Essential Evidence on a page - No. 7
Weight gain and car use

Adrian Davis 23/01/09

Many developed nations are in the grip of an obesity epidemic with far reaching consequences for society. Nearly one in four adults in England is obese and rates have trebled since 1980. Obese people are at significantly higher risk of ill-health and early death from a range of chronic diseases, principally type 2 diabetes, hypertension, cardiovascular disease including stroke, as well as cancer. Obesity can impair a person's well-being, quality of life and ability to earn. It has been estimated that nearly 60% of the UK population could be obese by 2050 on current trends. The economic implications are startling. By 2050, a seven-fold increase in the direct healthcare costs of overweight and obesity is anticipated, with wider costs to society reaching over £45.5 billion (at 2007 prices).[1]

Travel behaviour choices impact on body weight. Studies from across the world report an association of time spent in cars increasing risk of weight gain in contrast to time spent using active travel modes. In the UK a significant transfer from walking to car use has occurred over the past three decades as car ownership has risen. Comparing miles walked per year of main car users with those of adults in car-free households reveals a 'loss' of calorific expenditure through transferring from walking to main car user. Over a decade body weight could increase by 1 stone 13lbs, enough to move from 'healthy' to 'overweight' and a slide into obesity which tends among adults to occur over such a timeframe.[2]

Key findings from the literature are that:

- Countries with the highest levels of active travel generally have the lowest obesity rates[3]
- Mixed use developments, at high density, with good connectivity for walking and cycling significantly affects body weight and reduce the risk of weight gain[4]
- Time spent in cars as a passenger or driver is positively associated with obesity, and an additional 60 minutes per day in the car translates into an 6% odds of being obese[5]
- The purchase of motor scooters/motorcycles or cars to travel to work has been reported as doubling the likelihood of becoming overweight, in comparison to those that make no change in their mode of travel behaviour.[6]
- Similarly, there is a significant association with commuting to work by car and overweight or obesity compared with active travel modes and use of public transport.[7]

Conflict of interest declaration: Co-author of reference 7 report.

1 Foresight, 2007 *Tackling Obesities: Future Choices – Project Report*. London: Government Office for Science.
2Davis, A., Valsecchi, C., Fergusson, M. 2007 *Unfit for purpose: How car use fuels climate change and obesity*, London: Institute for European Environmental Policy.
3Bassett, D., Pucher, J., Buehler, R., Thompson, D., Crouter, S. 2008 Walking, cycling, and obesity rates in Europe, North America and Australia, *Journal of Physical Activity and Health*, 5: 795-814.
4Frank, L., Andresen, M., Schmid, T. 2004 Obesity relationships with community design, physical activity, and time spent in cars, *American Journal of Preventive Medicine*, 27(2): 87-96.
5 Ibid.
6 Bell, C., Ge, K., Popkin, B. 2002 The road to obesity or the path to prevention: Motorised transportation and obesity in China, *Obesity Research*, 10(4): 277-283.
7 Wen, L., Orr, N., Millett, C., Rissel, C. 2006 Driving to work and overweight and obesity: findings from the 2003 New South Wales Health Survey, Australia, *International Journal of Obesity*, 30(5): 782-786.