



Ethylene Oxide

- Ethylene Oxide, or EtO, is a potentially harmful gas. It is also known as oxirane (pronounced oxy-rane).
- The most likely way for people to come in contact with EtO is by breathing it.
- The main health concern with breathing EtO over many years is an increased risk for developing blood and breast cancers.

What is EtO?

EtO is a man-made, flammable, colorless gas. It is mostly used to make other chemicals and for sterilizing sensitive medical equipment.

How could I come in contact with EtO?

- Contact with EtO mainly occurs by breathing it.
- Breathing high amounts of EtO is most likely to occur in workplaces using the chemical.
- Breathing EtO is also possible while living or working near industrial sites that use this chemical.
- EtO can be found in cigarette smoke, burning fuel, and in small amounts in food and skin-care products.

Can I smell EtO in the air?

You cannot smell low amounts of EtO in the air. It's possible you could be breathing in harmful amounts even when you do not smell it.

How long does EtO stay in my body?

EtO leaves the body quickly. Almost 90 percent of EtO is gone from the body two hours after breathing it in.

Is there a way to test for EtO in my body?

There are tests to estimate the current amount of EtO in your body. The tests are only useful for a very recent and high amount of exposure to EtO. Tests cannot tell you if breathing EtO has caused health problems or could cause them in the future.

How could EtO affect my health?

- Breathing EtO over many years, even at low amounts, may increase the risk of developing certain cancers including blood cancers (such as non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia) and breast cancer.
- Breathing EtO at very high amounts, most likely in the workplace, can lead to irritation of the eyes, skin, nose, throat, and lungs, as well as harm the brain and nervous system. When pregnant, breathing high amounts of EtO, most likely in the workplace, may lead to a miscarriage.
- As with most chemicals, your risk of health problems depends on how much EtO you breathed in, how long you were breathing it, and how your body reacts to it.

What if I am concerned about EtO?

- Having one of the health problems listed on this fact sheet does not mean that you have been exposed to EtO.
- Talk to your healthcare provider about your health concerns. Have annual wellness exams. Follow your healthcare provider's recommendations for medical tests and cancer screenings.



Want to know more?

To learn more about Ethylene Oxide (EtO) in your community, contact:

- Michigan Department of Health and Human Services
Environmental Public Health, 800-648-6942
- Michigan Department of Environmental Quality
Environmental Assistance Center , 800-662-9278



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