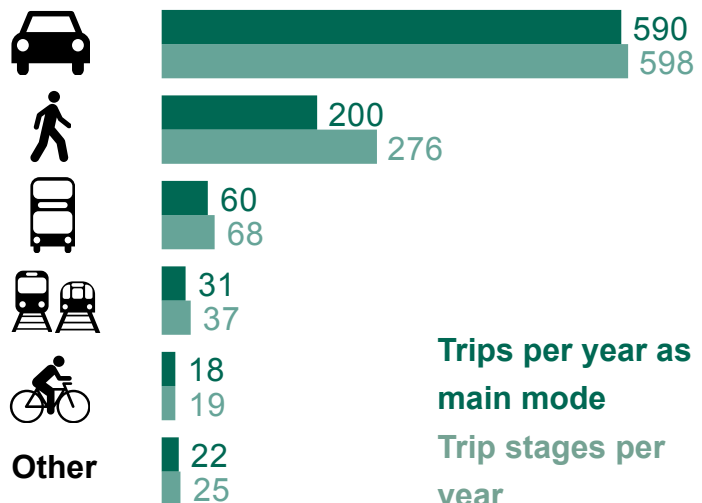
Trips and stages by mode:

Residents of England made 921 trips on average during 2014. The majority of these trips are made by two main modes - car or walking, which together account for around 86% of all trips.

These trips involved a total of 1,024 trip stages - an average of 1.1 stages per trip across all modes.

This means that there were an average of 103 stages which were not made by the main mode of the trip. Most - three quarters - of these were walking stages.

Average number of trips and stages by mode of travel: England, 2014



Stages as part of another type of trip:

As a share of their total use, the modes most likely to form part of another trip (i.e. where the longest part of the trip distance is using another mode) are walking and public transport.

In particular, nearly a third of London Underground stages and a quarter of walk stages are made as part of a multi-stage trip by another main mode (where main mode is that used for the longest part of the trip by distance).



Multi-stage trips

Number of multi-stage trips:

Based on NTS data, in 2014 an average of 72 trips per person - 8% of all trips - involved more than one mode of travel.

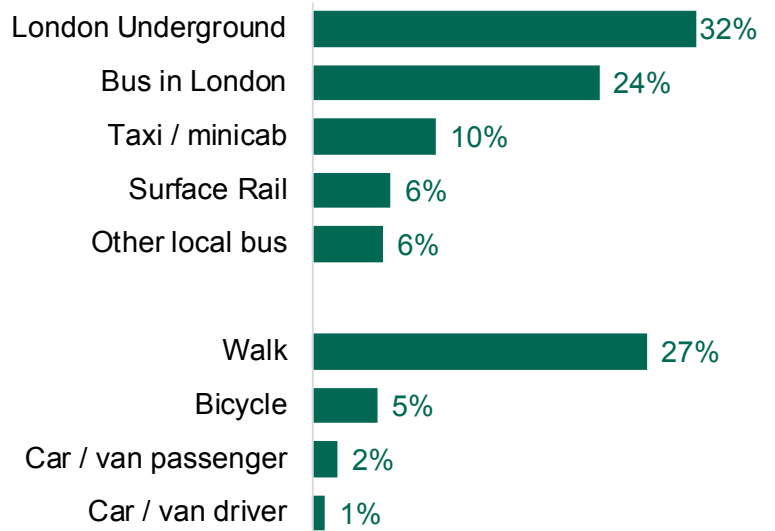
The proportion of trips which involve more than one stage has increased over the last decade. This is largely due to increasing use of public transport - particularly rail, and bus in London.

Proportion of stages by trip mode:

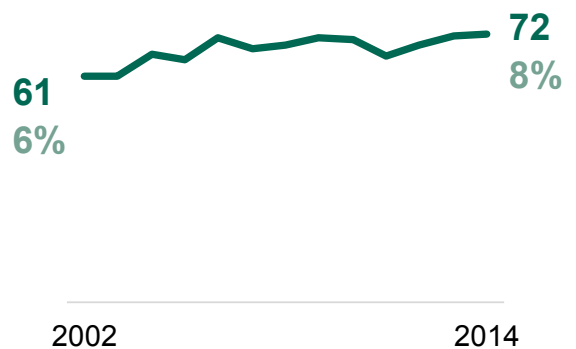
Most trips involve only one stage. In particular, trips recorded in the NTS where the main mode is car or walking very rarely involve another stage by another form of transport.

However trips where the main mode is by public transport - bus, and particularly rail - are more likely to involve another stage (e.g. to get to or from a bus stop or rail station).

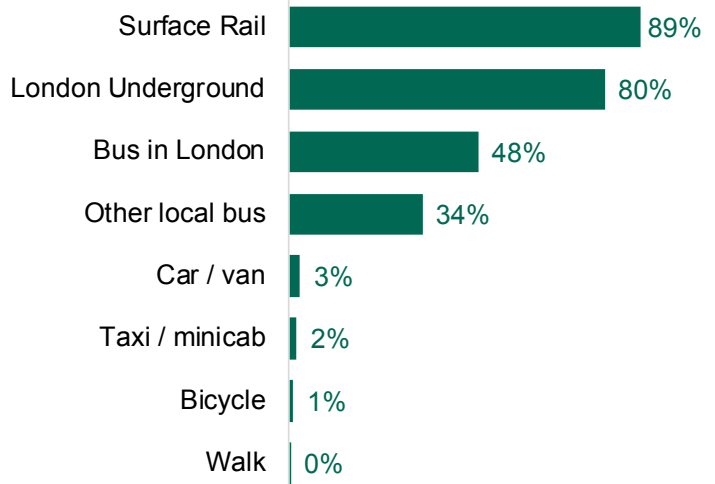
Proportion of all stages that form part of a trip by another main mode of travel, by mode of the stage: England, 2014



Number and share of multi-stage trips: England, 2002 to 2014



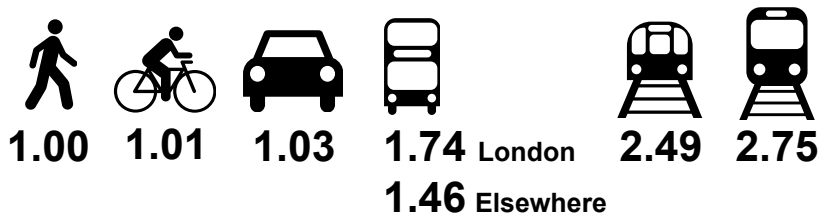
Proportion of trips involving more than one stage, by main mode, England, 2014



Average number of stages per trip:

A similar pattern is seen in average number of stages per trip, which is highest for rail trips which are likely to involve travelling to and from the station.

Average number of stages per trip by main mode



Which other modes are used as part of public transport trips?

Modes used as part of a public transport trip, by main mode of trip

Surface rail:

Nearly two-thirds of rail trips recorded in the NTS involve a walk, with around a quarter involving a car stage.

Underground:

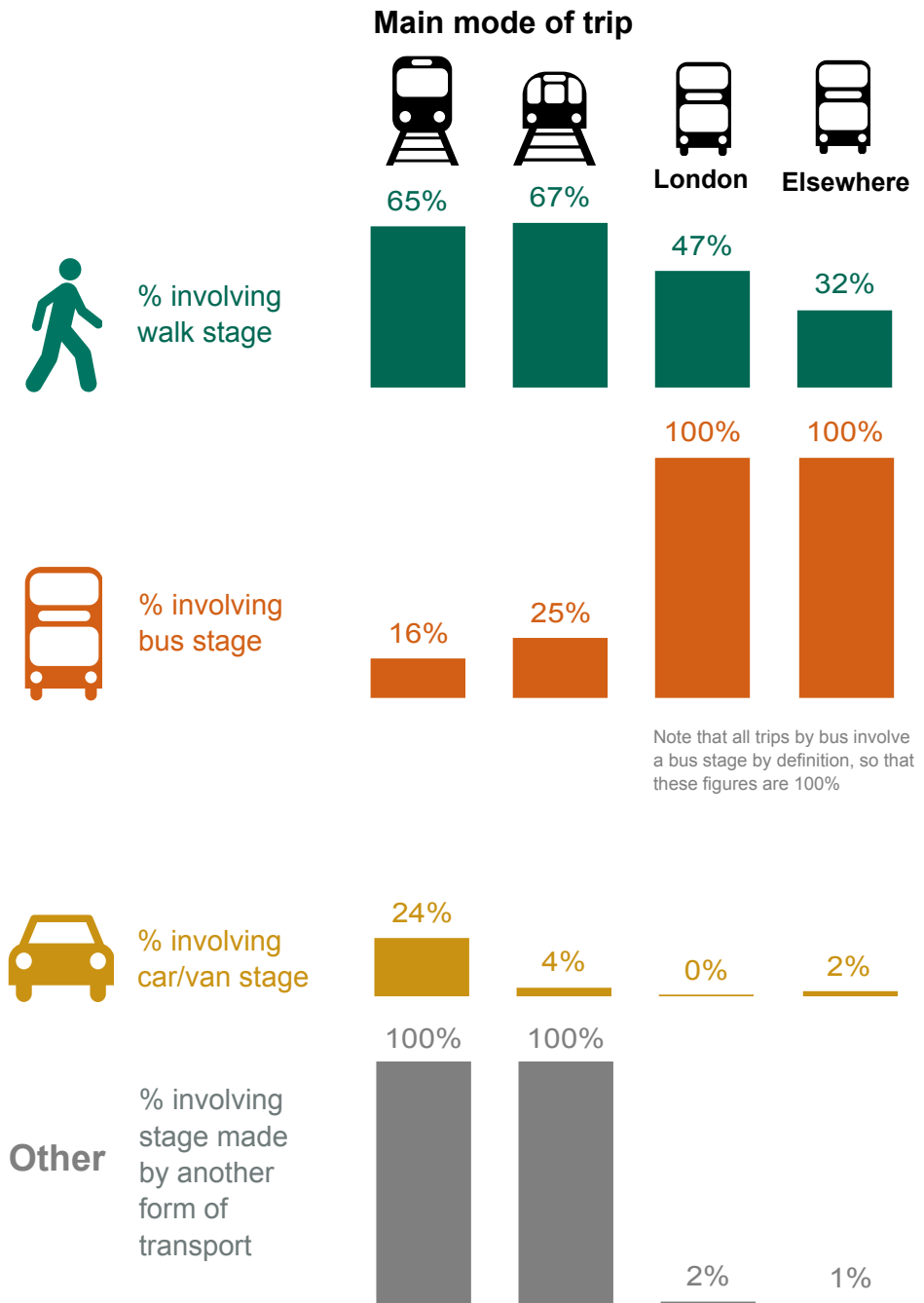
Compared to rail, underground trips are more likely to involve bus stages and less likely to involve use of private car.

Bus:

Walking is also recorded as a stage for almost half of bus trips in London and around a third of bus trips outside London. Bus trips rarely involve modes other than bus and walking.

Taxi:

Only 2% of taxi trips (not shown in the chart) involve a stage by any other form of transport i.e. 98% of taxi trips involve only one stage.



Note that all trips by bus involve a bus stage by definition, so that these figures are 100%

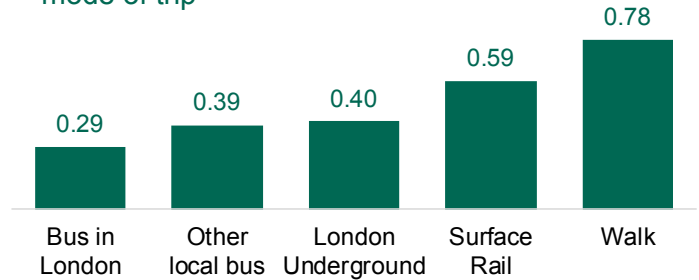
Rail and underground are counted as 'other' modes here which is why these figures are 100%



Average length of a walking stage by mode of trip

Walk stages tend to be shorter when recorded as part of a bus trip than for walk-only trips (note that the figures here are based on distances recorded by NTS respondents which may be more likely to miss the very shortest walks and thus there is a risk of overestimating the averages).

Average length (in miles) of a walking stage by main mode of trip



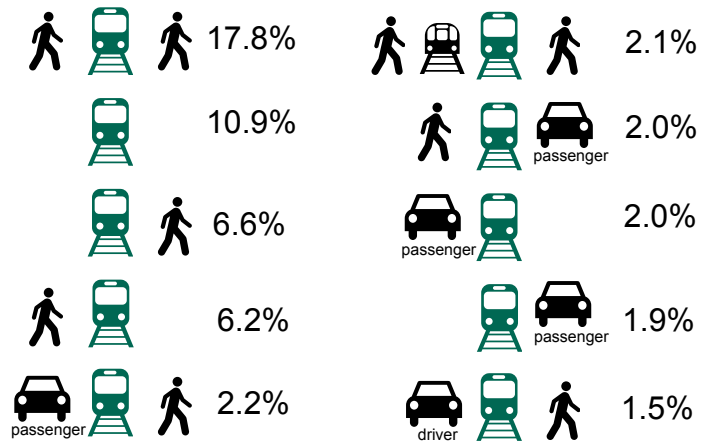
Rail trips

Most common combinations of stages in surface rail trips:

Rail trips recorded in the NTS most commonly involve three stages (43%), with 28% involving two, and 19% more than three.

There are many different combinations of modes preceding and following rails trips. The most common combination is walk - rail - walk.

Proportion of all surface rail trips recorded in the NTS by combination of stages

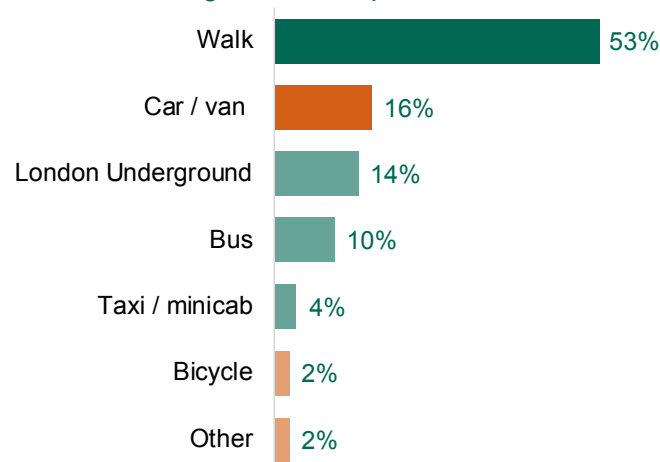


Stages preceding rail:

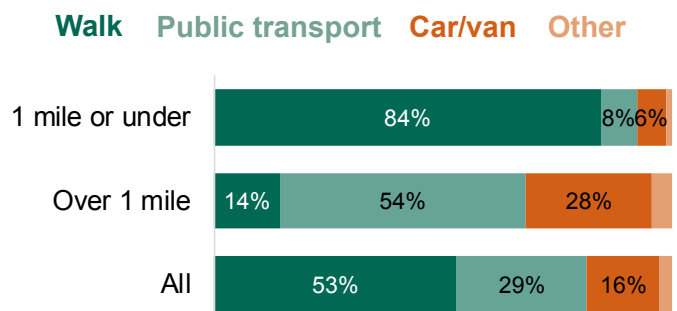
Overall half of surface rail trips recorded in the NTS are preceded by a walk, i.e. walking is the method of getting to the station for half of rail trips.

55% of stages preceding rail are 1 mile or under, and for these stages walking accounts for over 80%.

Mode of transport used immediately before a surface rail stage in a rail trip



Mode of transport used before a surface rail stage in a rail trip by length of the stage





Background and references

The National Travel Survey

The National Travel Survey is the Department for Transport's key source of data on personal travel behaviours since 1965. Data is collected from around 16,000 individuals each year through a face-to-face interview and a 7-day travel diary. The survey covers residents of England of all ages, which makes it a powerful tool to understand topics like multi-stage trip patterns.

Tables and raw data

The majority of figures in this factsheet are based on unpublished analyses of the NTS data (raw data is available via the [UK Data Service](#)). Related published data tables which provide information on personal travel include:

- ▶ [NTS0303](#) shows average number of trips by main mode, and [NTS0304](#) shows the equivalent figures for trip stages.
- ▶ [NTS0312](#): frequency of walking for 20+ minutes
- ▶ [NTS0313](#): frequency of use of different modes of transport over a year

Related information

Transport for London produces a detailed annual [report on travel in London](#), based on a number of sources including the London Travel Demand Survey which, like the NTS, is a household survey of travel incorporating a trip recording element. The [6th report](#) looked at the proportion of trips by other modes which included an element of walking. These figures are higher than those implied by NTS data, which in part reflects definitional differences between the two surveys and may suggest that there is some under-recording of walks as part of multi-stage trips in the NTS.

Further references

More details about travel behaviours of English residents can be found in the 2014 National Travel Survey publication: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/457752/nts2014-01.pdf

More factsheets on specific topics from the National Travel Survey can be found at: <https://www.gov.uk/government/publications/nts-factsheets>

Contact us

For any questions or queries in relation to this factsheet, please contact the National Travel Survey team:

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