Diesel Engine Exhaust

Why am I being warned about potential exposure to diesel engine exhaust?

- Diesel engine exhaust is on the Proposition 65 list.
  - The International Agency for Research on Cancer (IARC) found that it is carcinogenic to humans and causes lung cancer. The US Environmental Protection Agency (US EPA) found that it is likely carcinogenic to humans. Other agencies made similar findings.
- California’s Proposition 65 requires businesses to warn people before exposing them to a significant amount of a chemical listed under Proposition 65 for cancer or reproductive toxicity.

What is diesel engine exhaust?

- Diesel engine exhaust is produced when engines, including those in vehicles and generators, burn diesel fuel.
- It is a mixture of thousands of chemicals released as gases or particles (soot).
- More than 40 chemicals listed for cancer are present in diesel engine exhaust. These include benzene, arsenic, formaldehyde, acetaldehyde, 1,3-butadiene, lead, and numerous polycyclic aromatic hydrocarbons (a class of chemicals created by burning fuels and other substances).

How does exposure to diesel engine exhaust occur?

- Exposure occurs by breathing in air containing diesel engine exhaust. Sources include diesel-powered motor vehicles, ships, trains, generators, and other diesel-powered equipment.
- Exposure also occurs through contact with diesel engine gases and exhaust particles, which may be absorbed through the skin or unintentionally ingested.

These contaminants may:
- Be present on the surface of diesel-powered vehicles and equipment.
- Enter vehicles, homes, and other structures, where they can settle on surfaces and be absorbed into dust particles.
Main ways you can be exposed to diesel engine exhaust:

- During pregnancy, some chemicals in diesel engine exhaust can pass from mother to baby.

How can I reduce my exposure to diesel engine exhaust?

- Always start and operate a diesel engine in a well-ventilated area.
- Avoid breathing in diesel engine exhaust. Whenever practical, do not stand next to operating diesel engines.
- Avoid idling diesel engine vehicles, where possible.
- Do not use diesel-powered engines in enclosed spaces.
- Do not modify or tamper with a diesel engine’s exhaust system.
- Install backup and portable diesel-powered generators well away from your home so that exhaust does not come in through open windows and doors.
- Consider replacing diesel-powered engines with alternatives such as engines powered by natural gas, propane, or electricity.
- Perform regular maintenance and frequent tune-ups of all diesel-powered equipment.
- When servicing or maintaining diesel-powered engines, prevent skin contact with exhaust by wearing gloves. Wash your hands when done, and before preparing food or eating.
- California restricts the use of certain types of diesel-powered vehicles. You can learn more about statewide diesel regulations from the [California Air Resources Board](https://www.arb.ca.gov).
For more information:

**General Fact Sheets and Resources**

- **California Environmental Protection Agency (CalEPA)\)**
  - California Air Resource Board (CARB)
  - Overview: Diesel Exhaust & Health
    - [http://www.arb.ca.gov/research/diesel/diesel-health.htm](http://www.arb.ca.gov/research/diesel/diesel-health.htm)

- **Office of Environmental Health Hazard Assessment (OEHHA)**
  - Health Effects of Diesel Exhaust
    - [http://oehha.ca.gov/air/health-effects-diesel-exhaust](http://oehha.ca.gov/air/health-effects-diesel-exhaust)
  - Diesel Particulate Matter
    - [https://oehha.ca.gov/calenviroscreen/indicator/diesel-particulate-matter](https://oehha.ca.gov/calenviroscreen/indicator/diesel-particulate-matter)

- **Biomonitoring California**
  - Diesel Exhaust Fact Sheet
  - Polycyclic Aromatic Hydrocarbons (PAHs)
    - [https://biomonitoring.ca.gov/chemicals/polycyclic-aromatic-hydrocarbons-pahs](https://biomonitoring.ca.gov/chemicals/polycyclic-aromatic-hydrocarbons-pahs)

- **American Cancer Society (ACS)**
  - Diesel Exhaust and Cancer Risk

**Scientific Information on Diesel Engine Exhaust**

- **California Environmental Protection Agency (CalEPA)**
  - Office of Environmental Health Hazard Assessment (OEHHA)
  - Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant. Executive Summary
  - Part B: Health Risk Assessment for Diesel Exhaust
    - [https://ww2.arb.ca.gov/sites/default/files/barcu/regact/dieseltac/partb.pdf](https://ww2.arb.ca.gov/sites/default/files/barcu/regact/dieseltac/partb.pdf)

- **World Health Organization (WHO)**
  - International Agency for Research on Cancer (IARC)
    - [http://monographs.iarc.fr/ENG/Monographs/vol105/](http://monographs.iarc.fr/ENG/Monographs/vol105/)

**Proposition 65**

- **California Environmental Protection Agency (CalEPA)**
  - Office of Environmental Health Hazard Assessment (OEHHA)
  - Proposition 65: Background
    - [https://www.p65warnings.ca.gov/faq](https://www.p65warnings.ca.gov/faq)
  - Proposition 65: The List of Chemicals
    - [https://www.p65warnings.ca.gov/chemicals](https://www.p65warnings.ca.gov/chemicals)
  - Proposition 65: Fact Sheets
    - [https://www.p65warnings.ca.gov/fact-sheets](https://www.p65warnings.ca.gov/fact-sheets)