



## Associations between different methods of commuting and death from any cause, cardiovascular disease and cancer, and cancer incidence

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### About the research

Active travel is increasingly recognised as an important source of physical activity. This research aimed to identify associations between the different ways of commuting and death from any cause, cardiovascular disease, cancer, and cancer incidence.

Researchers used Census data from over 300,000 people in England and Wales in 1991, 2001 and 2011 to determine the mode of transport used to get to work.

These people were followed for up to 25 years to see who had died or developed cancer. The team included data on their occupation and socio-economic status in the analysis.

People who cycle to work are at lower risk of death from any cause, cardiovascular disease, cancer, and cancer incidence than those who drive. This is seen across all occupational groups and suggests that cycling to work could benefit people from all economic backgrounds.

Not using a private car to commute to work was associated with a number of health benefits (summarised over in Key Findings section).

***“While not everyone is able to walk or cycle to work, the government can support people to ensure that beneficial shifts in travel behaviour are sustained in the longer term.”***

**Anthony Laverty**

### Policy implications

- The UK government has advised against using public transport during the coronavirus pandemic. This could result in more people commuting by car, which may increase air pollution and lead to people getting less exercise than before.
- If fewer people are able to travel by public transport due to social distancing, measures to make cycling easier and safer could improve the nation’s health.
- Our findings augment existing evidence for the beneficial health effects of physically active commute modes, particularly cycling and train use, and suggest that all socioeconomic groups could benefit.
- Private car use will need to be reduced to meet future health goals, and climate commitments. Business as usual will mean continuing high levels of physical inactivity, which is linked to obesity and other metabolic diseases and ultimately death.
- Interventions to improve health can often lead to worsening inequalities as those best positioned to take advantage are those with existing better health. It was surprising and reassuring to see in this study that the benefits of cycling appear to apply to everyone.

### About the School

The NIHR School for Public Health Research is a partnership between the Universities of Sheffield; Bristol; Cambridge; Imperial; and University College London; The London School for Hygiene and Tropical Medicine (LSHTM); LiLaC – a collaboration between the Universities of Liverpool and Lancaster; and Fuse - The Centre for Translational Research in Public Health a collaboration between Newcastle, Durham, Northumbria, Sunderland and Teesside Universities.

This project is funded by/ supported by the National Institute for Health Research (NIHR) School for Public Health Research (Grant Reference Number PD-SPH-2015-10025). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.



## Key findings

Compared with commuting by private car:

- Bicycle commuters had a 20% lower risk of dying from any cause, a 24% lower risk of dying from cardiovascular disease, a 16% lower risk of dying from cancer and an 11% lower risk of being diagnosed with cancer.
- Rail commuters had a 10% lower risk of dying from any cause and a 21% lower risk of dying from cardiovascular disease, in addition to a 12% lower risk of being diagnosed with cancer.
- Commuting by walking was associated with 7% lower risk of being diagnosed with cancer.
- There was no indication of differences between socioeconomic groups.

## Further information:

[Road User Charging: will local policy innovation improve population health and reduce inequalities](#)

[Patterson R, and others. Associations between commute mode and cardiovascular disease, cancer, and all-cause mortality, and cancer incidence, using linked Census data over 25 years in England and Wales: a cohort study. The Lancet Planetary Health. 2020;4:E186-E194](#)

## Contact the researchers

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