

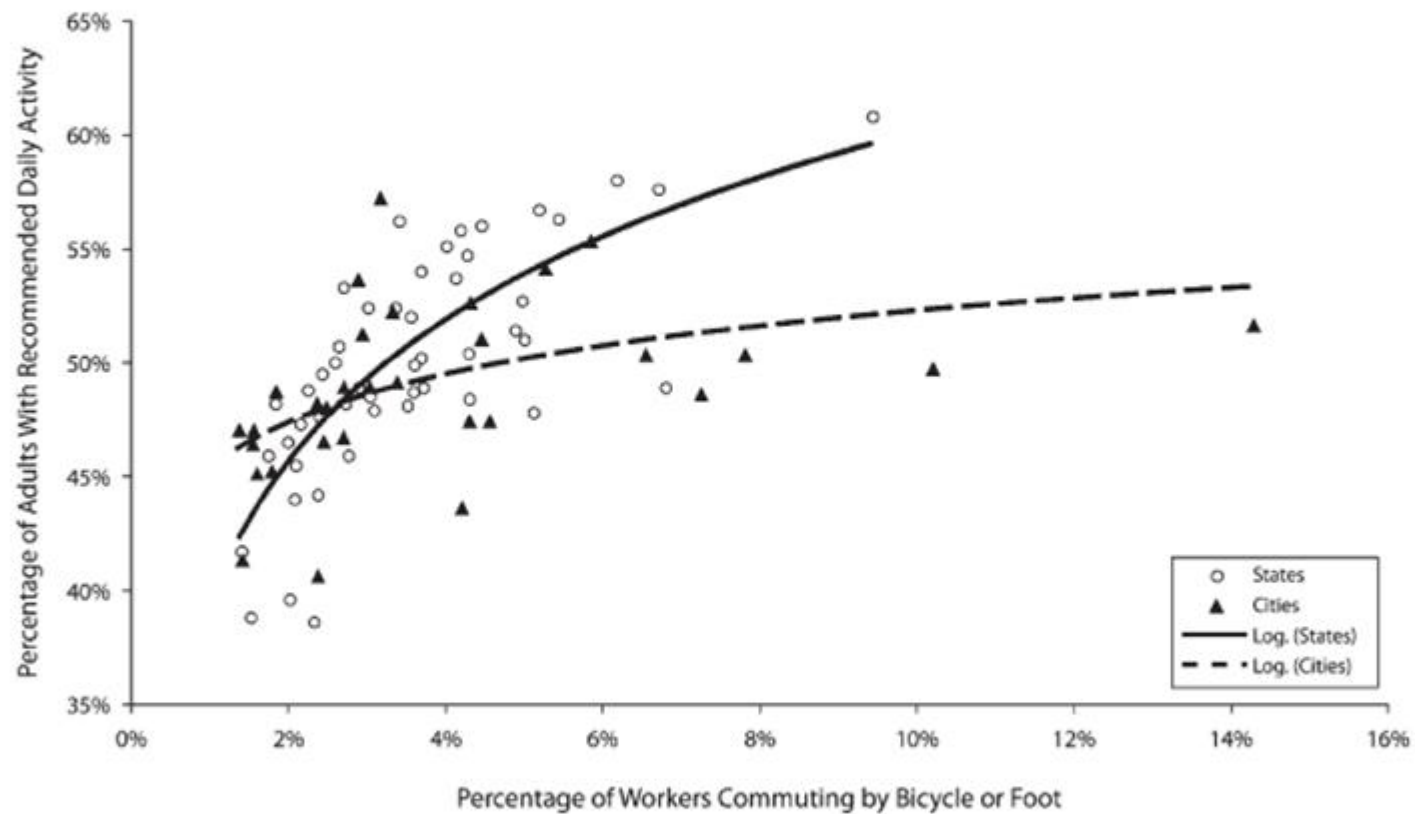
Active travel and public health: recent research findings

David Ogilvie

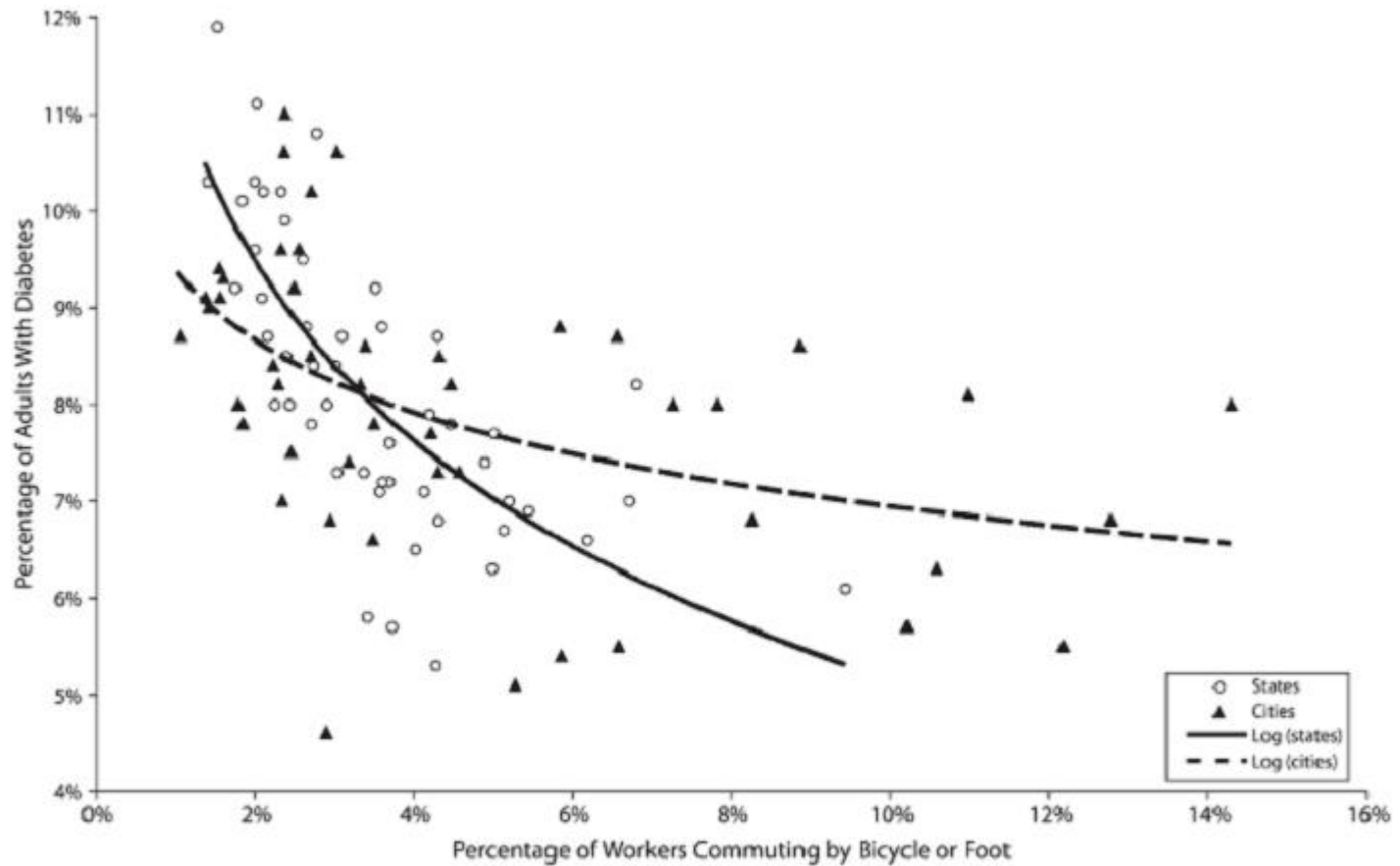
MRC Epidemiology Unit, Cambridge and
UKCRC Centre for Diet and Activity Research (CEDAR)

Glasgow Centre for Population Health, 19 October 2010





Pucher J et al, *Am J Public Health* 2010



Pucher J et al, *Am J Public Health* 2010

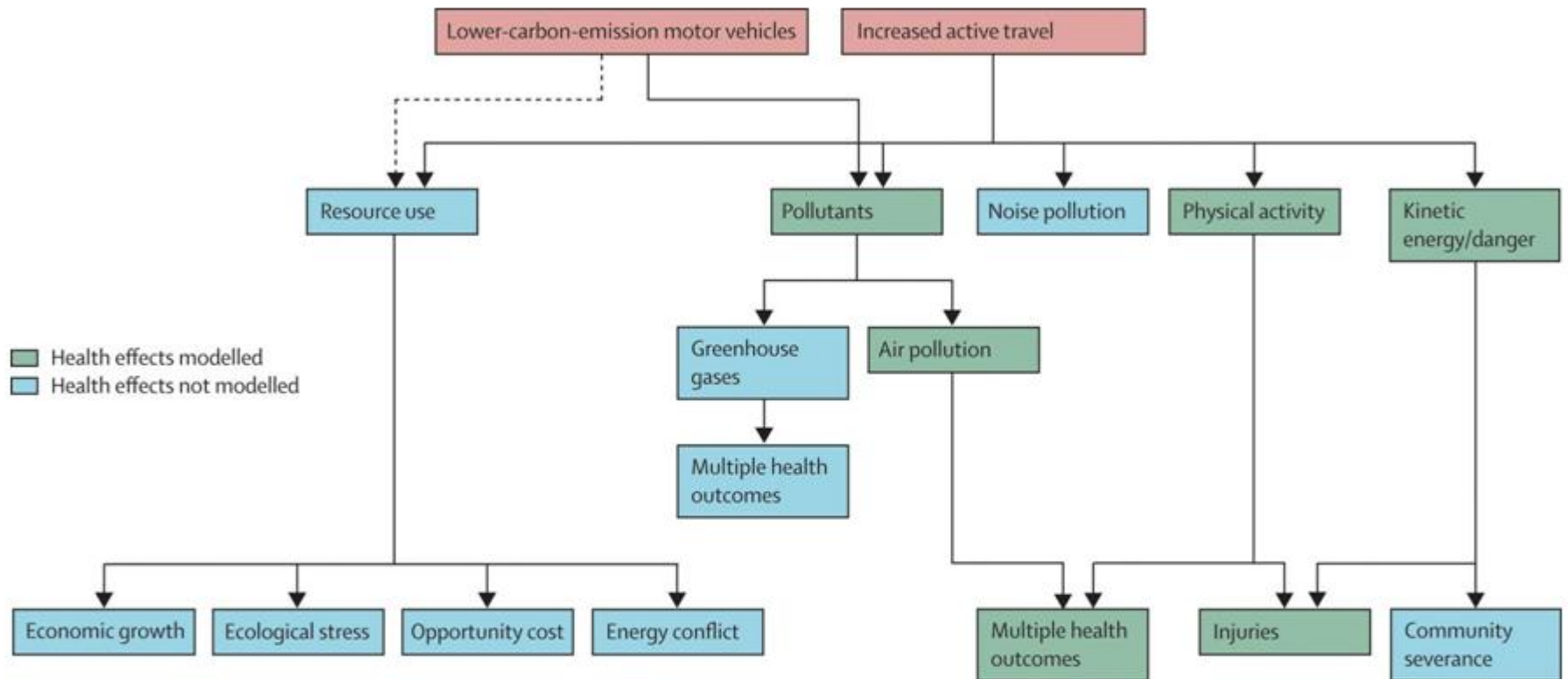


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Increased active travel

- Focus is on replacement of some car travel with active travel. Also includes a small reduction in distance (km) travelled by road freight and a large reduction in the number of motorcycles (from a low baseline).
- 38% reduction in transport CO₂ emissions from 1990 levels.
- Per person CO₂ emissions are 0.69 tonnes.
- High levels of walking and cycling are assumed, similar to the practice in some cities in continental Europe (eg, Copenhagen [Denmark], Delft [Netherlands], Amsterdam [Netherlands], Freiburg [Germany]).
- Assumptions made for this scenario are that the distance walked is more than doubled and distance cycled is increased eight-fold (but from a low baseline).

Woodcock J et al, *Lancet* 2009



Woodcock J et al, *Lancet* 2009

	Delhi			London		
	Lower-carbon-emission motor vehicles	Increased active travel	Towards sustainable transport	Lower-carbon-emission motor vehicles	Increased active travel	Towards sustainable transport
Physical activity						
Premature deaths	0	-352	-352	0	-528	-528
YLL	0	-6040	-6040	0	-5496	-5496
YLD	0	-816	-816	0	-2245	-2245
DALYs	0	-6857	-6857	0	-7742	-7742
Air pollution						
Premature deaths	-74	-99	-122	-17	-21	-33
YLL	-1696	-2240	-2749	-160	-200	-319
YLD	0	0	0	0	0	0
DALYs	-1696	-2240	-2749	-160	-200	-319
Road traffic crashes*						
Premature deaths	0	-67	-67	0	11	11
YLL	0	-2809	-2809	0	418	418
YLD	0	-730	-730	0	101	101
DALYs	0	-3540	-3540	0	519	519
Total†						
Premature deaths	-74	-511	-532	-17	-530	-541
YLL	-1696	-10969	-11448	-160	-5188	-5295
YLD	0	-1547	-1547	0	-2144	-2144
DALYs	-1696	-12516	-12995	-160	-7332	-7439

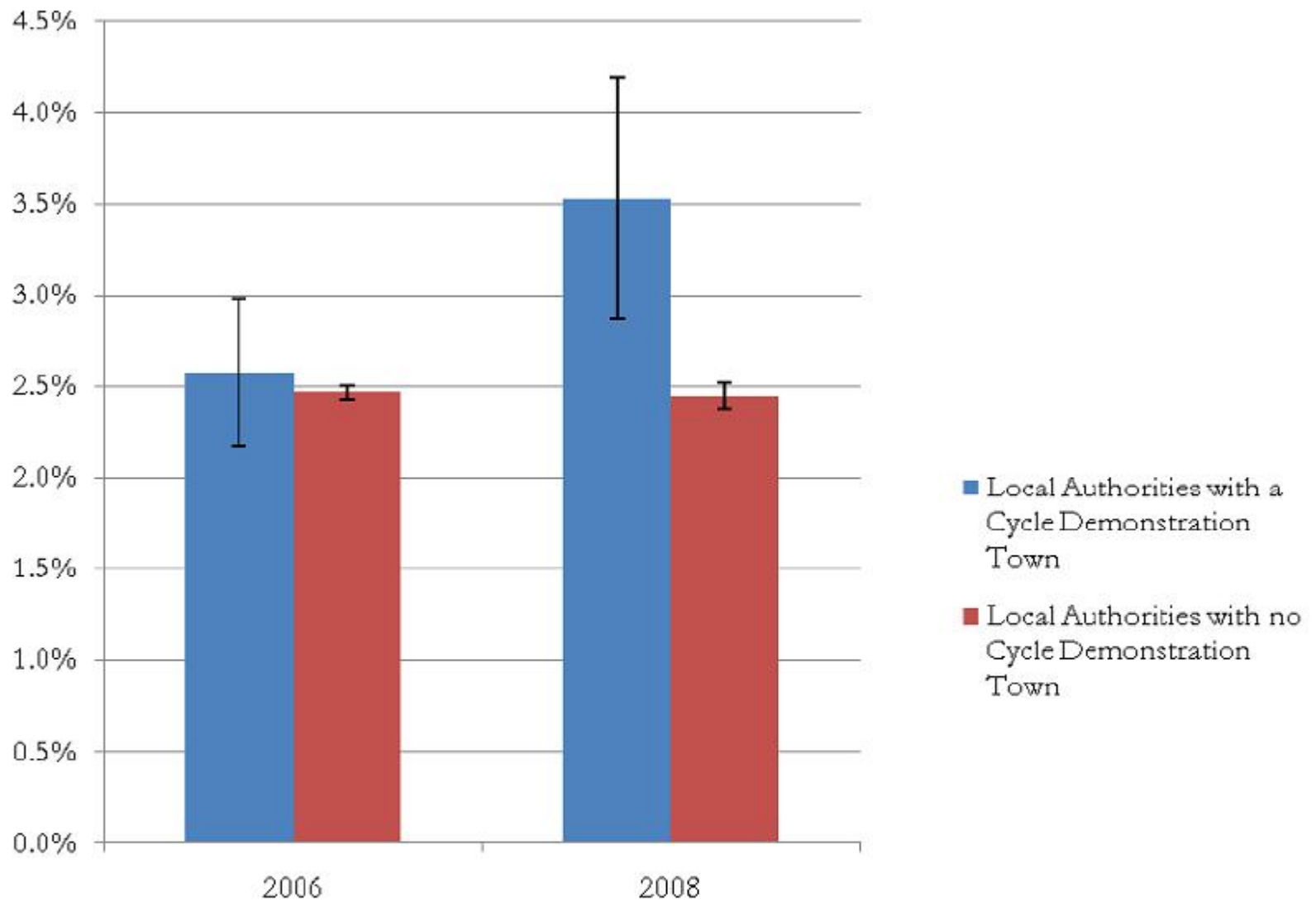
Woodcock J et al, *Lancet* 2009

- Policy change implies a reprioritisation designed to restrict car use and ensure active travel is the most convenient, pleasant, and quickest way to reach destinations.
- Specific policies would include substantial investment in the design of infrastructure for pedestrians and cyclists to reshape the streetscape and public realm, carbon rationing, geographically expanded road pricing, traffic demand management, restrictions on car parking and access, reduced speed limits, and behavioural change approaches (eg, raised awareness, travel planning).

Woodcock J et al, *Lancet* 2009



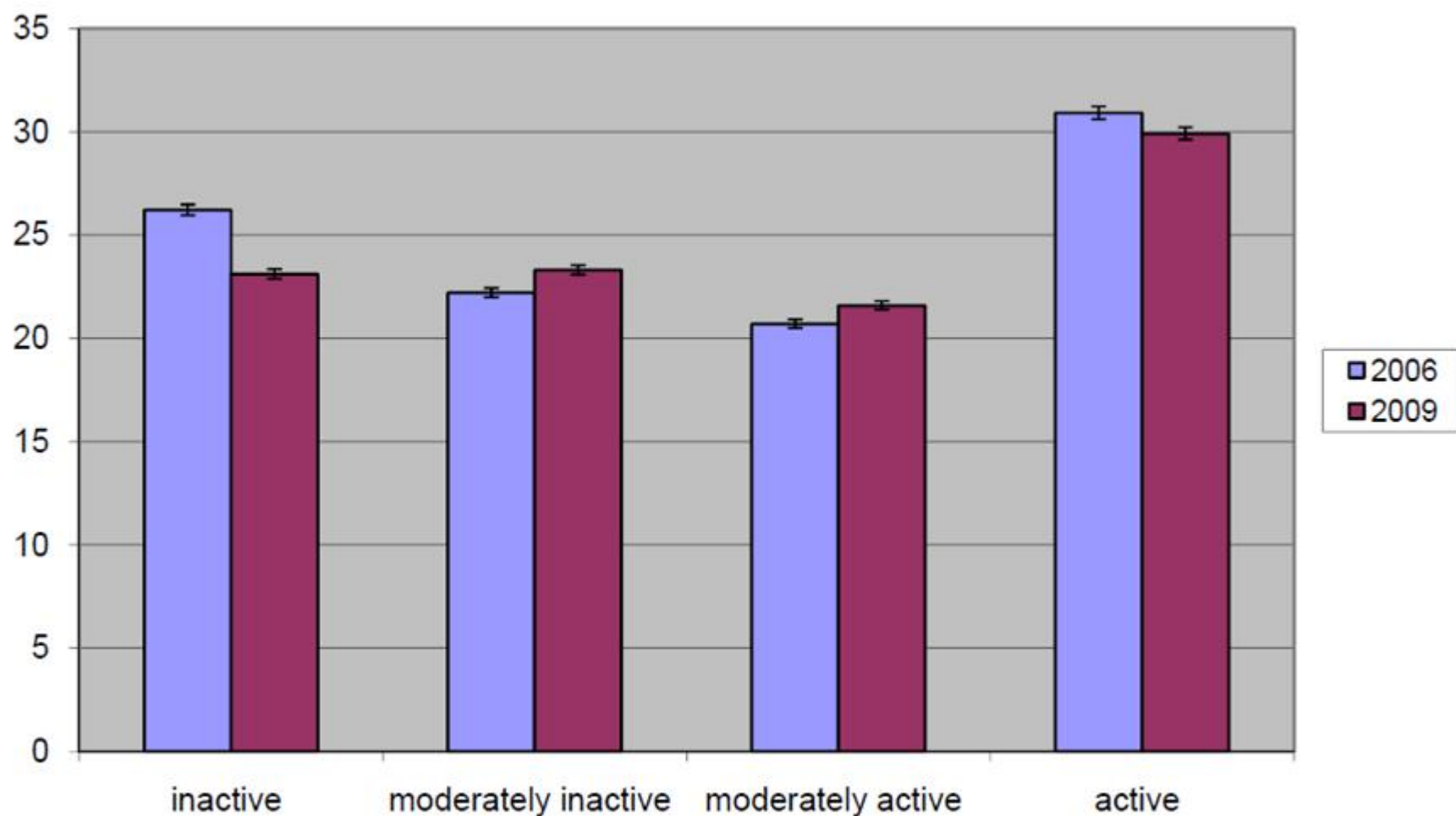
Type of intervention	Mean study validity	Summary of net effects
Interventions to promote cycling in particular (n=6)	3.8	Change in proportion of trips made by bicycle of between 0% and +3.4%
Individualised marketing of 'environmentally friendly' modes of transport (n=16)	1.9	Change in cycling trip frequency of between -0.7 per week and +21 per year
Other interventions to promote travel behaviour change in general (n=3)	0.3	Change in proportion of trips made by bicycle of between -11.6% and +1.1%



Source: Active People Survey. 2006 total n= approximately 1,000 per local authority;
 2008 total n=approximately 500 per local authority

Sloman L et al, DfT and Cycling England 2009

% in each EPIC physical activity category (all CDTs n=8948)



Cavill N et al, Cycling England 2009



in the
re-te
garden

the fairy army rises, hidden power of earth



AWAKE



Benefits

The M74 Completion project is a key part of the Scottish Government's programme of investment in transport infrastructure, delivering a wide range of benefits from helping to promote the sustainable economic growth of Scotland and bringing new jobs along the route, to reducing road accidents and improving the environment.

During the period of construction, this investment is directly supporting up to 900 jobs in the construction industry.

Transport Scotland et al, 2009

Conclusion

Drawing these various strands together, and looking at all the policy, transport, environmental, business, and community disadvantages of the proposal as a whole, it is concluded that the proposal would be very likely to have very serious undesirable results; and that the economic and traffic benefits of the project arising from the transfer of future jobs from other parts of Scotland would be much more limited, more uncertain, and (in the case of the congestion benefits) probably ephemeral. It is therefore concluded that the public benefits of the proposal would be insufficient to outweigh the considerable disadvantages that can be expected.

Inquiry Reporters Unit, Scottish Executive, 2004



Last year, we'd a big burst water main at the Cross, so the traffic was all diverted. It was so peaceful. You wouldnae believe it. You know, I went 'Oh, this is heaven, this is what it should be like.' [...] It suddenly brought it home to you how much noise you were taking in every day. It was like being out in the country [...] And you just felt, oh, I could walk more here, you know?

Woman aged 64 with no car

Ogilvie D et al, *Int J Behav Nutr Phys Act* 2010

If that big motorway got built there, I wouldn't go near Victoria Road, I'm sorry. Except to go to the doctor or dentist.

Woman aged 68 with no car

I think if it was like that, I would certainly not be going up Govanhill anymore, no.

Woman aged 64 with no car

When I visualise it, it makes me think of Kinning Park, sort of a wee bit stark and big concrete, concrete everywhere.

Woman aged 36 with no car

Ogilvie D et al, *Int J Behav Nutr Phys Act* 2010

Oh, it's horrible. If you have ever walked under it. Well it's just like slabs of concrete, isn't it? And you're hearing this traffic all the time [...] you know, it's quite scary. Just because it's dark. It's all dull [...] it's a cold feeling that all this traffic going on top of you [...] Certainly not pleasant to walk under.

Woman aged 64 with no car

Ogilvie D et al, *Int J Behav Nutr Phys Act* 2010

'We've got no access to the park. The children here and the community used to go there and have picnics, they've taken that away 'cause we don't have access. You cannae get out [of Corkerhill], you're suffocating, claustrophobic.'

These feelings of claustrophobia arise because the M77 forms a concrete barrier which completes the enclosure of Corkerhill within a box of road and railway lines.



Summary

1. Active travel is associated with health benefits
2. More active travel would be associated with a net population health gain
3. We need more research on how to achieve that, but in order to do that we need more (and more ambitious) interventions at multiple levels, introduced in such a way that they can be properly evaluated.

Further information

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