

AIR

Health and Environmental Impacts of Diesel Exhaust

Pollution from older diesel engines has the potential to harm human health and the environment.

- Diesel exhaust contains pollutants that contribute to ozone formation (or smog), acid rain, and global climate change.
- Diesel exhaust contains significant levels of small particles, known as fine particulate matter. Fine particles are so small that several thousand of them could fit on the period at the end of this sentence. Fine particles from diesel engines contribute to haze which restricts our ability to see long distances.
- Diesel exhaust contains both carbon particulates and 40 chemicals that are classified as “hazardous air pollutants” under the Clean Air Act.
- Fine particles pose a significant health risk because they can pass through the nose and throat and lodge themselves in the lungs. These fine particles can cause lung damage and can also aggravate conditions such as asthma and bronchitis.
- According to EPA, particulate matter from all sources, especially fine particles, is responsible for thousands of premature deaths every year nationwide.
- EPA has determined that diesel exhaust is a likely human carcinogen. Diesel exhaust can also contribute to other acute and chronic health effects (see EPA’s Health Assessment Document for Diesel Exhaust).

Who is at Risk?

People with existing heart or lung disease, asthma or other respiratory problems are most sensitive to the health effects of fine particles. The elderly and children are also at risk.

How Are Children Affected?

Air pollution from diesel vehicles has health implications for everyone, but children are more susceptible to this pollution because they breathe at a faster rate than adults. Diesel fumes from idling school buses exacerbate asthma, allergies, and chronic bronchitis and contribute to a compromised immune system and cancer. More than 24 million children in the United States ride a bus to and from school every day.



According to the American Lung Association

- 9.2 percent of children in Oklahoma have asthma (about 80,000 children)
- One out of 13 school aged children in Oklahoma have asthma
- Children breathe 50 percent more air per pound of body weight than an adult, making their developing respiratory system especially vulnerable to air pollution.
- The average daily bus ride time for a student is one hour, during which time they may be exposed to 5-15 times the particulate pollution found along a roadside.