



Healthy Air Oregon Fact Sheet

Gasoline vapors include several substances considered toxic air including benzene, toluene, and a gasoline additive known as MTBE (methyl tertiary-butyl ether).

Benzene is the most dangerous pollutant in Oregon's air. Exposure to benzene vapors is linked to cancer, specifically leukemia and Non-Hodgkin's lymphoma. Children are at the highest risk for these diseases. Gas station attendants receive unhealthy levels of exposure while they do their work. A parent's exposure can also increase the risk of leukemia in the unborn child.

Toluene is considered a central nervous system depressant, and has been associated with cardiac arrhythmias and liver and kidney injury. It's also considered to be a developmental toxicant, meaning that it has the potential to affect fetal development.

The principal source of these hazardous emissions is automobile exhaust, particularly from idling and fueling activities at gasoline stations such as "topping off."

Facts About Idling

1. **Fact:** Idling for more than 10 seconds costs more than turning off your engine.
2. **Fact:** A recent study found that almost half (45%) of parents idle their vehicles while waiting to pick up their children.
3. **Fact:** Children are particularly vulnerable to air pollution - they breathe faster than adults and inhale more air per pound of body weight. (Health Fact: More than 5,000 Americans die prematurely each year because of air pollution.)

4. **Fact:** Service delivery vehicles spend 20-60% of their time idling, which costs fleet owners a lot of money.
5. **Fact:** Stopping unnecessary vehicle idling is one relatively easy way to contribute to improved air quality and respiratory health in our communities.
6. **Fact:** If every driver in the six Western states avoided idling for five minutes per day every day of the year, we would prevent more than 2.2 million tons of carbon dioxide from entering the atmosphere, the equivalent of removing 379,310 vehicles from the road.
7. **Fact:** If you, as one driver, reduced your engine idling by five minutes a day, every day of the year, you would save about 14.5 gallons of fuel worth about \$40. If every driver avoided idling for five minutes in one day our nation would save 660,000 million gallons of fuel worth more than \$1.8 million.
8. **Fact:** Contrary to popular belief, idling isn't an effective way to warm up your vehicle, even in cold weather. The best way to warm it up is to drive it. In fact, with today's engines, you need no more than 30 seconds of idling on winter days before you start to drive.
9. **Fact:** Excessive idling can damage the engine. An idling engine isn't operating efficiently, which means that fuel doesn't undergo complete combustion. This leaves fuel residues that can condense on cylinder walls, where they can contaminate oil and damage parts of the engine. Excessive idling can cause water to condense in the vehicle's exhaust, leading to corrosion and reducing the life of the exhaust system.
10. **Fact:** Idling can increase fuel consumption by 4 to 5 percent.
11. **Fact:** Human activities, particularly the combustion of fossil fuels, are a major source of greenhouse gas emissions. The transportation sector is the single largest source of greenhouse gas emissions. For every litre of gasoline used, the average car produces about 2.4 kilograms of carbon dioxide (CO₂), the principal greenhouse gas.

Facts About Topping Off:

Topping off is the practice of pumping gasoline into the gasoline tank after the shut-off valve has “clicked” off.

- Every time you pull up to the gas pump, gas fumes are in the air. A big part of what you smell is benzene. It enters the atmosphere any time gasoline goes from one tank to another.

- Topping off contributes to spillage. Spilling one ounce of gasoline from topping off a gas tank produces the same amount of volatile emissions as driving a car 56 miles.
- A single vehicle dropping off and picking up kids at school puts three pounds of pollution into the air every month.
- New cars have a vapor recovery system built in to the gas tank which keeps vapors from accumulating in the tank and greatly reducing the amount of benzene that escapes. Topping off can seriously damage this system and cause expensive repairs.
- Children who live in close proximity to gas stations have a dramatically higher rate of leukemia according to research published in *Occupational and Environmental Medicine*. A child currently living 100 meters from a gas station is exposed at levels above the DEQ health benchmark from the fumes released from refueling activities such as topping off and spilling gas.
- Contrary to many people's assumptions, topping off doesn't get you more gas nor does it get you better mileage. In fact, the gasoline that is pumped while topping off usually spills out or goes back into the dispensing hose. You are paying for gas you aren't actually using.

Prepared by Oregon Toxics Alliance
P.O. Box 1106
Eugene, OR 97440
541.465.8860
theteam@oregontoxics.org
www.HealthyAirOregon.org