

Active Travel

Related academic evidence

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About Sustrans

Sustrans makes smarter travel choices possible, desirable and inevitable. We're a leading UK charity enabling people to travel by foot, bike or public transport for more of the journeys we make every day. We work with families, communities, policy-makers and partner organisations so that people are able to choose healthier, cleaner and cheaper journeys, with better places and spaces to move through and live in.

It's time we all began making smarter travel choices. Make your move and support Sustrans today.
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Introduction

This document provides a summary of how the work that Sustrans carries out on a day-to-day basis is supported by the findings of academic articles. More specifically, this document is a literature review undertaken in the context of the Active Travel projects, which aim to increase levels of physical activity by encouraging more active forms of transportation, such as walking and cycling, for everyday purposes. To achieve this, Sustrans works with communities, universities, and workplaces.

For more detail on the Active Travel projects, see the associated pages of the Sustrans website - <http://www.sustrans.org.uk/what-we-do/active-travel/active-travel-projects>. For more information on the monitoring and evaluation of Active Travel projects, please contact monitoring@sustrans.org.uk.

Summary of secondary evidence in support of Active Travel projects

The results from Sustrans Active Travel projects show that participants have increased their levels of walking and cycling. These results are put into a wider social context and provide evidence from academic literature to support the aims and objectives of the projects.

Modern lifestyles can be very sedentary: data from the NHS¹ shows that only 40% of men and 28% of women in the UK are achieving minimum recommended levels of physical activity. Physically inactive lifestyles can have serious health impacts, and are linked to 22-23% of coronary heart disease cases, 16-17% of colon cancer cases, 15% of diabetes cases, 12-13% of strokes and 11% of breast cancer cases², making this one of the leading causes of death in developed countries. 24% of UK adults are overweight, and it is reported that inactivity levels in the UK cost the NHS £8-10 billion a year³. Sustrans Active Travel projects increased walking and cycling levels amongst participants who initially had physical activity levels similar to the national average, therefore encouraging active travel more widely could help to reduce physical inactivity in the UK.

Why is active travel so important? Oja (1998) argued that the best way to achieve the substantial health-enhancing potential of physical activity on a population level is if people can incorporate physical activity into their daily lives⁴. This is exactly what Sustrans Active Travel projects aim to achieve; by replacing time spent commuting by car with physically active forms of travel such as walking and cycling, physical activity becomes embedded in participants' daily routines. Oja (1998) also showed that moderate-intensity, high-frequency activity like physically active commuting can improve health related fitness and selected indices of metabolic health for the work aged population.

Vuori (1994)⁵ showed that short term, low cost interventions were enough to promote increased health in previously inactive participants. A randomised control study of inactive, middle aged men and women who travelled to work by active travel for one hour a day for 10 weeks increased their VO₂ maximum by 4.5%, increased their maximal treadmill time by 10.3% and lowered cholesterol by 5%; all signs of increased physical fitness.

Sustrans Active Travel project participants may also benefit from reduced stress levels after swapping from their car to their bicycle to commute: White (1998)⁶ showed that those who commuted by car showed higher levels of stress than those that did not. Mutrie (2000)⁷ showed that

¹ NHS Information Centre (2008) Health Survey for England 2006: CVD and risk factors adults, obesity and risk factors children

² World Health Organisation (2002) The World Health Report 2002 – Reducing Risks, Promoting Healthy Life

³ Department of Health (2004) At least five a week - evidence on the impact of physical activity and its relationship to health - a report from the Chief Medical Officer

⁴ Daily walking and cycling to work: their utility as health-enhancing physical activity Pekka Oja, Ilkka Vuori, Olavi Paronen Patient education and counseling 1 April 1998 (volume 33 issue Pages S87-S94)

⁵ Vuori IM, Oja P, Paronen O. Physically active commuting to work (testing its potential for exercise promotion). Med Sci Sports Exerc. 1994;26:844-850

⁶ Steven M. White and James Rotton Type of Commute, Behavioral Aftereffects, and Cardiovascular Activity: A Field Experiment Environment and Behavior November 1998 30: 763-780, doi:10.1177/001391659803000602

⁷ Mutrie N. (2000) The relationship between physical activity and clinically defined depression. In: Biddle SJH, Fox KR, Boutcher SH (eds) Physical activity and psychological well-being. London: Routledge

moderate, aerobic physical activity, like walking to work, had an anti depressant effect of the same order of magnitude as psychotherapeutic techniques for participants. Briddle (2000)⁸ reported on the ability of physical activity to ‘energise’ and produce more positive moods, a theme that corresponds with Active Travel projects participant feedback.

Increased levels of physical activity help to reduce obesity and have been shown to have positive impacts on physical and mental health⁹. Penedo *et al* (2005)¹⁰ showed that participants of physical activity interventions had better general and health related quality of life, better functional capacity and better mood states. Interventions, like Sustrans Active Travel projects, also have an important role to play in helping participants shift to a more active lifestyle through support and education.

A recent NHS paper (March 2011)¹¹ on the relationship between obesity and mental health concluded that “obese persons had a 55% increased risk of developing depression over time, whereas depressed persons had a 58% increased risk of becoming obese”. This shows the importance of everyday physical activity, both to maintain a healthy weight and prevent mental illness. The report also states that individuals are more likely to reduce their weight participating in an intervention with their peers than on their own, and that the best interventions encourage participants to add small amounts of exercise into their daily routine. Therefore, active travel projects are well designed to offer the best type of intervention for people wanting to lose weight, increase their physical activity levels and as a result reduce their risk of developing future mental health problems.

The NHS report also highlights the importance of patients’ perceived obesity and lower perceived athletic competence in the onset of depression. Sustrans Active Travel projects have the potential to increase perceived athletic competence through the practical training offered and the positive encouragement and enthusiasm of project staff, reported frequently in participants’ survey responses. This is also backed up by Boyd *et al* (1998)¹² who showed that regular cycling increased perceptions of enhanced wellbeing and self confidence.

⁸ Biddle SH. (2000) Emotion, mood and physical activity. In: Biddle SJH, Fox KR, Boutcher SH (eds) Physical activity and psychological well-being. London: Routledge

⁹ T Sugiyama *et al* (2006) *J Epidemiol Community Health*; 62:e9 doi:10.1136/jech.2007.064287

¹⁰ FJ Penedo *et al* *Current Opinion in Psychiatry*, 2005; Exercise and well-being: a review of mental and physical health benefits associated with physical activity

¹¹ NHS paper: Obesity and Mental Health. http://www.noo.org.uk/NOO_pub/briefing_papers March 2011

¹² Boyd, H., *et al* 1998 Health-related effects of regular cycling on a sample of previous non-exercisers, Resume of main findings.