

# Healthy and active travel

The move over the last 50 years to private motor transport, offering door-to-door convenience while also making our roads more hostile to walking and cycling, has encouraged sedentary, inactive lifestyles. Even young children are less active and more prone to obesity. Moves to encourage active travel can improve public health, and Sustrans' practical programmes help create an environment where people can choose the healthy option.

*"Sustrans' 20 year vision for environmentally sustainable transport has culminated in the National Cycle Network, with the implementation to date of over 6,000 miles of routes for cyclists and pedestrians. We now have a full hand of associated projects promoting alternatives to private motor transport.*

*The Network should be recognised as the largest UK environmental intervention to promote public health; it enables people to choose to be physically active as part of their daily travel requirements."*

*John Grimshaw MBE,  
Director, Sustrans*

The commonly identified health impacts of motor transport are road casualties, air and noise pollution. Historically the main focus of concern among doctors

and health sector staff has been road casualties since these are acute, require immediate medical treatment, and are directly attributable. The contribution of road traffic to air and noise pollution has attracted increasing concern in the past three decades with the rapid motorisation of society.

These impacts, although important, are but the tip of the iceberg. They are easier to measure than the health implications of the reduction in active transport which accompanied rising motorisation. Nonetheless, the increasingly sedentary lifestyles cultivated by habitual car use may be contributing to higher levels of ill health and deaths.

## Transport: the context

In 2000 there were over 24 million cars in Great Britain, **roughly one for every two adults**. This reflects both the significant growth in personal travel in recent decades and a change away from public transport, walking and cycling.

Between the mid 70s and late 90s our car mileage increased by two thirds while active forms of travel fell by over a fifth. As fewer people walk and cycle, the health benefits of these types of physical activity are lost.

Changing to the car leads not only to loss of health benefits for the individual but also a greater health burden for the population at large: more traffic noise, vehicle



*Over 3,000 people are killed on our roads each year and many more injured, yet the worst consequences of our passion for motoring may be due to insufficient physical activity*



*Without intending to, we have created a street environment where active travel, such as cycling and walking, is discouraged*

emissions and traffic danger. Moreover, increased car use causes a spiral of behavioural changes as pedestrians and cyclists are dissuaded by the hostile traffic environment; some then drive instead. Research suggests that up to a third of car users would like to drive less, if circumstances allowed<sup>(1)</sup>.

### Transport White Paper

In 1998 the transport white paper, *A New Deal for Transport: Better for Everyone*, confirmed that national transport policy would be oriented towards demand management and reducing the need to travel by car.

For the first time, a transport white paper also addressed the health impacts of transport, highlighting the need to increase walking and cycling in order to promote and protect health. The white paper set out a framework to:

- Reduce pollution from transport
- Improve air quality
- Encourage healthy lifestyles by reducing reliance on cars, and making it easier to walk and cycle more
- Reduce noise and vibration from transport
- Improve transport safety for users, those who work in the industry and the general public.

The white paper supported the existing National Cycling Strategy, which set targets to double the number of cycle trips by 2002, and to double this again by 2012 (from a 1996 baseline).

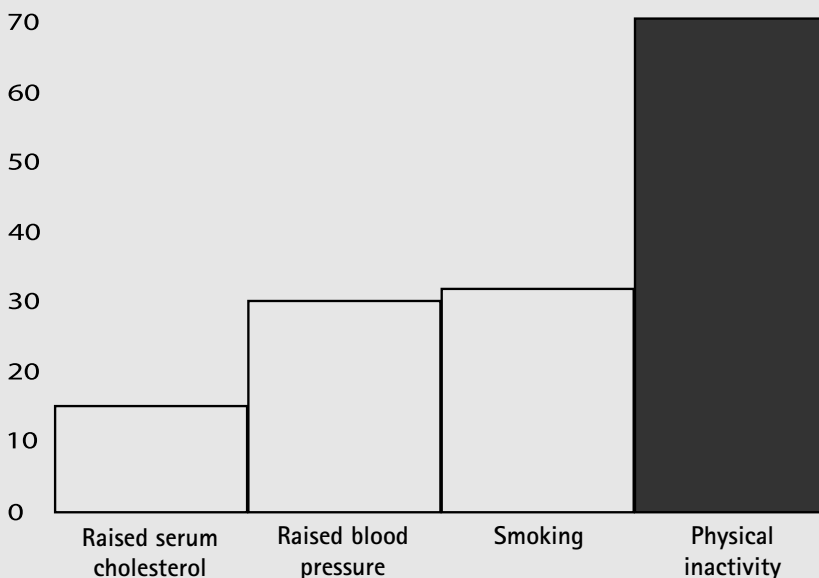
*"Too many of us have given up walking short distances in favour of using the car. We need to reverse that trend for the sake of our own and others' health and for good environmental reasons."*

*A New Deal for Transport: Better for Everyone (transport white paper, 1998)*

In 2000 the Government also issued guidance on walking, *Encouraging walking: Advice to local authorities*, in order to support local authority walking initiatives.

### Inactivity is a major health risk

Prevalence of risk factors for coronary heart disease in the adult English population



Source: Hillisdon et al 1995

## Health and physical activity

Physical inactivity is a major contributor to many forms of ill health. In particular inactive people have double the risk of coronary heart disease and up to three times the risk of stroke. Together heart disease and stroke account for 35% of all deaths. These diseases kill more commonly than any others, can strike within minutes and single out people in their prime as well as in later life<sup>(2)</sup>.

The National Audit Office has estimated that these illnesses cost the National Health Service £500 million and £1.6 billion per annum respectively<sup>(3)</sup>. When compared with other risk factors for serious health, the prevalence of physical inactivity is found to be much higher.

During the mid 1990's a consensus developed as to the value of regular, moderate levels of physical activity as part of the routine of daily living. This was reflected in documents produced, for example, by the World Health Organisation<sup>(4)</sup> and the U.S. Surgeon General<sup>(5)</sup>. In England the Department of Health's Strategy

*Active travel makes physical activity a part of the daily routine - while travelling to school, work or leisure - from an early age*



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Statement on Physical Activity noted that: **"There is now an international consensus that regular moderate physical activity confers major health benefits. Moderate activity forms the basis of this physical activity strategy because it offers the potential of the greatest health gains for the majority of the population, particularly the sedentary and those who have low activity levels".**<sup>(6)</sup>

In the 1999 public health White Paper Saving Lives: Our healthier nation<sup>(7)</sup> one of the key aims was to reduce heart disease in the population, with physical activity playing an important role.

In March 2000 the government published the National Service Framework for Coronary Heart Disease (NSFCHD) as a mechanism to deliver reductions in heart disease. It calls on public bodies to:

**"work together to tackle the broad determinants of health, including housing, socio-economic inequalities and transport. They will help children and adults have the opportunity to lead healthy lives, for example by increasing the opportunities for regular physical activity".**<sup>(8)</sup>

## The benefits of physical activity

Physical activity (defined as any bodily movement produced by skeletal muscles that results in energy expenditure)<sup>(9)</sup> has been shown to have the following benefits:

- it reduces the risk of morbidity and mortality from premature coronary heart disease<sup>(10)</sup> (a similar effect to not smoking)
- it reduces mortality after a heart attack<sup>(11)(12)</sup>
- it helps to defer the development of non-insulin dependent diabetes mellitus<sup>(13)(14)</sup>
- it is one of the most effective means of managing mild to moderate hypertension<sup>(15)(16)</sup> (a similar effect to drugs)
- it helps to maintain bone mass<sup>(17)</sup>
- it improves balance in co-ordination, mobility, strength and endurance<sup>(18)(19)</sup>
- it is associated with raised self esteem<sup>(20)</sup> and promotes overall psychological well-being<sup>(21)</sup>.

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*People may not be attracted to walk or cycle by long lists of health benefits; the feeling of arriving fresh and alert, once experienced, is more convincing*

Given this range of benefits, it has been suggested that physical activity is **"public health's best buy"**<sup>(22)</sup>; the question is, how best can it be promoted? Physical activity programmes have largely been targeted towards individual behaviour change programmes and promotional campaigns, yet with little evidence of success. In contrast, environmental interventions can promote physical activity<sup>(23)</sup> by making local environments perceivably attractive and safe, to meet everyday travel needs<sup>(24)</sup>.

Walking is the most widely available form of physical activity

as a means of transport, and therefore highly equitable. It is the dominant form of transport for journeys under one mile at 80%<sup>(25)</sup>.

A systematic review of physical activity promotion strategies concluded that walking, the activity most widely available, should be prioritised in measures to improve public health.

The authors noted that in order to increase the attractiveness of walking: "attention will need to be paid to environmental factors which influence personal safety and convenience<sup>(26)</sup>."



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## Health benefits of cycling

While walking is more widely available to the population, the health benefits of cycling are somewhat greater on account of the higher intensity of effort<sup>(27)</sup>. For example the Copenhagen Heart Study, which involved 13,375 women and 17,265 men aged between 20 and 93, found that cycling has a strong protective function.

Assessed by self reported health, blood pressure, cholesterol, Body Mass Index and risk factors such as smoking, it concluded that: "even after adjustment for other risk factors, including leisure time physical activity, those who did not cycle to work experienced a 39% higher mortality rate than those who did<sup>(28)</sup>".

Dutch research has demonstrated that cycling as part of normal daily activities can yield much the same improvements in physical performance as specific training programmes. The higher the total distance cycled during the six month trial period of activity, the higher the gain in maximal external power and maximal oxygen uptake.

For those with a low initial fitness level, cycling just 3 kilometres, four days per week is enough to improve physical performance<sup>(29)</sup>. This confirms that the greatest health gains are to be achieved when the least active<sup>(30)</sup> individuals become moderately active.

*High quality infrastructure makes cycling and walking a more attractive option*



*Where the car tends to isolate the user, active travel counts social contact among its benefits*

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## Body fat reduced

Similarly, a UK study of non-exercisers who agreed to take-up cycling on at least four days a week found great benefits early in the intervention, and a clear dose effect in that the more the volunteers cycled, the fitter they became. Body fat was also significantly reduced among most of those subjects who were overweight or obese at the outset (59% of subjects).

The extent of fat loss, typically two to three kilograms of fat mass over the period of the trial, should mean that they achieve a change

in energy balance, making it easier for them to control their weight whilst they continue to cycle<sup>(31)</sup>.

So walking and cycling as regular activities contribute to weight control. This is particularly important given the rising trends of obesity in the population. Obesity is one of the most important avoidable risk factors for a number of life threatening diseases and serious ill-health, including heart disease, diabetes and joint problems.

Changes in body weight are due to an imbalance between energy intake and energy expenditure.

Reduced levels of physical activity, with increasing rates of car ownership and use appear to be a critical factor in the trend of increasing obesity<sup>(32)</sup>.

A viable public health strategy is therefore to target improving the health of those with excess weight through the beneficial effects of physical activity<sup>(33)</sup>. They should also put in place arrangements to monitor centrally progress towards achieving these targets<sup>(34)</sup>."

A National Audit Office (NAO) study on obesity, published in 2001, identified transport as a key area where further action should be taken to encourage and assist people to be physically active in their travel routines. Among its recommendations, the NAO stated that: "**The Department of Health and the Department of the Environment, Transport and the Regions (now DTLR) should continue to encourage other potential partners, in particular local authorities and health authorities, to adopt local targets for cycling and walking which provide clear incentives to support healthy modes of travel**".



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*Regular physical activity is enjoyable and contributes to feelings of self-esteem*

## Conclusion and recommendations

Sustrans has argued for over 20 years for the intensive promotion of cycling and walking – the active forms of transport – and for measures to facilitate them and make them safer and more attractive. These measures include physical engineering of the road environment, information and education campaigns, safe routes to schools and stations, proper enforcement of traffic law, and fiscal measures to ensure that the full cost of private motor transport is borne by the user. The benefits of this promotion of active travel would be felt by every one of us; lower levels of pollutant emissions and reduced healthcare costs as more people become fitter and healthier would mean that even those who cannot or will not become active in their daily travel choice would also gain. As a society, we have nothing to lose from the choice of active travel.



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The evidence is overwhelming. The sources quoted in this document are but a selection from the many studies and policy statements which underpin Sustrans stance on transport.

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