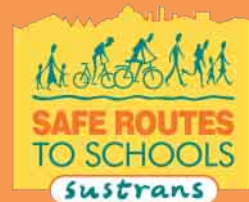


# The Health Benefits of Walking and Cycling to School



Information for parents and schools

INFORMATION SHEET FS15

## Introduction

**“Not only is physical activity crucial to children’s health but it also directly benefits academic performance.”**

House of Commons Select Committee on Health, Report on Obesity, 2004

Young people rarely suffer directly from heart disease, strokes and diabetes. However, they are increasingly demonstrating the early signs of all these potentially life-threatening illnesses, putting them at serious risk in adulthood.

Safe routes to schools where children can walk or cycle is a highly effective way of addressing these and other conditions - such as obesity, cancer, osteoporosis and depression - that compromise young people’s health.

By promoting safe routes, the entire school community can benefit from young people enjoying not just a healthier, happier childhood, but a healthier future too.

## The current situation

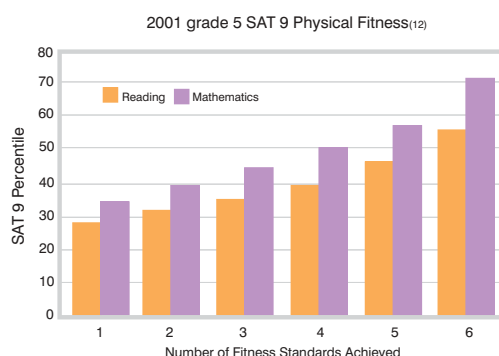
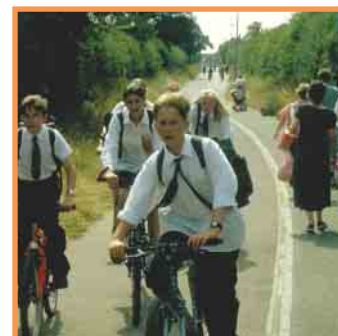
According to the Government’s National Travel Surveys, the numbers of children cycling and walking to school have dropped dramatically over the last two decades, whilst levels of conditions such as obesity and asthma amongst young people have risen significantly over the same period.

Physical inactivity is now a serious threat to our collective health:

**“Preliminary data suggests that a sedentary lifestyle is one of the ten leading global causes of death and disability.”**

World Health Organisation, Move to Health, 2002<sup>(1)</sup>

Luckily, a “sedentary lifestyle” can be easily prevented and the school



Department for  
**Transport**

The **Safe Routes to Schools** project is co-ordinated by Sustrans and provides support to local authorities, schools and parents. Sustrans is the UK’s leading sustainable transport charity and works on practical projects to encourage people to walk, cycle and use public transport to benefit health and the environment.

National Cycle Network Centre, 2 Cathedral Square, College Green, Bristol, BS1 5DD



# The Health Benefits of Walking and Cycling to School



journey is an ideal way for both parents and young people to become more active. Whether it's a 30-minute or 5-minute journey, every little bit counts, not least because it introduces habitual physical activity into everyday life.

## Benefits for your body

**“All young people should participate in physical activity of at least moderate intensity for one hour per day. This hour can be made up from a variety of activities across the day, including organised sport, play, walking or cycling to school, physical education or planned exercise”**

Recommendation from Department of Health, 2005

One hour is the minimum amount of exercise recommended, yet approximately 30% of the UK's boys and nearly 40% of girls aren't even getting this.<sup>(2)</sup> Walking or cycling are excellent ways to help achieve these targets, and most school journeys are an easily manageable distance of less than 2 miles.

## So what do you stand to gain...?

### Fitness

Being active improves fitness. The faster you walk or cycle, the more pronounced this will be, but everything counts. Improved fitness makes everyday tasks easier and also benefits your heart. Research shows that regular adult cyclists have fitness levels of someone 10 years younger.<sup>(3)</sup>

### Healthy weight

A healthy weight could be different for two people of the same sex, age and height because we all have different bone structures and muscle development. What's important is feeling healthy, self-confident and keeping body-fat at the right level - not what the scales say. The best way to maintain a healthy weight is to be active.

We need to take action now, because obesity is rising at an alarming rate amongst children as well as adults. Obesity levels in the UK are increasing at over twice the rate of most other European countries,<sup>(4)</sup> with over 1 in 5 boys and 1 in 4 girls now classed as overweight or obese.<sup>(2)</sup>

Obesity can be a cause of heart disease, strokes, diabetes, back pain, joint problems, immobility and potentially some cancers. For the first time experts are predicting a generation of people dying before their parents and an NHS unable to cope with the expense of dealing with an overweight nation.

**“We believe that providing safe routes to school for walking and cycling, adequate and safe play areas in and out of school is very important in the battle against obesity.”**

House of Commons Select Committee on Health, Report on Obesity, 2004

### Bone-density

Osteoporosis is a condition of reduced bone-density usually associated with older people, but it can appear in the younger population too.<sup>(5)</sup>

Childhood (and especially early puberty) is a crucial period for establishing future bone-density. Studies show that most young people can typically improve theirs by 5-15%, just by doing weight-bearing

exercise (walking, running and skipping for example), although it can be increased by up to 30%.<sup>(5)</sup> This is because growing bone has a much greater ability to add bone-density than mature bone does.

Parents walking their kids to school can benefit too – whilst the average skeleton will start to lose density after the age of 30, weight-bearing activity has been known to halt or even reverse this.

### Healthy heart

More active, fitter people have healthier hearts. Researchers in Hong Kong looking at indicators of heart disease in overweight young people showed their vascular tests matched those of a 45-year-old adult who had been smoking for more than 10 years!

Heart disease is the number one cause of death in the UK. According to the Chief Medical Officer, inactive and unfit people have almost double the risk of dying from heart disease compared to more active and fit people.

## ...and what can you help prevent...?

Physical activity isn't a guarantee against all disease, but it has been shown to greatly reduce the chances of several serious illnesses.

### Asthma

Asthma has significantly increased amongst young people in recent decades and traffic pollution has been shown to have a strong link to this. Research showed that children living along busy streets were found to have a higher prevalence of most respiratory symptoms than children living along quiet streets.<sup>(7)</sup> Switching from car journeys to walking or

cycling helps to reduce traffic congestion, as well as improving general fitness and lung capacity. It has also been shown that children in cars in slow moving traffic (typical of rush hour congestion), are exposed to higher levels of exhaust fumes than those walking.<sup>(8)</sup>

### Diabetes

"Adult-onset" diabetes – or type II diabetes – is now occurring in children. According to Diabetes UK, obese individuals are 80 times as likely to develop type II diabetes as those at a healthy weight. See [www.diabetes.org.uk](http://www.diabetes.org.uk) for more information.

Physically active people have a 33-50% lower risk of developing type II diabetes compared with inactive people.<sup>(9)</sup>

### Cancer

Research on physical activity and its role in preventing cancer is continuing – but the Chief Medical Officer reported in 2004 that the most active individuals have a 40%-50% lower risk of colon cancer than the least active, as well as a 30% lower risk of breast cancer.

### Strokes

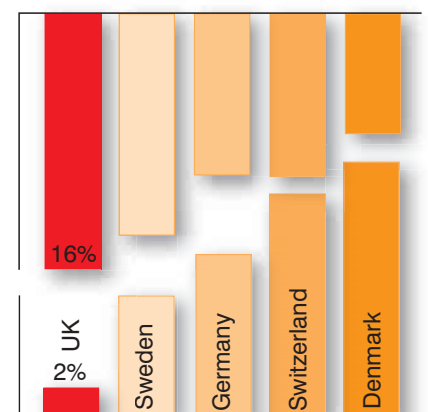
Physical activity is inversely related to the incidence of stroke. Clinical studies of patients with strokes suggest that formal exercise programmes have favourable effects on physical fitness. Walking to school initiatives and more cycle lanes have been proposed as important interventions in stroke prevention.<sup>(10)</sup>

### Bad backs

The British Chiropractic Association specifically identified shorter car journeys such as the "school run" as placing the back under immense strain. "School run mums" were identified as at risk because they



Overweight children aged around 10 years  
Source: IOTF, 2002



Levels of cycling in selected countries  
Source: DfT, 1996-2002

often had to twist and lift to help children in the back seat from the front and from lifting them or heavy schoolbags out of the car. See [www.chiropractic-uk.co.uk](http://www.chiropractic-uk.co.uk) for more information.

## Sport and Health

People do not have to be sporty to be healthy, they just have to be active. Building activity into your lifestyle is easy, time-efficient and inexpensive.

A sporting nation is not always the same as a healthy nation – The House Of Commons Select Committee’s Report on Obesity noted that Australia had “high levels of active recreation and sport” amongst young people, but a worrying increase in childhood obesity. They suggest this may be due to social inequality in accessing sporting facilities, or it could be a relatively high level of sport still only represents a small number of enthusiasts.

For young people who enjoy sport, being active can help improve fitness and co-ordination. Kesgrave School in Suffolk boasts several county champions in team and individual sports... and coincidentally has the highest rate of pupils cycling to school anywhere in the UK.

## Benefits for your Mind

### Academic Achievement

Most teachers will tell you that children who walk or cycle to school are more alert and ready to learn than those who travel by car.

One report found that schools that offer intensive physical activity programmes see positive effects on academic performance, even when

time for physical education is taken from academic learning. Benefits included increased concentration, reduced disruptive behaviours and improved mathematics and literacy scores.<sup>(11)</sup>

In 2002, the Department of Education in California showed a direct link between fitness levels and academic scores in English and Maths. Those in the fittest category had scores on average twice those of the least fit.<sup>(12)</sup>

### Mental Health

School can be a difficult time for many young people, having to deal with stressful experiences such as peer-pressure, bullying, poor self-image and exams. This can lead to depression, but studies have shown that physical activity can be used to overcome, and even prevent, depression and anxiety.<sup>(13)</sup> According to the Mental Health Foundation, activity can be as effective as medication and counselling. Read more at [www.mentalhealth.org.uk](http://www.mentalhealth.org.uk).

### Social Inclusion

The school journey is an ideal opportunity for children to interact with their peers, parents and other adults. This in turn builds self-confidence, independence and enhances their social skills.

## Benefits for the Community

### Less Pollution

More cycling and walking can result in less pollution and therefore lower rates of asthma and wheezing.

A study in Southern California looking at children over an 8-year period, documented how exposure to air pollutants led to diminished lung capacity. Children exposed to more polluted air were five times more likely





to have reduced lung development by age 18 than children raised in cleaner areas. The study also demonstrated other health risks associated with slower lung growth in children, including more illness later in life.<sup>(14)</sup>

### **Safer Streets**

Fewer motor vehicles make the streets safer for pedestrians, cyclists and even other motorists. A comparison of child pedestrian risk between English and Dutch children has revealed that their exposure to traffic is comparable, but Dutch children spend half of their pedestrian time in traffic calmed/controlled areas, whereas only 10% of English children as so protected.<sup>(15)</sup> Moreover, in The Netherlands and Sweden where cycling rates are much higher, cycle fatalities are half those of Britain.<sup>(16)</sup> Safer, quieter streets are invariably health-promoting streets.

### **More productive schools and workplaces**

Numerous papers have demonstrated that fit, active adults take fewer sick days and are more productive, loyal employees. It would seem logical that schools would benefit similarly from healthier pupils and anecdotal evidence does suggest this is the case.

**“Infancy, childhood and young adulthood are critical stages in the development of habits that will affect people’s health in later years.”**

Choosing Health: making healthier choices easier, Department of Health, Public Health White Paper, 2004

For more information on traffic, health and road safety, see our Transport Facts and Figures Information Street.

## **Health Benefits vs Risks**

Cycling and walking are essentially safe activities. It would take 21,000 years of average cycling to suffer a fatal injury! Yet Coronary Heart Disease (CHD) caused 67,000 premature deaths in 2002<sup>(17)</sup> (compared to 130 cyclist fatalities in traffic accidents). Along with strokes and cancer, CHD accounts for 60% of all premature deaths in England.<sup>(18)</sup> Being active, however, reduces your risk of heart disease by 50%. For more information, see our Safety on the Streets Information Sheet.

## **The Future**

**“Children and adolescents provide the greatest opportunity to influence attitudes towards activity. Children who emerge from their school years feeling confident about their physical skills and bodies and who have had positive experiences of physical activity are more likely to be active through adulthood.”**

“At Least Five a Week”, Chief Medical Officer’s Report 2004

For more information about encouraging safe, healthy routes to schools, please see our Safe Routes to Schools, Walking and Cycling Information Sheets, or visit our website.

## References

1. World Health Organisation (2002) Move for Health, citing Murray, C.J.L. and Lopez, A.D. (eds) (1996) The global burden of disease, Cambridge (MA): Harvard University Press
2. Sproston, K. and Primatesta, P. (eds) (2003) Health Survey for England 2002, Volume 1: The health of children and young people. London: TSO
3. Tuxworth, W., Nevill, A., White, C. and Jenkins (1986) Health, fitness, physical activity, and morbidity of middle aged male factory workers, British Journal of Industrial Medicine, 43, pp. 733-753
4. House of Commons Select Committee Report on Obesity, 2004, Paragraph 34
5. Biddle, S.J.H., Gorley, T. and Stensel, D.J. (2004) Health-enhancing physical activity and sedentary behaviour in children and adolescents, Journal of Sports Sciences, 2004, 22, 679-701
6. Mackett, R., Lucas, L., Paskins, J. and Turbin, J. (2004) The therapeutic value of children's everyday travel, Transportation Research Part A, 39, pp. 205-219
7. Oosterlee, A., Drijver, M., Lebet, E. and Brunekreef, B. (1996) Chronic respiratory symptoms in children and adults living along streets with high traffic density, Occupational and Environmental Medicine, Vol 53, 241-247
8. Environmental Transport Association Trust (1997) Comparative Pollution Exposure of Road Users
9. At Least Five a Week, Chief Medical Officer's Report 2004
10. Batty, D. and Lee, I. (2002) Physical activity for preventing strokes, British Medical Journal, 325, pp. 350-351
11. Shephard R.J. (1997) Curricular physical activity and academic performance, Pediatric Exercise Science, 9:113-126
12. California Department of Education (2002) State study proves physically fit kids perform better academically, News Release, 12th October 2002
13. Powney, J., Malcolm, H., Lowman, K. (2000) Health and Attainment, The Scottish Council for Research in Education, University of Glasgow, Page 14
14. Gauderman, W., et al (2004) The Effect of Air Pollution on Lung Development from 10 to 18 Years of Age, New England Journal of Medicine, Volume 351:1057-1067
15. Department of the Environment, Transport and the Regions (1999) Comparative study of European pedestrian exposure and accidents, London: DETR
16. Commission for Integrated Transport (2001) European Best Practice in the delivery of Integrated Transport: Report 1, London: CiT
17. British Heart Foundation (2004) 2004 Coronary Heart Disease Statistics
18. Department of Health (2005) Choosing Activity: a physical activity action plan, London, DH



## Further information

Visit the Safe Routes to Schools website  
**[www.saferoutestoschools.org.uk](http://www.saferoutestoschools.org.uk)** for:

- latest news and information on Safe Routes to Schools
- specific information on each of the UK regions
- downloadable resources including other information sheets
- case studies, curriculum materials and newsletters

**For Safe Routes to Schools enquiries call 0117 915 0100  
 or email [schools@sustrans.org.uk](mailto:schools@sustrans.org.uk)**

*Sustrans would like to thank everyone who has contributed photography including its own staff and Julia Bayne, Jason Patient, North Yorkshire County Council, Hertfordshire County Council, Surrey County Council and Coventry City Council.*

*This information sheet may be freely photocopied for use in schools and local authorities. For reproduction in other publications, please contact the Safe Routes to Schools team at Sustrans for permission.*