
Executive Summary

Americans spend more time than ever before inside of cars. We drive to work, we drive to the supermarket, we drive to the family vacation spot. If we are going somewhere, chances are good that we are driving. People in this country traveled more than 2.8 trillion miles by automobile in 1995, up half a trillion miles from five years earlier and nearly double the number of miles driven in 1965. Not only are people driving more miles, traffic and other roadway delays mean that it often takes more time to go a shorter distance. The average amount of time spent commuting to and from work has increased steadily since the 1980s, with a growing number of people now facing a daily drive time of thirty minutes or more each way.

Most people realize that there are risks associated with traveling by automobile—drunk drivers, road rage, and speeding tickets come to mind. The greatest concern of drivers stuck in traffic is most likely that they won't get to their destinations on time. Few people, however, are concerned about the health effects of the air quality inside of their cars. If their thoughts turn to the subject at all, they are more likely to consider air pollution an “outdoor” problem.

This unprecedented survey of international studies shows that air pollution may be even more severe inside of cars than out. The results of 23 separate scientific studies conducted during the 1980s and 1990s reveal that in-car air pollution levels frequently reach concentrations that may

threaten human health. The reports show that the air inside of cars typically contains more carbon monoxide, benzene, toluene, fine particulate matter, and nitrogen oxides than ambient air at nearby monitoring stations used to calculate government air-quality statistics. In-car pollution is often even worse than pollution in the air at the side of the road.

The air pollution accumulating in the interior of automobiles consists almost exclusively of gasoline and diesel exhaust. This toxic soup of gases, aerosols, and microscopic particles includes benzene (a known carcinogen), carbon monoxide (which interferes with the blood's ability to transport oxygen), particulate matter (which studies have associated with increased death rates), and a host of other hazardous chemicals.

Public health officials frequently issue warnings reported in local weather broadcasts when concentrations of auto pollutants exceed healthful levels in the ambient air. The air quality inside of cars is typically much worse. In-car benzene concentrations sometimes exceed concentrations in the roadside air by up to four fold. Carbon monoxide concentrations may be more than 10 times higher inside of cars than at the side of the road.

Elevated in-car pollution concentrations particularly endanger children, the elderly, and people with asthma and other respiratory conditions. While it receives little attention, in-car air pollution may pose one of the greatest modern threats to human health.

Recommendations

While individuals can take some actions to reduce in-car pollution levels—driving less, ensuring that their vehicles are properly maintained, and using public transportation whenever possible—the main burden falls on the shoulders of policymakers.

Initiatives to address this problem should include the following:

1). Federal, state and local governments must provide greater funding for public transportation projects, especially in cities plagued by high levels of traffic congestion. Tax incentives for individuals and employers should promote the use of public transportation, while tax breaks that encourage people to drive, including parking incentives, should be phased out.

2). The EPA must fix a major failing of its recent Tier 2 rule by requiring automakers to develop and sell zero-emissions alternatives to gasoline- and diesel-powered vehicles.

3). The California Air Resources Board must preserve its zero-emissions-vehicle mandate, which

comes up for review later this year. This provides the greatest incentive for automakers to actively develop and sell nonpolluting cars that do not contribute to in-car pollution problems.

4). Until EPA addresses the issue of alternative vehicles, states should opt to implement California LEV 2 emissions rules, including the ZEV mandate, rather than the federal Tier 2.

5). The EPA's final heavy duty vehicles/diesel rule, due out later this year, must include steep reductions of PM and NOX emissions outlined in the agency's proposed rule. The final rule must require 100% of diesel fuel to contain low sulfur levels (less than 10 ppm) by 2007. The agency must not give in to industry demands for a lengthened timeline or a phase-in of the low-sulfur fuel.

6). EPA must end its history of repeated delays and issue a tough mobile source toxics rule that will significantly reduce new cars' emissions of benzene, toluene, 1,3 butadiene, xylenes, ethylbenzene, and other VOCs. This rule should include federal incentives for the development of zero-emission vehicles.