

Study: Curbing car travel could be as effective as cutting calories

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(Medical Xpress)—Those considering how to maintain a healthy weight during holiday festivities, or looking ahead to New Year's resolutions, may want to think twice before reaching for traditional staples like cookies or candy – or the car keys.

A new study by University of Illinois researchers, led by computer science and mathematics professor Sheldon H. Jacobson, suggests that both daily automobile travel and calories consumed are related to body weight, and reducing either one, even by a small amount, correlates with a reduction in [body mass index](#) (BMI).

"We're saying that making small changes in travel or diet choices may lead to comparable obesity reduction, which implies that travel-based interventions may be as effective as dietary interventions," said graduate student Banafsheh Behzad, a co-author of the study, published in the journal *Preventive Medicine*.

Obesity is a multidimensional problem with many social and medical factors, but maintaining body weight essentially is a result of energy consumed and energy expended. Other studies look at the two issues individually, or at a local or individual level, but Jacobson's group wanted to look at both sides of the equation through a national lens. As an outgrowth of previous work examining the relationship between driving and obesity, they decided to use driving as a proxy for physical activity.

"An easy way to be more physically active is to spend less time in an automobile. Any time a person sits behind the wheel of a car, it's one of the most docile activities they can do in a day," Jacobson said. "The automobile is the quickest mode of transportation we have. But a consequence of this need for speed in getting things done may be the [obesity epidemic](#)."

The researchers used publicly available data on national average BMI, caloric intake and driving habits. To capture the complexity in the relationship among the three variables, they developed a multivariable model showing how calories consumed and miles driven correlate with BMI.

They found that if all adults in the United States drove 1 mile less per day, the model predicted an associated decrease in the national average BMI by 0.21 kg/m^2 after six years. (The national average BMI in 2010, the most recent data available, was 27.55.) In comparison, reducing diet by 100 calories per day would be associated with reducing national average BMI by 0.16 kg/m^2 after three years.

"One mile is really not much," Behzad said. "If they would just consider even taking the bus, walking the distance to the bus stop could have an impact like eating 100 calories less per day. The main thing is paying attention to [caloric intake](#) and moving more, together, can help reduce BMI."

Even a modest decrease in BMI, like that predicted by the model, could represent significant cost savings. If drivers nationwide traveled 1 mile less by car each day, not only would fuel consumption fall, but annual health care costs could drop by billions of dollars as fewer people would be classified as obese or overweight, Jacobson estimates.

"The most important thing for people to learn from this study is that they

have a choice," Jacobson said. "One has to be just as careful about when you choose to drive as when you choose to eat. These small changes in our driving and dietary habits can lead to long-term significant changes in obesity issues. Those are the kind of changes we advocate."

More information: The paper, "Quantifying the association between obesity, automobile travel, and caloric intake," is available online:

www.sciencedirect.com/science/.../ii/S0091743512006007

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