

Cycling to work linked to higher risk of injury-related hospitalisation among UK commuters

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Cycling to work is associated with a higher risk of admission to hospital for an injury than other modes of commuting, suggests a UK study

published in *The BMJ* today.

But those who cycled to work had a significantly lower risk of cancer, cardiovascular disease and death compared with commuters who did not cycle.

Recent evidence shows that active modes of commuting are linked to potential [health benefits](#) such as improved fitness and lower body fat, and a lower risk of cardiovascular disease, cancer, type 2 diabetes, and death. But the number of people [cycling](#) to work in the UK and many other countries is low.

Many people are put off by the potential danger linked to cycling in traffic, but there is a lack of individual level data on cycling and injuries in the UK.

So a team of researchers set out to investigate the association between commuter cycling and risk of injury, compared with other modes of commuting. They analysed data from the UK Biobank study, which included 230,390 daily commuters from 22 sites across the UK, half (52%) of which were women, with an average age of 52.

The participants were recruited between 2006-2010 and monitored for an average of 8.9 years. During this time, of the 5,704 people who only cycled to work, 7% were injured. Among people who cycled for part of the commute, 6% were injured. In contrast, 4.3% of the commuters who travelled by car or public transport were injured.

Cycling was associated with a higher risk of injury to arms and legs, the torso, the head or neck, and fracture injuries, as well as injury-related hospital stays of 1, 2-6, and 7 or more days.

Among all commuters using the various modes, those who were injured

were slightly older, more likely to be white men and a current smoker, and have a history of cardiovascular disease, diabetes, cancer or longstanding illness.

After taking account of other potentially influential factors, such as age, sex, and physical activity levels, commuting by bicycle was associated with a 45% higher risk of hospital admission for a first injury and a 3.4-fold higher risk of a transport related incident, compared with commuting by car or [public transport](#). And those who cycled greater distances had a higher risk of injury.

But when those who cycled for the whole or part of the journey were compared with all other commuters, the cyclists showed a reduced risk of cardiovascular disease (21%), lower risk of first cancer diagnosis (11%) and lower risk of death (12%).

To put this into context, if 1000 people changed their mode of commuting to include cycling for 10 years, this would mean an estimated 26 additional hospital admissions for a first injury (of which three would require a hospital stay of a week or longer), 15 fewer first cancer diagnoses, four fewer [cardiovascular disease](#) events, and three fewer deaths.

This is an observational study, so can't establish cause. The authors point to some limitations, including that UK Biobank is known to be skewed towards [better health](#) and affluence, so may not be representative of the general UK population. And assessment centres were located in large cities, so included few people who lived rurally.

They say that the study supports the perception among the general public that cycling poses a greater risk of injury than other modes of commuting, but that the health benefits are considerable.

"The risk of [injury](#) associated with cycling commuting needs to be taken seriously and safer infrastructure provided if we are to address cycling dangers (both real and perceived) in the UK. This could help increase the uptake of cycling commuting with resulting benefits to health and the environment," they conclude.

In a linked editorial, Anne Lusk from the Harvard T.H. Chan School of Public Health says that safer cycling infrastructure benefits people and the local economy, and that the study and accelerating [climate change](#) indicate it is time to look upstream for transport solutions.

"Enhanced cycle tracks in dedicated space beside pavements (sidewalks) should be as revered and generously funded as historic buildings and trails," she writes.

Lusk calls for an international movement, whereby "business owners, donors, and communities would fund safe and aesthetic cycle tracks and urge governments to support new infrastructure that tackles some of the world's biggest issues—public safety, health, economic development, equity, and climate change."

More information: Association of injury related hospital admissions with commuting by bicycle in the UK: prospective population based study, *BMJ* (2020). [DOI: 10.1136/bmj.m336](https://doi.org/10.1136/bmj.m336)

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