



Iowa Department of Public Health Bureau of Environmental Health Services

Benzene Chemical Fact Sheet

Overview: Benzene is found in crude oil and in gasoline. Benzene is a chemical used in many industries. Because it is naturally occurring and part of so many products, benzene is found everywhere in the environment. Benzene is used to make plastics, resins, and synthetic fibers. It is also used to make lubricants, dyes, cleaning products, paint strippers, and pesticides. Car exhaust and wood burning stoves produce benzene. So does cigarette smoke.

How are people exposed to benzene?

The most likely way for someone to be exposed to benzene is by breathing in vapors from gasoline-type products or cigarette smoke.

Sometimes, benzene can get into water below ground. This can happen if gasoline leaks from where it's being stored into the ground. Leaking underground and above ground storage tanks can be common sources of groundwater pollution. Some of this groundwater may be used for drinking water.

To know if you've been exposed to a chemical, ask yourself the following questions:

1. Did I breathe it in?
2. Did I touch it?
3. Did I swallow it?

If you answered "no" to all three questions, you were not exposed.

How does exposure to benzene affect my health?

Breathing in high levels of benzene can cause drowsiness, headaches, and confusion. It can also cause unconsciousness, and even death in very high amounts.

Swallowing benzene can cause vomiting, stomach upset, and dizziness.

The health impact from exposure to benzene may vary from person to person.

In general, chemicals affect the same organs in all people who are exposed.

If you come in contact with a chemical, the amount and length of time can affect your reaction.

How you react to a chemical depends on:

- your health
- your genetics
- your previous exposure to chemicals (including medicine)
- your personal habits, such as smoking and drinking.

Does benzene cause cancer?

Benzene is known to cause cancer. Exposure to benzene for long periods of time has been linked with an increased risk of leukemia. This particular leukemia is called acute myeloid leukemia (AML).

How do I reduce my exposure to benzene?

- Do not breathe in gasoline vapors when you are filling your vehicle with gas.
- Store gasoline in air tight containers.
- Fill your gas powered equipment outside, away from your house or attached garage.
- Do not smoke in the home, in enclosed places, or near children.
- If you believe your drinking water well has been polluted with gasoline, stop using the water. Then get your water tested.

Are there regulations for benzene?

Water: The EPA has set the maximum not-to-exceed contaminant level of benzene in drinking water at 5 parts benzene per billion parts of water (5 ppb).

Air: No standards or regulations exist for the amount of benzene allowed in the air of homes. However, the Occupational Safety and Health Administration (OSHA)

has set a standard of an average exposure for an 8-hour day of 1 part benzene per million parts of air (1 ppm) within the workplace.

References:

Agency for Toxic Substances and Disease Registry (ATSDR). Benzene ToxFAQs.

This fact sheet summarizes information about this chemical and is not a complete listing of all possible effects. It does not refer to work exposure or emergency situations.

Who should I contact if I want more information?

- Poison Control Center: 800-222-1222
- Your local public health agency
- Iowa Department of Public Health



<http://idph.iowa.gov/>

- Iowa Department of Natural Resources



<http://www.iowadnr.gov/>