climate nudge

Policy Brief

# Climate and health benefits of active commuting

By promoting active commuting—walking or cycling—more effectively, Finland could substantially reduce its carbon emissions. At the same time, increasing everyday physical activity would improve physical health and function among the population. This policy recommendation by the Climate Nudge project focuses on active commuting (trips between home and the workplace) and outlines various ways to increase its prevalence.

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# Active commuting needs to be promoted

*Finland urgently needs additional climate actions to meet the national and EU-level emission reduction targets. At the same time, insufficient physical activity among Finns is detrimental to the population's physical health and functional capacity. Increasing the prevalence of active commuting could simultaneously help tackle both these challenges. However, achieving this goal requires utilizing all existing measures.*

## Climate benefits from active commuting

According to the 2021 National Travel Survey, 70% of commute trips in Finland are made by car as driver, while only 26% are made using sustainable modes, such as walking, cycling, or public transport. There is considerable potential to increase active commuting, as most commutes are relatively short. Over half of all commutes in Finland are less than 10 kilometers long. In the Helsinki metropolitan region, the median commute distance is approximately 10 kilometers, while in other large and medium-sized cities it is around 6 kilometers. About one-third of commutes are 5 kilometers or shorter, yet more than 40% of commute trips between 1–3 kilometers are made by car. According to the respondents of the National Travel Survey, one-third of car commutes could be replaced with a sustainable alternative.

Commute cycling is more common in the Oulu city region than in other parts of Finland, with the differences being especially pronounced during winter. It was estimated in the Climate Nudge project that if other Finnish city regions cycled on commute trips like Oulu, this would yield substantial climate benefits.[1] Electric bicycles would enable even greater emission reductions. The emission reduction potential of cycling is therefore comparable to many other measures in the Finnish Roadmap to fossil-free transport.

The emission reduction potential is particularly high among men, as they more often have access to a car and tend to drive more frequently than women, even on short commutes. Opportunities for increasing cycling and reducing emissions exist in almost all types of urban fabrics, from public transport and car-oriented zones to the fringes of city centers.

## Diverse health benefits from active commuting

Finns are generally not physically active enough: less than half meet the recommended levels of physical activity.[2] This contributes to an increase in conditions such as obesity and type 2 diabetes, as well as declining physical fitness and functional capacity. Walking or cycling to work can help individuals achieve a significant portion of the weekly recommended amount of moderate-to-vigorous (aerobic) physical activity. This has direct health benefits, as active commuting has been linked to a lower risk of cardiovascular and metabolic diseases.

The Climate Nudge project found that active commuting is associated with lower levels of C-reactive protein (CRP) in the blood, a marker of inflammation in the body.[3] This finding may partly explain the reduced disease risk associated with active commuting, as chronic low-grade inflammation is linked to many health conditions. On the other hand, the project did not find evidence that active commuting is associated with better brain health.[4,5] It is likely that the relationships between active commuting and cognitive or mental health are more complex than those with cardiometabolic health.

Active commuting may carry a higher risk of injury, such as those from traffic crashes or falls, compared to car

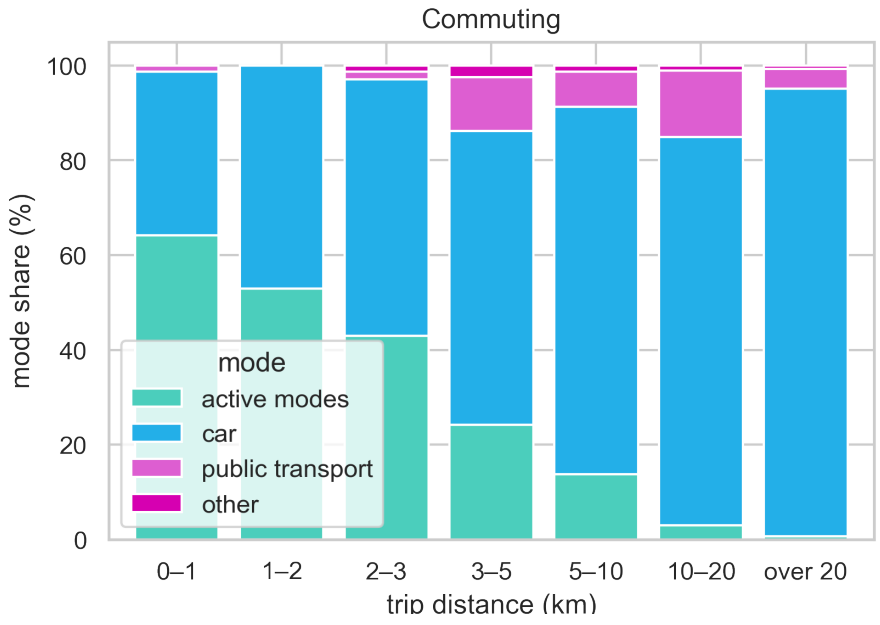


Figure: Mode shares on commute trips in Finland (National Travel Survey 2021)

**Increasing active commuting is important for both climate and health reasons.**

travel. However, it is generally estimated that the health benefits of increased physical activity outweigh these risks. The same applies to air pollution, as walkers and cyclists get more exposed to air pollutants than car drivers.[6] However, individuals can reduce their exposure to air pollution by avoiding walking or cycling near busy roads.

## Health benefits of active commuting also benefit work life

The share of people in Finland who rate their work ability as diminished has increased over the past 20 years, particularly among those under 40 years old. Perceived work ability strongly predicts future sick leaves and disability pensions, making this a concerning trend.

According to existing literature, leisure-time physical activity can help maintain and improve work ability. However, there is virtually no international evidence on how active commuting affects self-reported work ability.

Studies conducted as part of the Climate Nudge project using municipal sector data suggest that increasing the number of active commutes could improve both perceived health and work ability.[7,8] However, these benefits require significant changes in commuting habits, as small or occasional increases in activity may not be sufficient. One study from the project indicates that the benefits may apply particularly to those who cycle to work.[9]

Another study using the same dataset also found that commute cycling was associated with a lower risk of sick leave days and long-term absences due to illness.[10] Previous research from the Netherlands and the United Kingdom has also established a link between cycling to work and fewer sick leave days.

## It is possible to influence travel mode choice

The distance and/or duration of the commute is typically the strongest determinant of travel mode (see Figure): the shorter the trip, the greater the likelihood of walking or cycling.[11,12] Urban form has a major impact on trip distance and can thus either hinder or facilitate the use of active modes. However, promoting active commuting does not always require substantial investments in new infrastructure: reallocating existing street space can also be an option. That said, urban development over the past 30 years has not always supported the uptake of sustainable commuting.[13]

Households with young children, particularly school-aged, tend to commute

**Employers can benefit from encouraging and promoting active commuting.**

by car more than average. Employers can encourage the active commuting of employees with children by increasing the flexibility of working hours. Flexible schedules would offer the ability to adjust daily working hours and start or finish times. Employers can also promote active commuting through other means. In addition to flexible working hours, workshops and commuting interventions conducted in the project revealed several factors influencing travel mode choice, including suitable and secure bike parking, sufficient changing rooms and shower facilities, and a company bike benefit.

A company bike benefit can incentivize employees to acquire a new (electric) bicycle, boosting their enthusiasm for cycling. Electric bikes can make it easier to start cycling and enable longer active commutes since the electric assistance reduces physical effort. Although e-bikes require less exertion than regular bicycles, they still provide at least light-intensity physical activity, comparable to walking. Results from recent e-bike interventions have been promising, leading to lasting behavioral change. In contrast, employer-provided free car parking encourages car commuting.

In general, men—also in Finland—tend to drive more frequently and longer distances than women.[12] There is no single explanation for this phenomenon. It has been suggested that men are often the primary car users in one-car households. On the other hand, it has been observed that in households with multiple cars the use of active modes decreases even further.

**There are many ways to promote active commuting.**

There are numerous ways to encourage active commuting at both national and local levels, as well as measures that employers can implement. These possibilities include the company bike benefit scheme, flexible working hours, development of urban form to support active travel modes, ensuring proper winter maintenance of walking and cycling paths, allocating street space to walking and cycling, and making car use less appealing, for instance by limiting parking spaces or with parking fees.


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