

CLEARING THE AIR

OEC is working to reduce benzene emissions by promoting stronger laws and providing tips for Oregonians to reduce their exposure.



What Is Benzene?

Benzene is a clear, colorless, flammable liquid chemical formed from both natural processes and human activities. Benzene is a component in gasoline, diesel fuel and aviation fuel. Benzene is used to make plastics, resins and nylon. It is also used to make certain types of rubber, dyes, detergents, drugs and pesticides. Natural sources of benzene include volcanoes and forest fires.

Benzene Harms People

Benzene is a cancer-causing chemical linked to leukemia. Breathing benzene can cause drowsiness, dizziness and unconsciousness. Long-term benzene exposure affects bone marrow; can cause anemia, chromosomal damage and excessive bleeding; and makes the immune system more susceptible to infection. According to the World Health Organization, "no safe level of exposure can be recommended."

Benzene Endangers Children

Benzene is strongly linked to childhood leukemia and is known to cause developmental problems in children. Studies on animals suggest that benzene inhaled by pregnant women may result in low birth weights, delayed bone formation, and bone marrow damage in the child.

How Are People Exposed?

People are most commonly exposed to benzene by breathing automobile and truck exhaust. Air around fuel storage facilities, gas stations, hazardous waste sites, and industrial sites often has higher concentrations of benzene. Inhalation of cigarette smoke is also a major source of benzene exposure. Indoor exposure can come from contact with benzene-laced glues, paints, furniture wax, and detergents. Occasionally, people are exposed if they consume well water tainted by gasoline or oil.

Benzene Is an Oregon Problem

Benzene is one of the primary air pollutants contributing to cancer risk in Oregon. Oregon has some of the highest levels of benzene in the United States. Ambient levels and exposures are significantly higher in most areas of the state than levels considered safe by the Oregon Department of Environmental Quality (DEQ). In the Portland area, residents are twice as likely to develop cancer from breathing benzene than the nationwide average for cancer risk from benzene.

Benzene levels are high in Oregon because our gas comes from Northwest refineries that rely on crude oil naturally high in benzene. Thankfully, the national Environmental Protection Agency (EPA) recently decided to cap benzene levels in our gasoline. Benzene in gas will be reduced by approximately 70% by 2012. Under pressure from Northwest lawmakers and citizens, the rule, which was originally too lax when it came to Northwest refineries, will result in benzene levels in Northwest gasoline that are comparable to other parts of the U.S.

According to DEQ's 2002 emissions inventory, about 60% of out-of-doors benzene emissions were from engines burning gasoline or diesel (e.g., cars, trucks, snowmobiles, boats), and the rest were from small "area" pollution sources (e.g., wood stoves, fireplaces, prescribed slash burning and burning of residential garbage and yard debris).

FOR MORE INFORMATION

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Or visit our website: www.oeconline.org

WHAT YOU CAN DO

Protect Yourself

- Don't smoke.
- Avoid exposure to second-hand smoke.
- Keep children away from second-hand smoke.
- Drive less. Visit www.driveless.savemore.org for ideas.
- Don't idle your car unnecessarily.
- Keep your car properly maintained. Visit www.drivegreensavegreen.org for ideas.
- Choose a low-emission car, such as a hybrid or alternative fuel vehicle.
- Use a certified woodstove. Burn only clean, dry wood or compressed logs in your woodstove or fireplace.
- Don't burn garbage
- Select benzene-free glues, paints, furniture waxes and detergents.

Support Stronger Laws

Urge Local Leaders to Take Action

Call or write your local leaders—mayors, city administrators and other leaders in your area—to take these steps:

- Support transportation options that make it more convenient for Oregonians to drive less.
- Limit idling by heavy-duty diesel trucks, buses and off-road engines.
- Switch to cleaner burning fuels such as natural gas or wind-derived electricity.
- Ban backyard burning of residential garbage.

Urge State Lawmakers to Take Action

Encourage your state senator and representative to:

- Pass House Bill 2172, which will provide grants, loans and tax credits for the purchase of cleaner diesel engines, the scrapping of old diesel engines, and the upgrade of existing engines with clean diesel technology, with an emphasis on cleaning up school buses.
- Pass Senate Bill 338, which will provide grants and regulations to replace old, uncertified woodstoves with cleaner options that reduce benzene emissions by 25% compared to uncertified stoves.
- Pass House Bill 2210, which will result in greater use of cleaner, renewable fuels, including biodiesel and ethanol. According to the EPA Complex Model, a 10% ethanol blend in gasoline can reduce benzene emissions by 25% compared to conventional gasoline.

To find out who represents you in Salem, type in your address at www.leg.state.or.us/findlegsltr/findset.htm, or call your county elections office. You can find specific contact information at the same website, or you may leave a voicemail message for your legislator via the Citizen Access Line: 800-332-2313 or 503-986-1187.

In addition, the Environmental Quality Commission (EQC) should adopt a rule requiring “stage one” vapor control technology statewide. This technology captures benzene when fuel is transferred between tanker trucks and storage tanks. Benzene capture is currently only required in the Portland, Salem and Medford areas. To voice your support for EQC action, contact David Collier of the Department of Environmental Quality at (503) 229-5177 or David.Collier@state.or.us.