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The link between obesity and the built environment. Evidence from an ecological analysis of obesity and vehicle miles of travel in California.

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AIMS: Obesity and physical inactivity are known to be risk factors for many chronic diseases including hypertension, coronary artery disease, diabetes, and cancer. We sought to explore the association between an indicator of transportation data (Vehicle Miles of Travel, VMT) at the county level as it relates to obesity and physical inactivity in California. **METHODS:** Data from the California Health Interview Survey 2001 (CHIS 2001), the US 2000 Census, and the California Department of Transportation were merged to examine ecological correlations between vehicle miles of travel, population density, commute time, and county indicators of obesity and physical inactivity. Obesity was measured by body mass index (BMI). Physical inactivity was based on self-reported behaviors including walking, bicycling, and moderate to vigorous activity. The unit of analysis was the county. Thirty-three counties in California with population size greater than 100,000 persons per county were retained in the analyses. **RESULTS:** CHIS 2001 statewide obesity prevalence ranged from 11.2% to 28.5% by county. Physical inactivity ranged from 13.4% to 35.7%. Daily vehicle miles of travel ranged from 3.3 million to 183.8 million per county. By rank bivariate correlation, obesity and physical inactivity were significantly associated ($p < 0.01$). Furthermore, by rank analysis of variance, the highest mean rank obesity was associated with the highest rank of VMT ($p < 0.01$). Similar rank patterns were observed between obesity and physical inactivity and commute time. Associations between VMT and physical inactivity were examined but failed to reach statistical significance. **CONCLUSION:** This analysis adds to the growing evidence supporting the association between VMT (a measure of automobile transportation) and obesity. An urban design characterized by over dependence on motorized transportation may be related to adverse health effects.

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