

## Cars and Climate Change.

Scientists believe air pollution is heating up the globe, and automobile emissions are one of the major contributors. In our atmosphere, carbon dioxide traps solar energy, resulting in global warming. With more than 17.5 million vehicles traveling on Canadian roads, and each vehicle pumping out three times its weight in carbon dioxide every year, it's easy to see why automobiles are one of the biggest contributors to the climate change problem.

For this reason, it is very important to cut down on car usage. Leaving your car at home just one day a week keeps approximately 334kg of carbon dioxide from entering the atmosphere annually. Think how quickly that would add up if every car commuter did this. The harmful effects of global warming include increased rates of death and injury from more frequent extreme weather events such as floods, hurricanes and droughts. Higher temperatures also intensify urban air pollution, resulting in increased respiratory distress and other health concerns.

## Protect Yourself: A Message from the Ontario College of Family Physicians and the Canadian Association of Physicians for the Environment.

As physicians, we are dedicated to protecting and improving your health. We urge you to be proactive in your efforts to protect yourself from the hazards of smog.

- In the summer, listen to the radio for smog advisory warnings.
- When smog levels are high, avoid exercising outside.
- If you have chronic respiratory problems, asthma or heart disease, stay indoors at these times, and always make sure that you take your medication as prescribed by your doctor.

We also urge you to take action to reduce smog and make your air, our air, safer to breathe. Please follow the advice in this pamphlet and take action today to combat smog. It's our greatest hope for a cleaner and healthier tomorrow.

For more information on smog, read Pollution Probe's Smog Primer:  
[www.pollutionprobe.org/Publications/Air.htm](http://www.pollutionprobe.org/Publications/Air.htm)

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## See How Easy It Is To Join Us In The Fight Against Smog.



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CLEAN AIR. CLEAN WATER.

## What is Smog and How is it Formed?

The term “smog” was coined more than five decades ago to describe a mixture of smoke and fog in the air. Today smog refers to a noxious mixture of air pollutants, including vapours, gases and particles that can often be seen as a yellowish-brown haze in the air. Smog is formed when sources such as factories, power plants and vehicles release pollutants into the air. Heat and sunlight cause chemical reactions to take place between pollutants which form ground-level ozone, one of the principal components of smog. Particles of many different sizes are also found in smoggy air, the smallest of which remain suspended in the air and can travel for hundreds of kilometers. These particles are what give smog most of its color and affect visibility. Smog will usually remain in an area until a weather system, such as a heavy rainfall, washes the pollutants out of the air. High wind speeds can also help with better dispersion of pollutants.

## Smog and Your Health

Smog is a mixture of pollutants. When inhaled, its impact on human health varies depending on air pollutant levels, type of pollutants, and length of exposure, as well as factors such as age, weight, activity level and health status of those exposed to it. Certain groups of people are more at risk or vulnerable to smog, including the elderly, children, individuals with allergies, asthma, or other respiratory diseases, as well as healthy people exercising outdoors on a smoggy day.

The potential health effects of short-term exposure to smog can range from eye, nose or throat irritation to difficulties in breathing. Smog can also cause aggravation of respiratory or cardiac disease, and in some cases, premature death. When inhaled, ground-level ozone can inflame and damage the cells in your lungs. When you breathe in smoggy air, particles can stick to and irritate the sides of your airways or, if they are small enough, travel deep into the lungs where they become trapped and cause various health problems. Studies have shown that emergency room admissions increase whenever there is a high smog period. For more information on the health effects of air pollution, please visit Health Canada’s website at [www.hc-sc.gc.ca/air](http://www.hc-sc.gc.ca/air)

## Smog and Your Car

A large amount of air pollution comes from personal transportation. On average, each of the 17.5 million vehicles registered across the country emits approximately five tonnes of air pollutants and gases annually. While automobile manufacturers have made significant improvements in tailpipe emissions over the past two to three decades, particularly for cars and light-duty trucks, the ever-increasing number of vehicles on the road reduces these benefits. Moreover, the increasing shift towards purchases of sport utility vehicles (SUVs) and minivans is resulting in heavier, less fuel-efficient passenger vehicles. Also adding to

the smog problem is the “single occupant vehicle” which represents the most inefficient use of transportation energy. If more people carpoled and took public transit, particularly for commuting to work, transportation emissions would be dramatically reduced.

## Smog Alerts

The smog alert program was developed by the Ministry of the Environment and the Government of Canada to warn Ontario residents when unacceptably high levels of ground-level ozone, which is a major component of smog, are present or expected. Smog alerts are issued through the media – often during radio and TV weather forecasts – in the late afternoon of the day before an ozone episode is expected. When a smog alert has been issued, you can help by reducing your car use and riding public transit instead. As well, protect your health by limiting your outdoor exposure. For daily air quality index readings in Ontario, call 1-800-387-7768 or 416-246-0411. You may also visit [www.airqualityontario.com](http://www.airqualityontario.com) and the AIRNOW web site at [www.ec.gc.ca/air/ozone-maps\\_e.shtml](http://www.ec.gc.ca/air/ozone-maps_e.shtml) for hourly information on smog concentrations.

## What Can You Do?

The choices that individuals make every day can help to reduce smog. By taking these actions, everyone can play a part in making Canada’s air cleaner:

- **Take public transit:** On average, one passenger on public transit produces approximately 8 times less carbon dioxide than one driver in a car over the same distance.
- **Get active:** Walking, running, cycling and in-line skating are great ways to reduce harmful emissions and improve your health.
- **Fill your car with co-workers:** Carpooling saves wear and tear on your vehicle if you share carpooling duty. It also reduces fuel and parking costs.
- **Stay tuned:** Having your car’s emission control system checked regularly and keeping your tires properly inflated can reduce fuel consumption by up to 15%.
- **Avoid the rush:** Every year, more companies are moving toward telecommuting. Try to establish a telecommuting policy at your office and work from home a few days a week.
- **Don’t idle:** Just 10 seconds of idling consumes more fuel than restarting your engine.
- **Use cleaner fuels:** Choose a cleaner fuel such as an ethanol blend which works with ordinary automobiles and is widely available across Ontario.
- **Think hybrid:** When purchasing your next car, consider the new electric hybrid vehicles on the market which deliver high fuel economy and ultra low emissions without sacrificing driving range, convenience or driving performance. There are no plugs or special charging stations – you just treat it like a regular car.