The influence of the Built Environment on Air Pollution Concentrations and Exposure in Neighborhoods

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Urban air pollution impacts the health of billions of city dwellers worldwide, increasing incidences of a wide range of diseases and conditions and shortening lifespans, even at relatively low concentrations. Even within a single urban area impacts vary widely, as the built environment combines with local meteorology, and the locations of pollutant sources result in large variations in pollutant concentrations. Here we will discuss some recent work determining the impact of barrier walls and vegetation around roadways (1, 2), the heights and spacings of buildings in neighborhoods (3, 4), and the location of pickup points for public transportation ("bus stops") on pollutant concentrations and human exposures to pollution (5).

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