

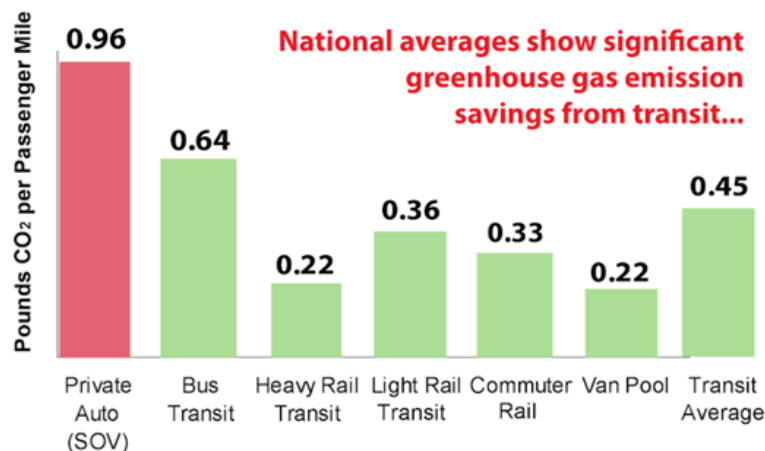
# ACTIVE TRANSPORTATION – Mindful Climate Action

Numerous considerations go into which mode of transportation we choose each day. And most people in the United States have multiple transportation options, however, the majority of people drive *alone* to work most days. On average Americans drive 13,500 miles per year.

So what does this mean in terms of environmental impact of driving cars in the United States? Especially in terms of climate change and greenhouse gas emissions?

The largest sources of transportation-related greenhouse gas emissions come from passenger cars and light-duty trucks, including sport utility vehicles, pickup trucks, and minivans. These sources account for over HALF of the emissions from the transportation sector.

Every gallon of gas burned releases ~24 pounds of CO<sub>2</sub> into the atmosphere. The average passenger car produces just under 1 pound of CO<sub>2</sub> per mile traveled, while on average, bus transit produces about 2/3 pound of CO<sub>2</sub> per mile. Below is a graph that compares pounds CO<sub>2</sub> emitted per passenger mile in a private automobile to other transportation options. Could one of these “green” options fit into your commute?



An alternative to driving or taking public transportation is known as **active transportation**, or **active travel**, bicycling or walking with the purpose of getting somewhere, not just for recreation.

Research from the University of Wisconsin –Madison has highlighted the co-benefits of using active travel instead of driving. Replacing half of our short car trips with bicycle trips during the warmest summer months in the 11 largest cities in the Midwest could result in reduction of mortality regionally by 1,295 deaths, 100,000s hospitalizations avoided, air quality improvement in downwind rural areas, combined regional benefits exceeding \$8.7 annually, in addition to reducing millions of tons of CO<sub>2</sub>.

Beyond greenhouse gas emissions, there are other ways that driving motor vehicles can affect the environment, specifically in the form of air pollution. It helps to understand what is leaving the tailpipe.

Some of the basic pollutants include: Fine Particulates (PM<sub>2.5</sub>), Particulates (PM<sub>10</sub>) (primary and secondary pollutants), Carbon Dioxide (CO<sub>2</sub>), Carbon Monoxide (CO) and Water vapor (H<sub>2</sub>O). Particulate Matter or (PM) is the term used for a mixture of particles and liquid droplets found in the air. PM<sub>10</sub> and PM<sub>2.5</sub> are inhalable particles that are either 10 micrometers or 2.5 micrometers in diameter. These particles are so small that they can be inhaled and cause serious health problems.

Along with reducing air pollution, there are substantial health benefits of driving less and using active transport. For instance, by walking or cycling more:

- Greater chances of meeting physical activity recommendations
- Reduces the risk of dying prematurely from heart disease,
- Reduces the risk of developing diabetes.
- Reduces the risk of developing high blood pressure *and* helps reduce high blood pressure.
- Reduces the risk of developing colon cancer.
- Reduces feelings of depression and anxiety.
- Helps control weight.
- Helps build and maintain healthy bones, muscles, and joints.
- Helps older adults become stronger and better able to move about without falling.
- Promotes psychological well-being.

U.S. cities with the highest rates of walking and cycling to work have obesity rates 20 percent lower, and diabetes rates 23 percent lower compared with U.S. cities with the lowest rates of walking and cycling.

Furthermore, People who went from another mode of transportation to walking or cycling reported improvements in their well-being – specifically they felt that they were able to concentrate more at work and were under less strain than when they traveled by car; people commuting by train or bus used the time to relax, read, or decompress before work.

Mindful Climate Action asks that you consider your options when it comes to transportation and incrementally pursue alternatives to driving. Try active transport 1 day a week to start. Or take public transportation or car pool 1 or 2 days a week, maybe ride your bike to the bus stop. Small changes undertaken by many can mean large benefits to individual health, air quality, and the global environment.

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