

## Benzene in Oregon's Air

Benzene is a toxic air pollutant that can cause serious health effects including cancer. Gasoline is the major source of benzene in Oregon. Other sources include wood smoke and cigarette smoke.

Currently, gasoline in the Pacific Northwest has a higher benzene content than in the rest of the country. In 2011 new EPA regulations limiting benzene content in the northwest gasoline supply should help reduce benzene levels in the air in Portland and statewide.

### Health effects of benzene

Current medical research demonstrates a clear link between health problems and repeated exposure to benzene.

Benzene exposure can cause cancer (primarily leukemia) and damage to the immune system and blood cell production. Benzene causes these health problems by interfering with the bone marrow's ability to produce blood cells.

Cancer is a disease caused by a complex combination of factors that are difficult to link back to a specific environmental pollutant. Many factors, both voluntary and involuntary, contribute to an individual's risk of cancer. In the United States, cancer rates are approximately 50 percent for males and 33 percent for females for all types of cancer.

### What is DEQ doing to reduce benzene in Portland's air?

Since 1999, DEQ and the Oregon Health Authority have worked collaboratively to develop the [Oregon's Air Toxics Program](#) to reduce benzene and other air toxics. In 2009, DEQ created the [Portland Air Toxics Solutions](#) project to work with local communities to develop an air toxics reduction plan for the Portland region. This plan will include strategies for reducing benzene to the health-based benchmark within 10 years.

DEQ's long-standing programs that reduce benzene and other pollutants in the Portland area include:

- Vehicle Inspection Program
- Industrial emission limits
- Out-door burn bans and restrictions
- Education projects including idling reduction and air pollution advisories



- Regulations that require Oregon gas stations, gasoline transporters, bulk tanks and terminals to have equipment to capture gas vapors and best practices to reduce accidental emissions
- A requirement for large employers to provide incentives for their employees to use transportation alternatives rather than commute alone in a car

DEQ's recently added programs that reduce benzene and other pollutants include:

- Regulations prohibiting gas station attendants from topping off vehicle fuel tanks during refueling
- A requirement for house sellers to remove old, polluting wood stoves

### What you can do to reduce benzene

There are many things people can do on their own to reduce benzene and other air toxics in the environment:

- Keep vehicles properly maintained
- Drive less
- Avoid unnecessary idling
- Use public transportation, carpool, bike or walk
- Switch to a natural gas fireplace
- Use certified woodstoves and burn only clean, dry wood or compressed logs
- Quit smoking
- Avoid exposure to second hand smoke

### Portland Air Toxics 2017 modeling study

The Oregon Health Authority and DEQ are concerned about any additional cancer burden. DEQ has a new, comprehensive study that estimates air toxics concentrations in the Portland region. The study projects what air toxics concentrations will be in the year 2017.



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The study estimates benzene levels will be up to 30 times over the benchmark in some locations in the Portland region in 2017. Oregon air toxics benchmarks are based on concentration levels that would result in a cancer risk of one in a million excess cancers based on a lifetime of exposure.

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**Alternative formats**

*Alternative formats (Braille, large type) of this document can be made available. Contact DEQ's Office of Communications & Outreach, Portland, at (503) 229-5696, or toll-free in Oregon at 1-800-452-4011, ext. 5696.*