



## Are you Fair to the Air you Breathe?

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We cause air pollution directly through our use of electricity, fuels, and transportation. We also cause air pollution indirectly, when we buy goods and services that use energy in their production and delivery. Most of this air pollution we cause results from the burning of fossil fuels, such as coal, oil, natural gas, and gasoline to produce electricity and power our vehicles.

### Impacts of Air Pollution

#### 1. Health Effects:

Exposure to emissions of lead, mercury, sulfur dioxide, particulate matter, carbon dioxide, and ozone-forming nitrogen dioxides are hazardous to public health. Toxic compounds, like mercury and

lead, poison organ systems and can lead to brain damage and death. In parts of the country where lakes and waterways have been contaminated with mercury from electric power plants, fish are no longer safe to eat because they, too, are contaminated with heavy metal pollutants. Other pollutants, like ozone and particulate matter, cause respiratory and other health problems, particularly in children and the elderly.

#### 2. Environmental Effects:

Climate change on a global scale has been attributed to increased emissions of carbon dioxide (CO<sub>2</sub>), a greenhouse gas. A global average temperature rise of only 1°C could have serious implications. Possible consequences include melting of polar ice caps; an increase in sea level; and increases in precipitation and severe weather events like hurricanes, tornadoes, heat waves, floods, and droughts. Indirect effects include increases in infectious disease, weather-related deaths, and food and water shortages. All these

effects put a stress on ecosystems and agriculture, and threaten our planet as a whole.

Other atmospheric effects of air pollution include urban smog and reduced visibility, associated with ozone-forming nitrogen oxides and volatile organic compound emissions. Sulfur dioxide and nitrogen oxides combine with water in the atmosphere to cause acid rain, which is detrimental to forests and other vegetation, soil, lakes, and aquatic life. Acid rain also causes monuments and buildings to deteriorate.

### 3. Economic Effects:

The effects of air pollution on human health and the environment have economic impacts. According to the Healthy People 2000 report, each year in the United States:

- The health costs of human exposure to outdoor air pollutants range from \$40 to \$50 billion.
- An estimated 50,000 to 120,000 premature deaths are associated with exposure to air pollutants.
- People with asthma experience more than 100 million days of restricted activity, costs for asthma exceed \$4 billion, and about 4,000 people die of asthma.

## The Link between Driving and Air Pollution.

Nowadays the main threat to clean air comes from car and road vehicle fumes. Cars and lorries burn petrol and diesel, giving off air pollutants like oxides of nitrogen and particulate matter. Air pollution affects people, plants and wildlife. This is why it can be more difficult for plants to thrive in city centres. Pollutants can also get into animals' food and water. Sulphur dioxide and nitrogen oxides can make water and soil more acidic (and therefore harmful to some plants and animals). This can also reduce the amount of plants that provide food and shelter, causing serious problems for other wildlife. Ozone can damage many types of plants, including farmed crops.

Air quality is in question still sometimes unacceptably high levels of pollution in some areas.

Cars and road vehicles pose the main threat to clean air, so it is important to cut down on the pollution they make. Tighter regulations and improved environmental technologies are continuing to reduce levels of air pollution nationally and internationally. Reducing unnecessary car journeys and choosing greener vehicles can help reduce the harmful health and environmental impacts of air pollution.

Some promising air-quality improvement efforts are described, as well as some personal strategies you can undertake to decrease the number of trips you take and the number of miles you drive.

## What You Can Do

There are many actions people of all ages can take to reduce their emissions including Green Driving Tips as follows:

### 1. Car Pool

Carpooling is one of the best solutions to the problem of expensive gas and is an excellent air pollution solution. Like any other venture that involves the participation of other people, you may need to agree on some things in advance in order to keep things running smoothly. A car pool can remove three to four vehicles from the road per day, and you'll want to continue this personal step in air pollution control for as long as possible.

### 2. Clean your trunk off junk

Your car burns gas for energy. It's food for the engine, which is what makes the car run. The more work the car has to do, the more energy it needs. It's sort of like how a marathoner needs to eat a lot more than a couch potato (though couch potatoes may beg to differ). This principle is already pretty clear to most people. It's why large SUVs have worse gas mileage than small cars. The added weight of the SUV makes the car work harder.

No matter what kind of car you drive, eliminating weight can go a long way toward increasing your car's fuel efficiency. Now, before you take a chainsaw to the bumper, there are probably less drastic steps you can take. Have a ski or bike rack on your car? Unless you're on your way to a ski trip or bike ride, take it off. That unused rack adds weight and wind resistance. And if you're like most people, you probably have some junk in your trunk. Clean it out. Sports equipment, strollers, gym bags and rock salt left over from winter driving are all hurting your fuel economy. The EPA estimates that for every extra 100 pounds your car carries, it loses 2 percent in fuel economy, so just by cleaning up your act, you can start on the road to saving.

### 3. Check the tire pressure

The weight your car is carrying around isn't the only thing that can affect your fuel economy. Your tires can, too. Proper tire maintenance is an often overlooked

way to increase your fuel economy. The easiest way to use your tires to save money is to make sure they're properly inflated. Tires that are underinflated negatively affect fuel efficiency. Imagine trying to roll a bean bag up a hill. It would take a lot of energy because it droops all over everything. In contrast, it's easy to roll a well-inflated ball up a hill. Like a ball, properly inflated tires have less contact with the road, which means they encounter less friction, so the engine doesn't have to work as hard to move the car.

If you want to get even more efficient, you can switch from regular tires to low rolling resistance tires. Low rolling resistance tires are harder than regular tires, so they encounter even less friction

#### 4. Take public transport !

A good solution for longer journeys may be public transport, since more people can be transported in a single vehicle. If you choose to take the car rather than the train or bus, for instance, you will generate several times more ozone pollution and up to 30 times more CO2 emissions.

#### 5. Walk or use the bike!

45 % of the ozone precursors and 38 % of the particulate matter emitted in Europe comes from transport. On average, one out of three journeys we do by car is only to go as far as 2 km. Replacing a car ride by walking or using the bicycle not only helps reduce traffic but also emissions.

#### 6. Petrol or diesel?

Knowing the difference between Petrol & Diesel can help you choose the right fuel for how you drive and minimize air pollution. If you drive more in town, where air quality is a consideration, a petrol engine may be a good choice. If you do a lot of long distance or motorway driving, consider a diesel engine for fuel efficiency and lower CO2 emissions.

7. Driving with the air conditioner turned on increases fuel consumption by 30 %; driving with windows open only increases it by 5 %.
8. Letting your car warm up while stationary can make it consume up to 50 % more fuel. If you start driving immediately, the engine will reach its working temperature quicker.
9. Using a roof rack on your car can increase fuel consumption by 20 to 30 %. Bicycles are better attached to the back of the car.

10. If you need to buy a car, be careful to check its fuel economy. With an environment-friendly car you will use less fuel and produce less exhaust fumes.

11. Drive Smart: Driving smart keeps pollution at a minimum:

Accelerate gradually, Use cruise control on the highway, Obey the speed limit, Keep your car tuned and support the Smog Check Program, Don't top off at the gas pump, Replace your car's air filter.

