Active transportation and health: overcoming the barriers

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Average distance travelled per person per year by each mode (miles)

Source: National Travel Survey
Average distance travelled per person per year by each mode (miles) (log scale)

Source: National Travel Survey
Average number of trips per person per year

Source: National Travel Survey
Number of walking trips per head per year, 2010

Source: National Travel Survey
Total number of cars licensed in Great Britain

Source: Transport Statistics: GB
Total distance travelled by car, van and taxi

Source: Transport Statistics: GB
The barriers to active travel

In a project for the DfT carried out at UCL on the potential for switching short trips by car to alternative modes the following barriers to switching to walking and cycling were identified:

• Difficulties in walking and cycling
• Lack of motivation
• Lack of time because of modern lifestyles
The barriers to active travel – difficulties in walking and cycling

• Physical difficulties
  – Long-term because of disability
  – Temporary e.g. heavy loads, young children

• Fear of going out
  – May be related to perception of street crime
  – May be time specific

• Local environment is unsuitable
  – Poor quality pavements, dog mess, etc.

• Desired opportunities are far away
The barriers to active travel – motivation and time

• Lack of motivation
  – The car offers a comfortable, weather-protected, fast and convenient alternative to walking and cycling
  – Staying at home offers electronic alternatives to making local trips

• Lack of time because of modern lifestyles
  – Modern lifestyles are complex and many revolve around the car
Modern life and the decrease in active travel

As people get richer, they buy mobility

- Increasing incomes
  - Increasing car ownership
    - Increasing car availability
      - Increasing car use
        - Less walking and cycling
Modern life and the decrease in active travel

More women are employed

- Increasing incomes
- Increasing car ownership
- Increasing car availability
- Increasing car use
- Less walking and cycling

More women in employment

Reduction in time available for taking children to activities
Modern life and the decrease in active travel

Cities are spreading out

- Increasing incomes
- More women in employment

- Decentralisation of urban areas
- Increasing car ownership
- Reducing in time available for taking children to activities

- Increasing distance apart of urban activities
- Development of car-oriented lifestyles
- Increasing car availability
- Increasing car use

- Less walking and cycling
Modern life and the decrease in active travel

Increasing perception of risk

Nature of urban areas

Increased perception of risks of being outdoors

Decentralisation of urban areas

Increasing distance apart of urban activities

Development of car-oriented lifestyles

Increasing incomes

More women in employment

Increasing car ownership

Reduction in time available for taking children to activities

Increasing car availability

Increasing car use

Increased perception of risk from traffic

Less walking and cycling
Modern life and the decrease in active travel

Staying at home has its attractions

- Nature of urban areas
- Decentralisation of urban areas

- Increased perception of risks of being outdoors
- Increasing distance apart of urban activities
- Development of car-oriented lifestyles

- Increasing incomes
- Increasing car ownership
- Increasing car availability
- Increasing car use

- More women in employment
- Reduction in time available for taking children to activities
- Increased availability of personal home entertainment

- Fewer local trips

- Less walking and cycling
What are the effective ways of reducing car use?

Ella Graham-Rowe and colleagues reviewed the effectiveness of strategies to reduce car use:

• 3486 studies reviewed
• 77 primary interventions to reduce car use identified
• Of these, only 12 were found to be methodologically strong
• Of these, 3 considered walking and cycling
The three methodologically strong studies that considered walking and cycling

• Bamberg et al looked at giving a free public transport ticket in Stuttgart, and found a slight increase in walking and a slight decrease in cycling, but the results were not statistically significant.

• Cervero et al looked at a car share scheme in San Francisco and found members were less inclined to walk and cycle.

• Hodgson et al looked at a public awareness campaign in Maidstone, but found no statistically significant changes in the number of trips by each mode.

So, the evidence is rather thin.
What are possible ways to increase active travel?

- Encourage more walking and cycling
- Try to change travel behaviour
- Encourage alternatives to household car ownership (Harmer and Cairns have shown that car club members own fewer cars and walk and cycle more than other people)
- Try to reduce car use through land use planning
- Link the sustainable travel and health agendas
Encouraging more walking and cycling

• Cycling Demonstration
  Towns show that cycling can be increased, but at a cost
• London Bicycle Hire Scheme is seen as successful, but does not cover its costs

But: Any scheme that requires funding may be diverting money from better ways of spending it
  • The extra cycling may be people who already cycle cycling further rather than people who were not active taking up cycling
  • How do we increase walking?
Changing travel behaviour

• Charge for use of the road, e.g. congestion charging
• Increase the cost of fuel
• Pay-as-you drive vehicle insurance
• Manage car parking better (e.g. parking levy scheme starting in Nottingham in 2012).
• Incentives to change mode, e.g. Step2Get in Wimbledon to incentivise children to walk to school using swipe card technology
• Bicycle hire schemes like the one in London
• ‘Nudging’ (based on Thaler and Sunstein’s work): making the choice easy
Alternative methods of accessing cars

• Taxis, including shared taxis
• Conventional car rental
• Car clubs e.g. Streetcar
• One-way car rental e.g. Car2Go
• Neighbourhood car rental e.g. Whipcar
• Car sharing e.g. Car Share Devon

But, trips using urban car rental schemes may be short trips which could be walked or cycled
The costs of alternatives to owning a car

• Taxi: in London black cabs cost about £16.20 (or more) for a km journey
• Minicabs: about half the price
• Car rental (e.g. Hertz or Avis): about £80 a day plus fuel in London
• Car clubs (e.g. Streetcar): from £50 a day, including some fuel plus £59.50 a year
• Neighbourhood rental: from about £30 a day plus fuel
Reducing car use through land use planning

• Policies to make walking and cycling more accessible:
  – Physical integration, e.g. bicycle racks at stations
  – Building bus stops and cycle lanes near residential, employment and shopping areas
  – Mixed use developments

• Increasing residential densities

• Provide more local facilities e.g. shops

• Include travel costs of users when considering location of new hospitals, schools etc.
Linking the sustainable travel and health agendas

• Active travel helps address both the sustainable travel and the health agendas
• Active travel has many positive aspects: it is cheap, has few barriers to entry, and is politically acceptable
• But, there are significant differences between the approaches of transport and health professionals
## The transport and health fields

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Transport, physical activity and health

• A scanning study on transport, physical activity and health has been carried out at UCL with funding by DfT through the former UK Transport Research Centre (UKTRC)

• This included a review of the available evidence on the role of transport in increasing physical activity

• One objective was to make transport professionals more aware of work in the health field and health professionals more aware of work in the transport field

• The report will be out soon…
Conclusions

• Walking and cycling have declined since the War
• This is probably due to the growth in car use
• Recently, car use has levelled off, with cycling growing slightly, but walking is still declining
• Various aspects of modern life have interacted to encourage the long-term decline in active travel
• It is not clear which initiatives are effective at reducing car use
• But, the issue is too important to do nothing
• Various strategies are available, particularly for cycling; walking is more difficult
• The fields of transport and health should co-operate
Further information

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