

**Autumn 2003 CTC/CCN
Conference
Cycling and health**

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What this presentation will cover:

- The importance of physical activity and exercise to public health.
- The specific health effects of cycling.
- The risks of cycling.
- The wider benefits of cycling.

Based on Nick Cavill and Adrian Davis 'Cycling and Health: a briefing paper for the Regional Cycling Development Team' 2003

Thanks also to Harry Rutter for his advice on this presentation

Health benefits of regular physical activity

- Heart disease
- Stroke
- Diabetes
- High blood pressure
- Cancer
- Obesity
- Mental health and well-being
- Cognitive function / independence
- Bones joints and muscles

Physical activity and mortality

- More than 36% CHD deaths due to sedentary lifestyle¹
- 28% decreased mortality in bike commuters²
- Adds one to two+ years of healthy life³
- Dose-response relationship

Sources:
2002

work.

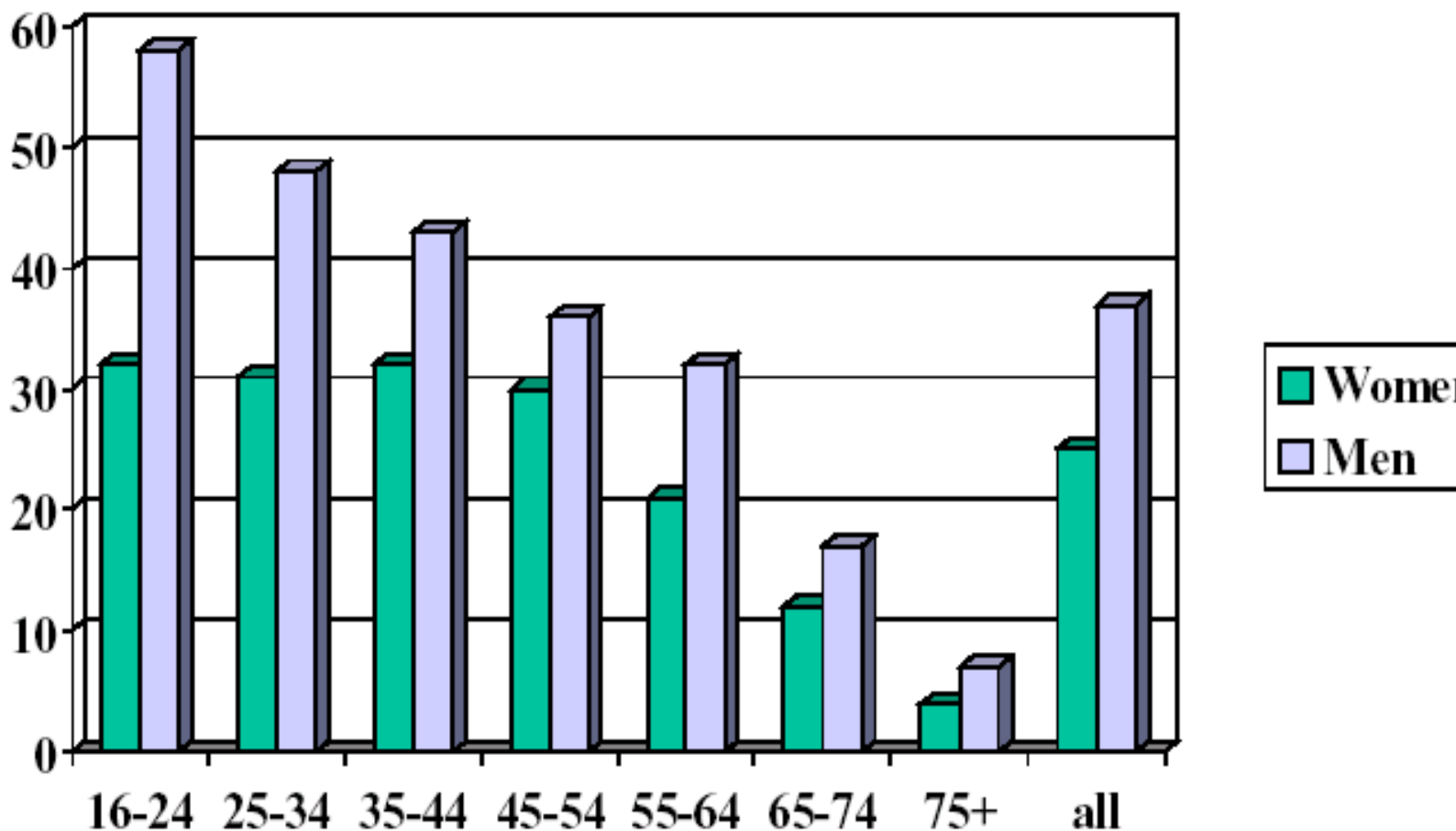
1) McPherson et al. Coronary heart disease: Estimating the impact of changes in risk factors. National Heart Forum,

2) Andersen et al. All-cause mortality associated with physical activity during leisure time, work, sports, and cycling to

Archives of Internal Medicine 2000, 160, 1621-1628.

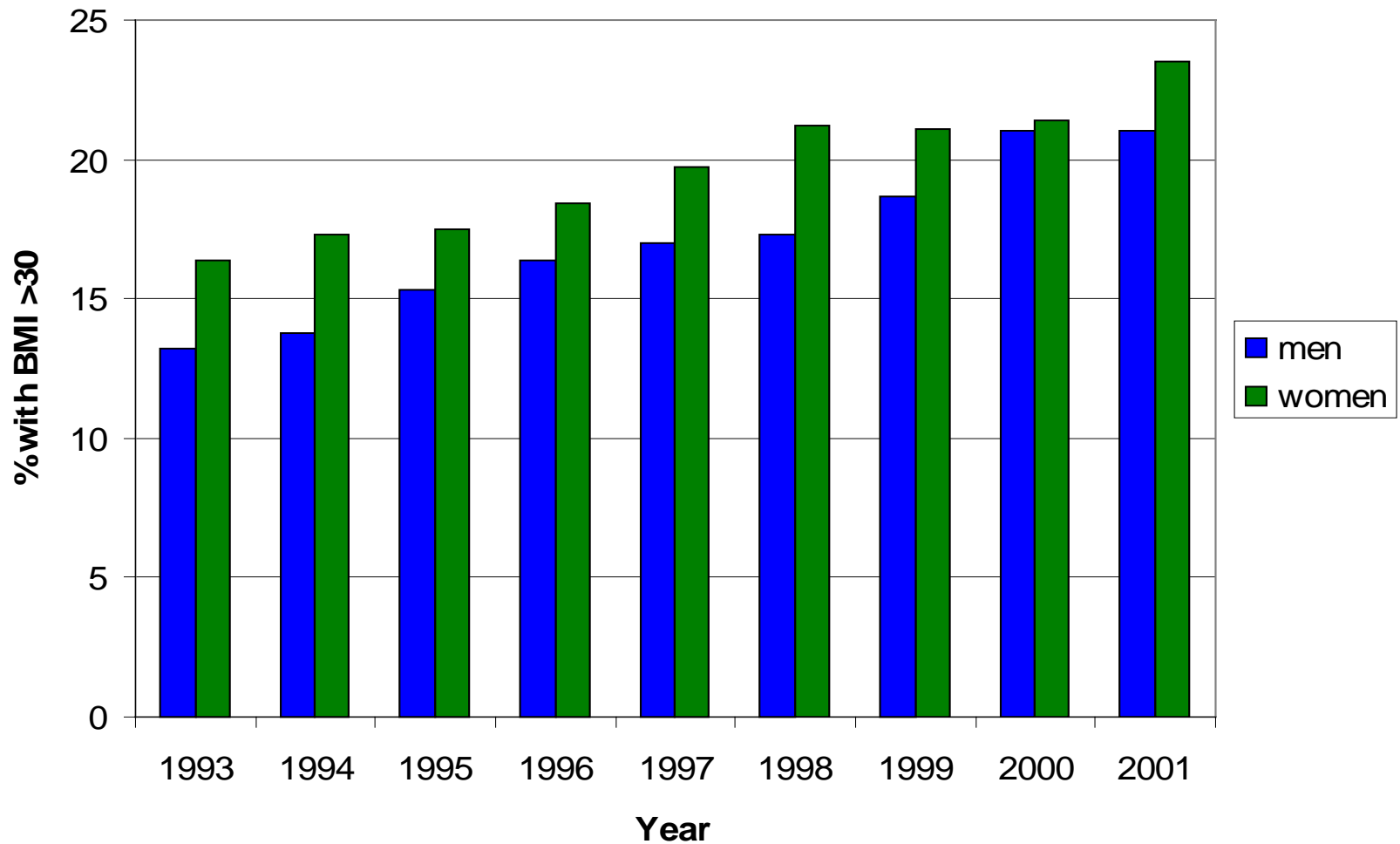
3) Deffenbacher et al. Physical activity, all-cause mortality, and longevity of college alumni. *NEJM* 1996;344:695-699.

Proportion of men and women meeting 'half an hour a day' guideline

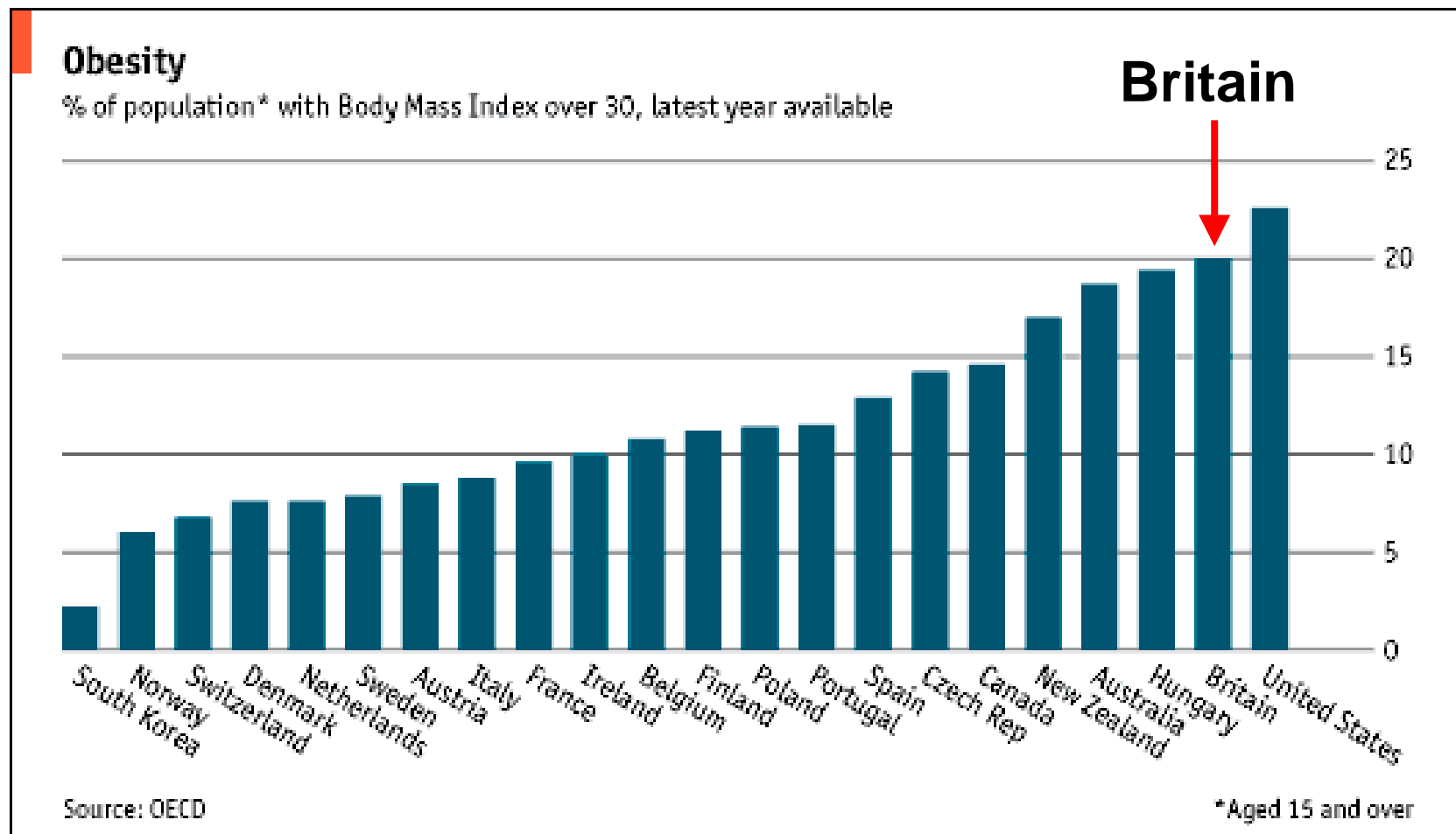


Source: Health Survey for England 1998

Rising trend in obesity in England



Our place in the world



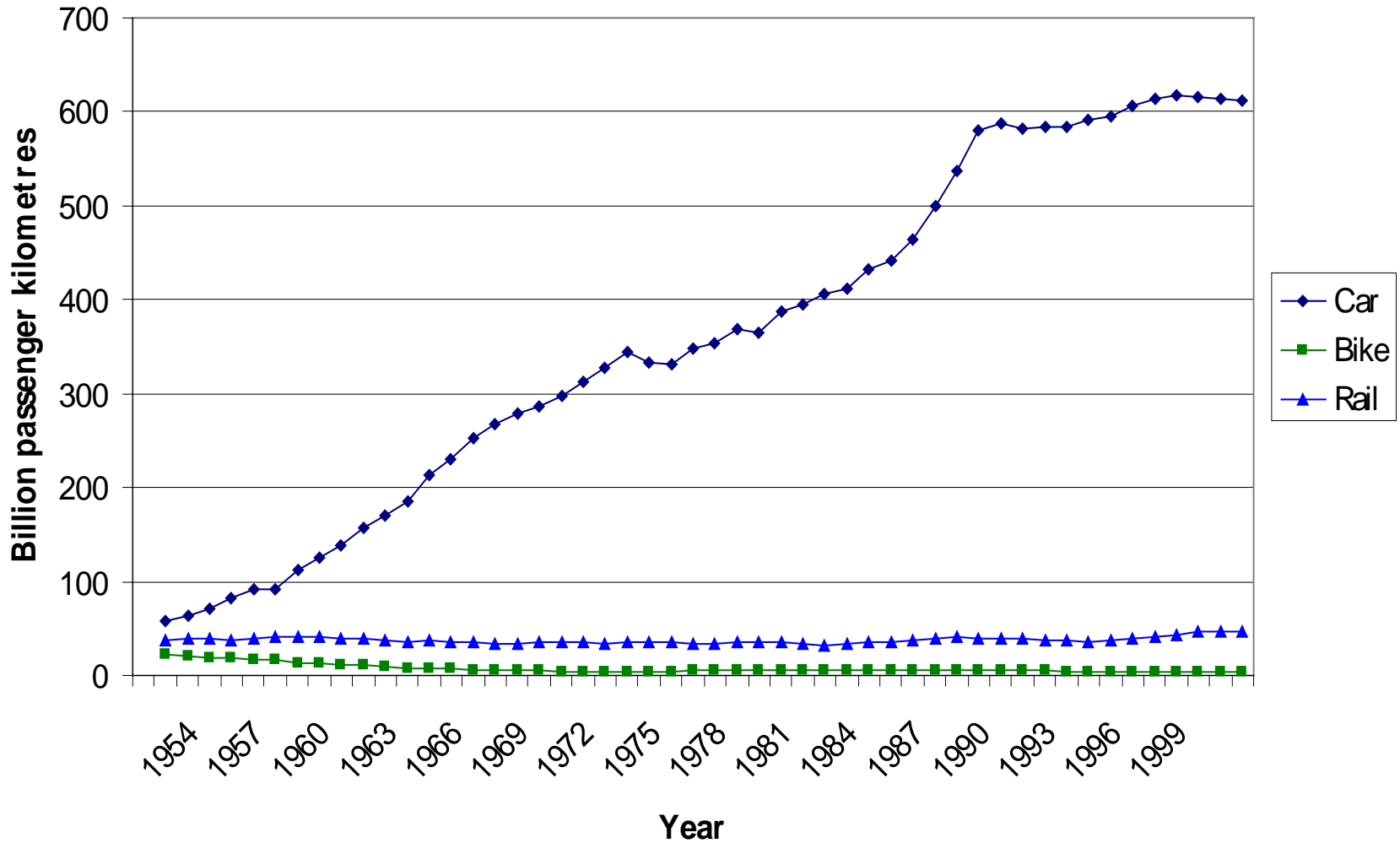
Obesity

- Increasing obesity
 - 20% of adults in England
 - Has trebled in last 20 years
 - Shortens life by average of 9 years
 - £0.5 billion direct costs to NHS
 - £2.0 billion impact on economy

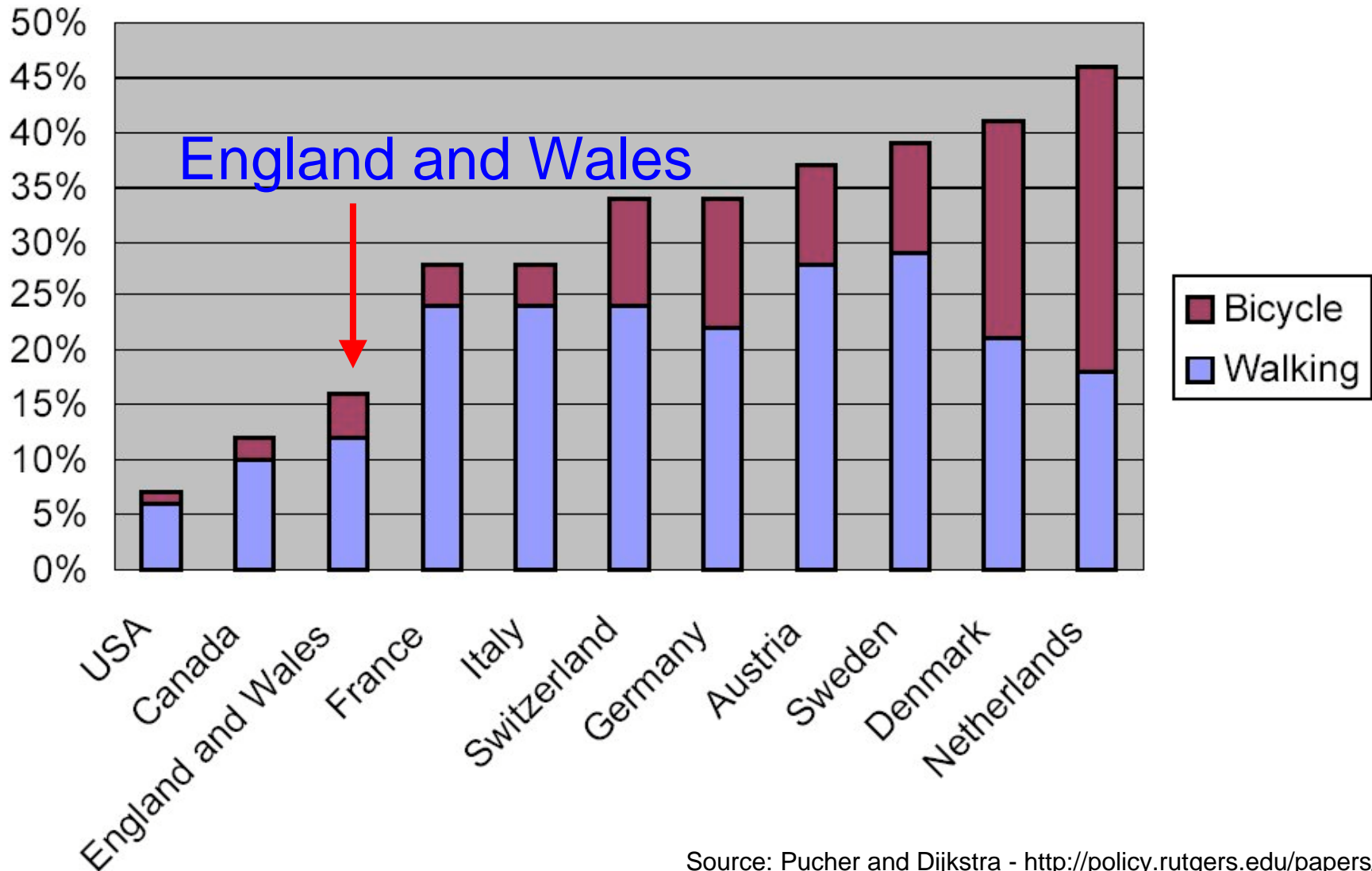
Physical activity and health

- “The way we travel is making us a less healthy nation”. (DfT. A New Deal for Transport: Better for everyone. 1998)
- “There are major opportunities for achieving large health gains for the European population by increasing levels of routine physical activity. Walking and cycling as means of daily transport can be a most effective strategy to achieve these gains.” (Physical activity through transport. WHO 2002).

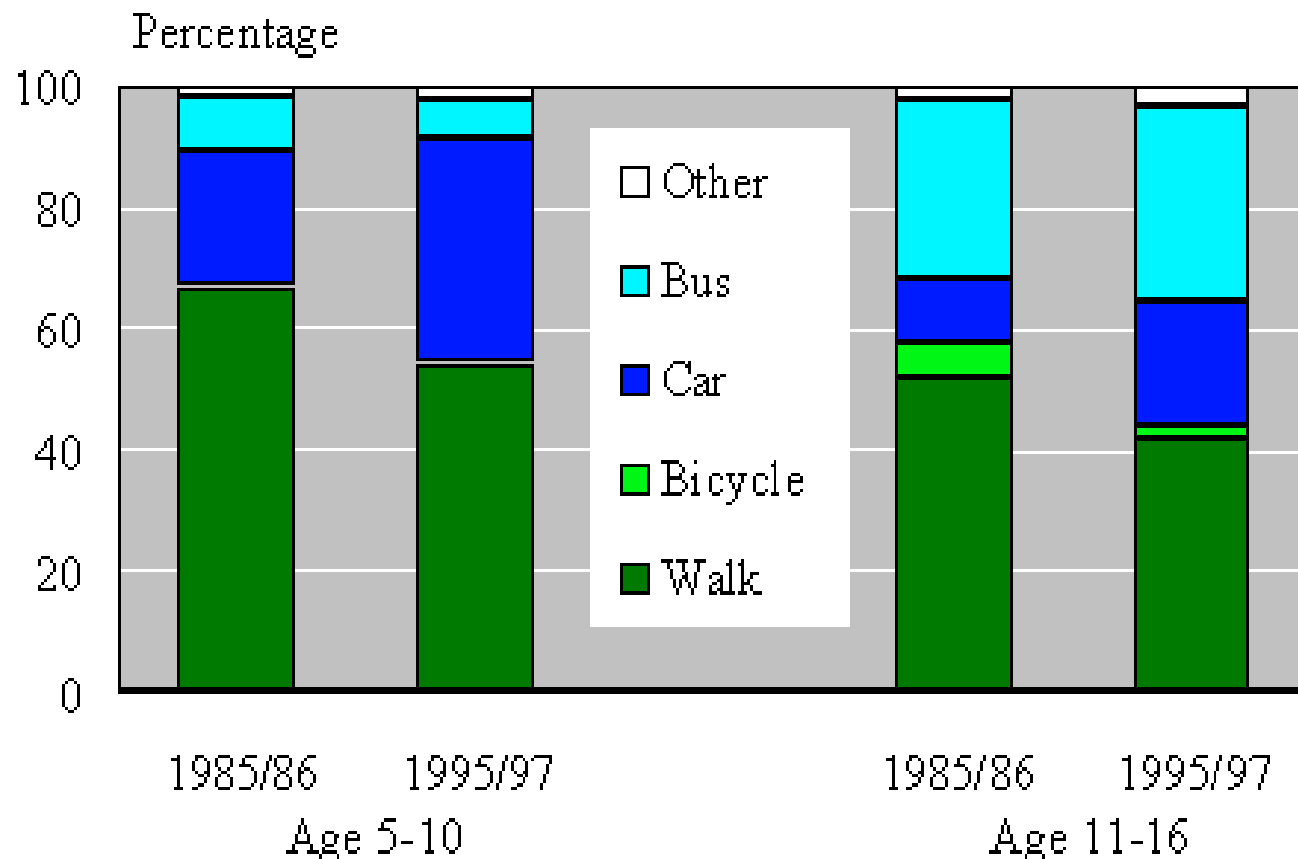
Passenger transport: by mode: 1952-2000



Modal splits of walking and cycling



Fewer children walking / cycling to school



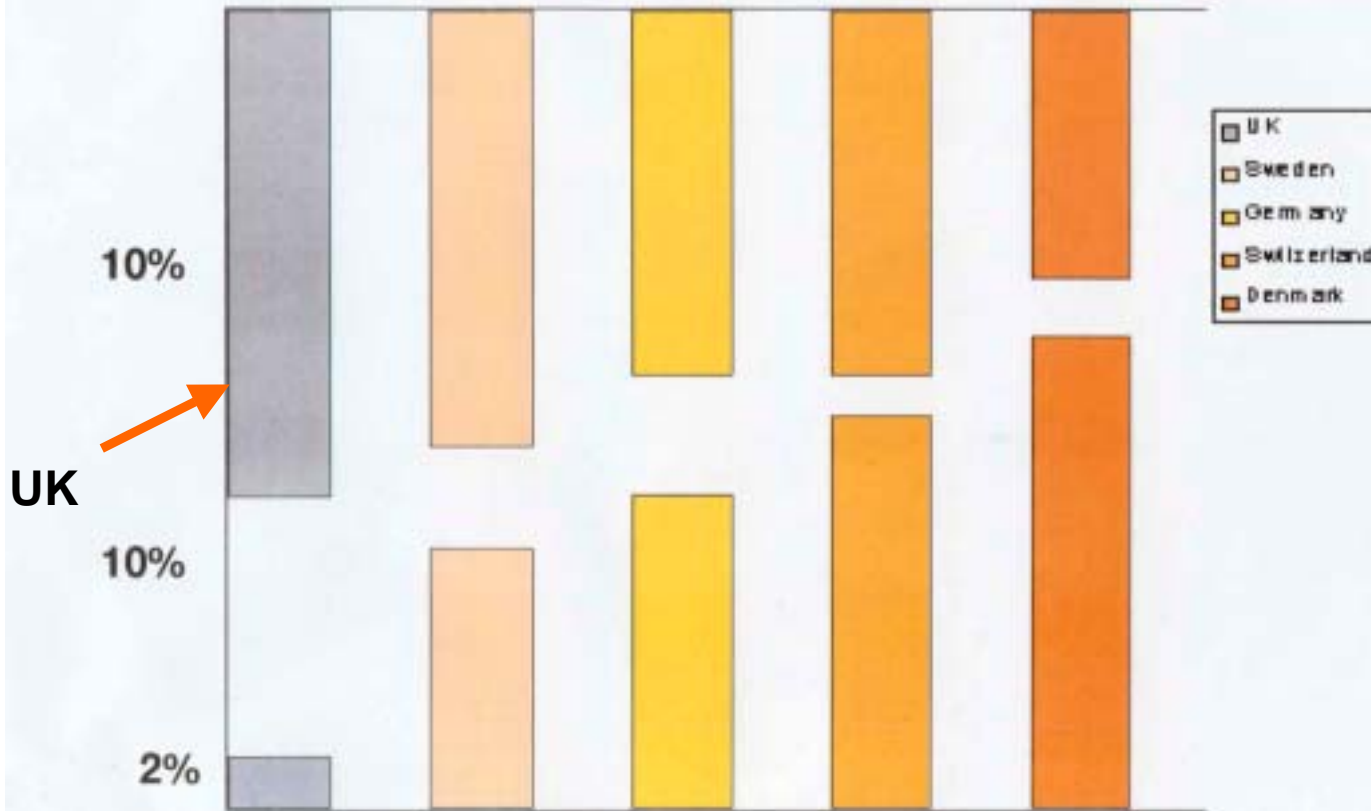
Cars and obesity

- 14% of Chinese households acquired a car between 1989 and 1997
- Men who acquired a car gained 1.8kg and doubled their risk of obesity

Bikes and obesity

Prevalence of overweight children aged around 10 years

Source: IOTF 2002



Levels of cycling in selected countries

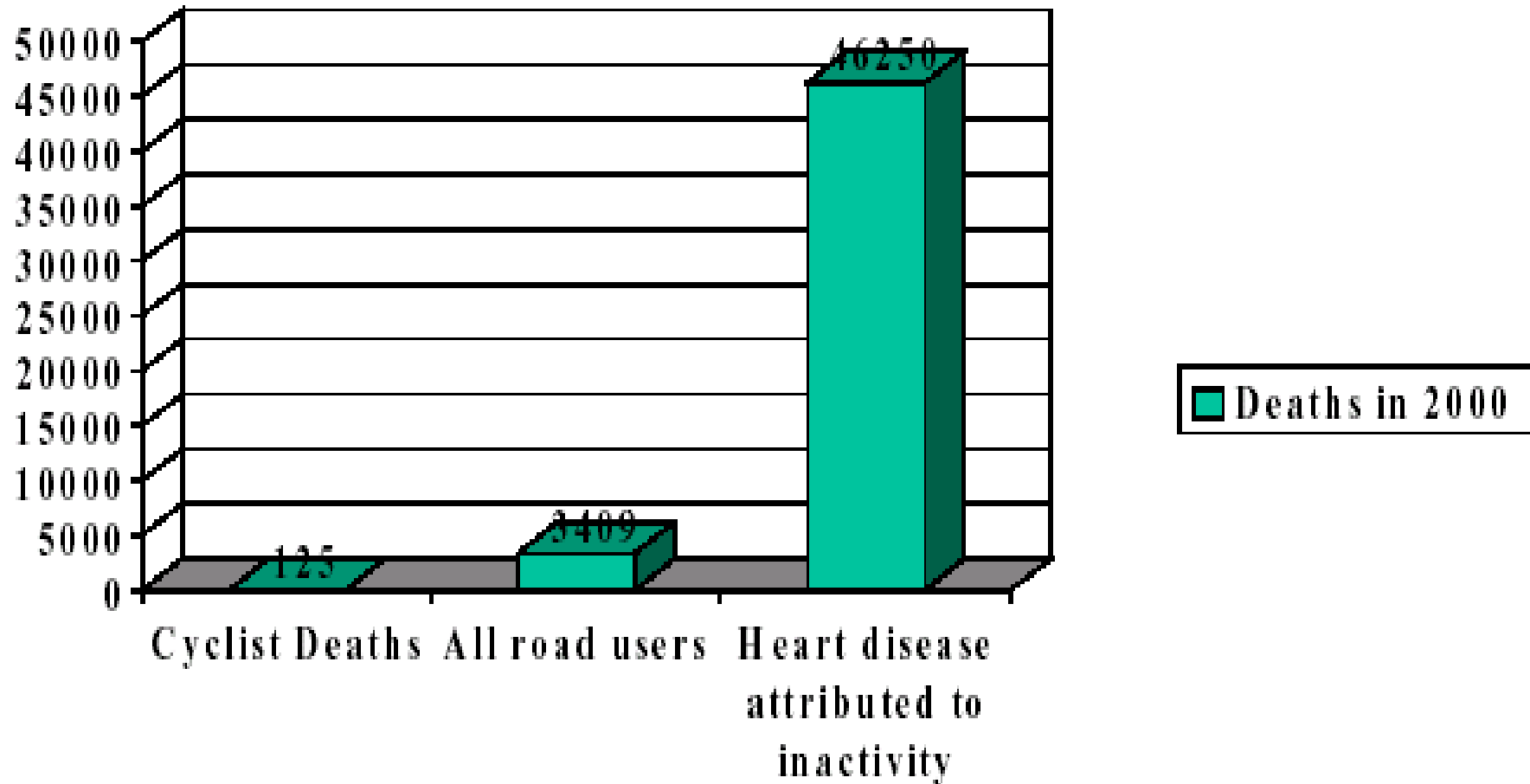
Source: DfT 1996

sustrans

The risks of cycling

- Direct and indirect

Cyclist deaths compared to deaths attributable to inactivity



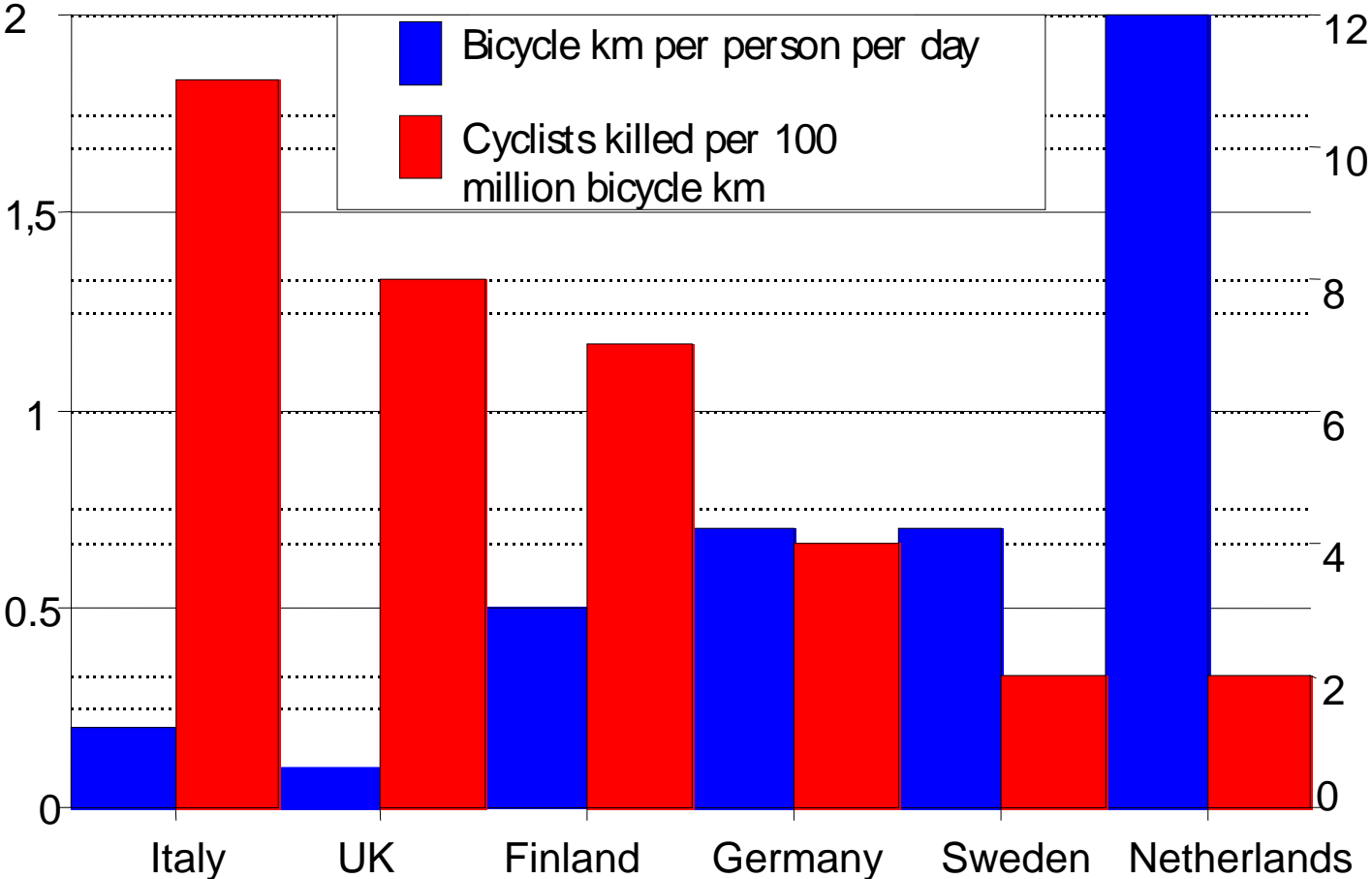
Risk of injury per million kilometres (EU data) –
excluding motorway travel

<i>Drivers</i>	<i>Cyclists</i>
20.8	21.0

Health cost / benefit of cycling

- At least 20:1 life years gained:lost (Hillman)
- Costs of sedentary lifestyle much harder to visualise than cycling death or injury - risk communication issues
- Cycling is safer than driving

Cyclist risks and distances travelled



The wider benefits of cycling

- Reduced danger – critical mass
- Improved air quality
- Reduced noise
- Increased play and activities for children
- Benefits to health and wealth
- Social capital and inclusion

Health costs of different transport interventions

	Crashes	Air pollution	Noise	Obesity	Community	Climate change
Improved fuel quality	-	↓	-	-	-	-
Increased vehicle efficiency	-	↓	-	-	-	↓
Reduced travel demand (eg teleworking)	↓	↓	↓	-	-	↓
More public transport, walking and cycling	↓	↓	↓	↓	↓	↓

In summary...

Cycling has a great potential to improve health.

Health is the key reason people choose to cycle.

We need to:

- address the perceived risk;
- take a broad view;
- stress the benefits to employers.