

HEALTH EFFECTS
OF DIESEL AND
GASOLINE
EXHAUST

Emissions from diesel- and gasoline-powered vehicles and equipment are major sources of air pollutants in Canada, especially in large cities. The health effects of air pollutants from diesel and gasoline exhaust include:



Increased asthma symptoms



Increased allergy symptoms



Increased lung problems



Increased heart problems



Increased hospital admissions



Increased medical visits



Lung cancer



Premature death

AIR POLLUTION:
WHAT ARE DIESEL AND
GASOLINE EXHAUST?



Diesel and gasoline exhaust are mixtures of gases, particles, and many different chemicals. Some of the pollutants in diesel and gasoline exhaust that impact human health include nitrogen dioxide (NO₂), particulate matter (PM), and polycyclic aromatic hydrocarbons (PAHs). The make-up of diesel and gasoline exhaust is variable depending on fuel type, engine type, and operating conditions.

HOW ARE CANADIANS EXPOSED TO
DIESEL AND GASOLINE EXHAUST?

People's exposures to diesel and gasoline exhaust depend on:

- Mode of transportation (e.g. vehicle, bus, train, boat) and time spent in transit
- Time spent outside close to roadways
- Heavy traffic (e.g. major roads and highways) close to their home, school, and workplace
- Being close to transport hubs, including bus or train stations and marine ports
- Being close to or using diesel- or gasoline-powered equipment
- Weather conditions (e.g. temperature, wind, precipitation)

DID YOU KNOW?

You can help to reduce diesel and gasoline exhaust emissions by:

- Choosing alternate ways to travel, such as walking or cycling, public transit, or carpooling
- Avoiding unnecessary idling of your vehicle
- Maintaining your vehicles and equipment for optimal engine performance

HOW CAN I PROTECT MYSELF FROM DIESEL AND
GASOLINE EXHAUST AND AIR POLLUTION IN GENERAL?

Ways to reduce exposure:

- Avoid or reduce exercising near heavy traffic, especially during rush hour
- Choose low-traffic routes for walking, running, or cycling
- Exercise in parks and green spaces, away from major roadways
- Avoid or reduce strenuous outdoor activities when air pollution levels are higher

Know the best times to be active outdoors:

- Check the **Air Quality Health Index** in your community (airhealth.ca)
- If you have a heart or lung condition, talk to your health care professional about additional ways to protect your health when air pollution levels are higher

WHERE DO DIESEL AND
GASOLINE EXHAUST COME FROM?

Any vehicle or engine that uses diesel fuel produces diesel exhaust and any vehicle or engine that uses gasoline fuel produces gasoline exhaust. For vehicles and engines, exhaust is released from the tailpipe or muffler. Some examples of vehicles and engines that use diesel fuel or gasoline fuel include:

MAINLY DIESEL FUEL



Transport trucks



Buses



Ships



Trains



Generators



Construction



Mining



Agriculture

HEAVY EQUIPMENT

MAINLY GASOLINE FUEL



Cars, trucks and motorcycles



Boats



Lawnmowers



Chainsaws



Snowmobiles



All-terrain vehicles (ATVs)



Jet skis

WHAT ACTION IS THE GOVERNMENT
OF CANADA TAKING ON AIR
POLLUTION FROM DIESEL AND
GASOLINE EXHAUST?

Increasingly more stringent federal regulations have been introduced over time to reduce air pollutant emissions from diesel- and gasoline-powered vehicles and equipment. Reductions in emissions, from these regulations, are mainly due to:

- Improved engine performance
- Adoption of the latest emission control technologies
- Cleaner fuels, including fuels with low sulphur content

DID YOU KNOW?



Of all cars, trucks, and buses used in Canada, approximately 92% use gasoline and only 8% use diesel.

However, **diesel vehicles** contribute to greater than **50%** of some key air pollutant emissions from all on-road vehicles in Canada.

For more information on air pollution, please visit www.canada.ca/en/health-canada/services/air-quality.html or contact us at: HC.air.SC@canada.ca