



To: Neighbourhoods and City Development

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Subject: Essential Evidence on a page: 82 Severance, social support and health

Top line: With an ageing population there is a strong case for ensuring that people are able to develop or at least maintain strong social support networks which are not damaged by prioritisation of motorised over pedestrian traffic.

Various studies have demonstrated the severance effect of motorised transport on communities – that there is a dose response – the greater the traffic volume and speed the lower the level of pedestrian street activity and the less the street functions as place as opposed to space for the movement of vehicles.^{1, 2} The study by Appleyard illustrated particularly clearly how numbers of friends and acquaintances reduced as traffic volumes and speed rose. Vulnerable groups, not least the elderly are likely to suffer disproportionately from traffic severance and any resulting reduction in social contact and social support which is dependent on independent mobility. Less attention has been given to connect the evidence of traffic severance with that of epidemiological³ evidence, which shows the importance of social contact and ties and friends and acquaintances to health and lifespan.

One of the most prominent studies to explore the relationship between social and community ties and lifespan was the Alameda County study in the USA.⁴ A follow-up study of Alameda County residents found that people who lacked social and community ties were more likely to die in the following follow-up period than those with more extensive contacts. The association between social ties and lifespan was found to be independent of self-reported physical health status, socioeconomic status, and lifestyle practices such as smoking, alcohol consumption, obesity, physical activity, and the use of health services.

The researchers examined four social relationships: marriage; contacts with close friends and relatives; church membership; informal and formal group associations. In each instance, people with social ties and relationships had lower death rates than people without such ties. The more intimate ties of marriage and contact with friends and relatives were stronger predictors than were the ties of church and group membership. To assess the cumulative effects and relationships, a Social Network Index was created based on the four sources of contact. For every age group examined, and for both sexes, people with many social contacts had the lowest death rates and people with the fewest contacts had the highest rates. More recent studies have confirmed these findings and added evidence that social activities among older people – that may entail little or no physical activity – have a positive impact on lifespan.⁵ Meaningful social activities reduce the harmful effects of stress by enhancing the body's immune response function.

¹ Appleyard, D. 1981 *Livable Streets*, University of California Press.

² Hine, J., Russell, J. 1996 The impact on pedestrian behaviour. 2 Assessing the traffic barrier on radial routes, *Traffic Engineering and Control*, 37(2): 81-85.

³ The WHO defines epidemiology as 'the study of the distribution & determinants of health-related states or events (including disease), & the application of this study to the control of diseases & other health problems'.

⁴ Berman, L., Styme, L. 1979 Social networks, host resistance, and mortality: A nine-year follow-up of Alameda County residents, *American Journal of Epidemiology*, 109: 186-204.

⁵ Glass, T. et al, 1999 Population based study of social and productive activities as predictors of survival among elderly Americans, *British Medical Journal*, 319: 478-482.