

Diesel Exhaust Impacts

Diesel Engines Today

Diesel engines manufactured today are cleaner than ever before. But because diesel engines can operate for 30 years or more, many older diesel engines are still in use today.¹ In the U.S, diesel engines and vehicles make up around a third of the entire transportation fleet, and diesel is the predominant fuel used for shipping goods and moving freight.² Limiting exposure to exhaust from diesel engines can reduce health impacts from harmful pollutants.

What is Diesel Exhaust?

Diesel exhaust is what is emitted when diesel fuel is burned. These emissions contribute to air pollution, such as ground level ozone, and can affect human health and the environment.¹

Diesel exhaust contains, but is not limited to:

- Diesel particulate matter (DPM) – primarily made up of soot, carbon, ash, metallic abrasion particles, sulfates, and silicates.³
- Sulfur Oxides;
- Carbon Monoxide;
- Nitrogen Oxides; and,
- Other hazardous air pollutants (HAPS) and air toxics.³

Health Effects of Diesel Exhaust

Short term exposure to high concentrations can cause:

- Wheezing and difficulty breathing;
- Asthma and respiratory illness;
- Headache;
- Nausea;
- Dizziness, and;
- Irritation of the eye, nose and throat.³

Long-term exposure can cause:

- Potential increased risk of lung and bladder cancer.³



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Higher Risk Individuals

- The people with the greatest risk of health impacts from diesel exhaust are children and the elderly.¹
- Occupation and lifestyle can also create increased risk due to higher-than-average levels of diesel exhaust exposure. Examples include:
- Those who work around diesel engines, especially if they spend time in areas where the diesel exhaust can accumulate, such as high-traffic areas, warehouses, and garages.
- Those who drive or ride in diesel vehicles, such as school buses or heavy trucks.
- Those who live and/or work near a high-traffic corridor.³

How to Reduce Emissions and Limit Exposure to Diesel Exhaust:

For Everyone

- Reduce time spent near exhaust.
- Run engines outdoors or ensure proper indoor ventilation.²
- Limit idle times to manufacturer recommendations.⁵
- Replace older diesel engines with cleaner and/or more efficient engines.
- Regularly inspect and maintain engines.²

For Business and Fleet Managers

- Implement an anti-idling policy.⁵
- Use personal protective equipment, such as respirators, if working around diesel engines.

Contact Us

If you have further questions, please contact the Oklahoma Department of Environmental Quality's Air Quality Division at **(405) 702-4100**.

References

1. <https://tinyurl.com/3x5npue6>
2. <https://www.epa.gov/diesel-fuel-standards/about-diesel-fuels>
3. https://www.ccohs.ca/oshanswers/chemicals/diesel_exhaust.html
4. <https://tinyurl.com/4pu9datz>
5. <https://www.epa.gov/dera/school-bus-idle-reduction>