



Iowa Department of Public Health Bureau of Environmental Health Services

MTBE Fact Sheet

Overview: Methyl tert-butyl ether (MTBE) is a flammable liquid with a distinctive, unpleasant odor. MTBE is made from blending chemicals. Since the 1980s, it has been added to unleaded gasoline to achieve more efficient burning.

How are people exposed to MTBE?

Most people are exposed to MTBE from auto exhaust when driving or from gasoline while fueling their cars.

Individuals can be exposed to MTBE by

- Touching the skin or breathing contaminated air while pumping gasoline.
- Breathing exhaust fumes while driving.
- Breathing air near highways or in cities.
- Drinking, swimming, or showering in water that has been contaminated with MTBE.

People can be exposed to MTBE from groundwater pollution. This can happen if fuel leaks out from where it's being stored such as underground and above ground storage tanks.

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 MTBE affect my health?

Breathing small amounts of MTBE for short periods may cause nose and throat irritation. Some people have reported having headaches, nausea, dizziness, and mental confusion.

The health impact from exposure to MTBE 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.

How do I reduce my exposure to MTBE?

- Store gasoline in air tight containers to prevent evaporation into the air.
- Prevent spills when using or transporting gasoline.
- If you believe your drinking water well has been polluted with gasoline, stop using the water. Then get your water tested.

Does exposure to MTBE cause cancer?

There is no evidence that MTBE causes cancer in humans. MTBE has not been classified as causing cancer in humans.

However, studies have found that animals breathing high levels of MTBE for long periods have developed kidney or liver cancer.

Are there standards for regulating MTBE?

The EPA has not established a drinking water standard for MTBE. EPA has issued a drinking water advisory which states that concentrations of MTBE in the range of 20 to 40 micrograms per liter of water (20-40 µg/L) will not cause unpleasant taste and odor for most people. No adverse health effects are expected at levels of MTBE below 40 µg/L.

References:

Agency for Toxic Substances and Disease Registry (ATSDR). ToxFAQs for MTBE (1997).

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/>