Green cities and health: a question of scale?

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Abstract

Background Cities are expanding and accommodating an increasing proportion of the world’s population. It is important to identify features of urban form that promote the health of city dwellers. Access to green space has been associated with health benefits at both individual and neighbourhood level. We investigated whether a relationship between green space coverage and selected mortality rates exists at the city level in the USA.

Methods An ecological cross-sectional study. A detailed land use data set was used to quantify green space for the largest US cities (n=49, combined population of 43 million). Linear regression models were used to examine the association between city-level ‘greenness’ and city-level standardised rates of mortality from heart disease, diabetes, lung cancer, motor vehicle fatalities and all causes, after adjustment for confounders.

Results There was no association between greenness and mortality from heart disease, diabetes, lung cancer or automobile accidents. Mortality from all causes was significantly higher in greener cities.

Conclusions While considerable evidence suggests that access to green space yields health benefits, we found no such evidence at the scale of the American city. In the USA, greener cities tend also to be more sprawling and have higher levels of car dependency. Any benefits that the green space might offer seem easily eclipsed by these other conditions and the lifestyles that accompany them. The result merits further investigation as it has important implications for how we increase green space access in our cities.