



## Quiz Answer Sheet

1. People who live in sprawling neighborhoods walk (**B. Less**) than those who live in more dense neighborhoods.

Sprawling neighborhoods are usually built with car travel in mind with commercial, residential, and recreational spaces separate from each other. This separation increases the distance between destinations and makes it less appealing, safe and practical to walk or bike, thus encouraging personal automobile travel. Policies that improve walkability and mix land uses have also been found to increase community cohesion and perceptions of personal security.

2. The average person takes (**B. 2,000**) steps per mile.

The Surgeon General recommends at least 30 minutes of physical activity on all, or most, days of the week. Additionally, the Surgeon General supports more walking and cycling for transportation as an ideal approach to raising physical activity levels. The Centers for Disease Control and Prevention encourage walking 2 miles, or about 4,000 steps, in 30 minutes as an adequate exertion level to obtain health benefits and utilize 150 calories.

3. 41% of all trips made in the US are shorter than 2 miles, and 28% of trips are shorter than 1 mile. Americans use their cars for (**C.66%**) of trips up to 1 mile long.

While most Europeans make over 25% of urban trips using nonmotorized transportation, Americans use their cars for 66% of trips up to a mile long and 89% of trips between 1 and 2 miles long. A 2003 study found that walking and cycling are largely discouraged in the US by longer trip distances and an environment that has been built to make these travel modes inconvenient, unpleasant, and unsafe. A study by Pucher and Dijkstra found that pedestrians were 23 times and bicyclists were 12 times more likely than car occupants to be killed on the road. Improvements to pedestrian infrastructure and implementation of policies that support active commuters will improve safety and increase walking and bicycling mode share.

4. Parents driving (**B. Children to school**) comprise 20-30% of morning traffic congestion in urban areas.

The California Department of Public Health reports an interesting paradox: the more traffic increases the more parents decide it is unsafe for them to allow their children to walk or bike to school, and thus the more cars enter the roadways. The Safe Routes to School Program reports that only 10% of children regularly walk to school and only 2% regularly bike to school. Increasing rates of children actively commuting to school promises, among many other things, to reduce traffic congestion during commute times and increase children's physical activity.

5. Separation of land uses into residential, commercial, and industrial zones (**A. Increases**) travel distances.

A study using data from the National Personal Transportation Survey, found that doubling density decreases the vehicle miles traveled by 38 percent. Residents in higher-density housing make fewer and shorter auto trips than those living in low-density housing. Condo, apartment, and townhouse residents average 5-6 trips per day. Residents of low-density communities average 10 trips a day, with a trip defined as any time a car leaves or returns to a residence.

6. Consumers shown photos of retail streets with and without trees indicated that they were willing to pay nearly (**B. 12%**) more to shop on streets lined with trees than on treeless ones.

In addition to the benefits of trees in urban spaces as improving the air, providing shade, serving as decoration and enhancing the environment, studies also support other psychosocial benefits of the exposure to nature. Increased productivity in the workplace, reduced stressed, and improved cognition have each been linked to the exposure to plants. Well-landscaped businesses improve the consumer's impression of the quality of goods and level of service the store would offer, thus increasing the value they equate to the product.

7. Each daily additional hour spent in a car is associated with a (**A. 6%**) increase in the likelihood of obesity.

In this study, Dr. Lawrence Frank found that increasing the mixture of land uses in an area by 25% (from single use to multiple uses including residential, office, and retail in one zone) was associated with a 12.2% reduction in the likelihood of obesity among area residents. Increasing the time we spend in our cars not only increases our risk for obesity, but also increases our risk of traffic crashes and pedestrian injuries.

8. Traffic-calming measures and policy changes at the local level can increase pedestrian and bicycle travel. Traffic calming can be accomplished through: (**C. Islands, bends, humps, and roundabouts**)

Traffic calming solutions differ from other strategies to slow drivers because they leave the driver with no alternative other than to reduce vehicle speed. A study conducted by The American Journal of Public Health found that children living near traffic calming devices were 50% less likely to be hit and injured by an automobile in their neighborhood. Additionally, traffic calming efforts can reduce noise levels by 4-5 decibels and can result in more aesthetically pleasing streets, increased pedestrian activity, more green space, increased property values, and provide other financial and environmental benefits.

- Bonus:** Americans who use transit spend a median of (**B. 19**) minutes walking to and from transit daily.

29% of transit users are able to achieve the Surgeon General's recommended 30 minutes of daily physical activity solely by walking to and from transit. While we know increasing the use of public transportation in the US will decrease green house gas emissions and particulate matter which causes respiratory illnesses, increasing public transit access and use can also increase rider physical activity. By capitalizing on investments that simultaneously improve the environment and community health we will stretch our dollars and see the greatest return on the investments we make.

## Resources:

America Walks

Besser, L. M., Dannenberg, A. L., (2005). Walking to public transit: Steps to help meet physical activity recommendations. *American Journal of Preventative Medicine* 29 (4), 273–280.

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Frank, L. D. Lawrence D., MA Andersen, and T. L. Tom L. Schmid (2004). Obesity Relationships with Community Design, Physical Activity, and Time Spent in Cars. *American Journal of Preventive Medicine* 27 (2):87-96.\

Frank LD, Engelke P. *How land use and transportation systems impact public health: a literature review of the relationship between physical activity and built form*. Atlanta, Centers for Disease Control and Prevention, 2000

Haughey, Richard M. *Higher-Density Development: Myth and Fact*. Washington, D.C.: ULI—the Urban Land Institute, 2005.

Pucher, J. and Dijckstra, L. (2003). Promoting Safe Walking and Cycling to Improve Public Health: Lessons from the Netherlands and Germany. *American Journal of Public Health* 93 (9), 1509-1516.

Wolf, K. (2002). *Retail and Urban Nature: Creating a Consumer Habitat*, Reducing Health Complaints at Work: Proceedings of the People/Plant Symposium. Amsterdam, Netherlands: People/Plant Council.