

Are Environmental Odors Toxic?



In general, most substances that cause odors in the outdoor air (environmental odors) are not at levels that can harm your health.

Even if environmental odors aren't at levels that can harm your health, they can still affect your quality of life.

An odor is caused by a substance in the air that you can smell. Odors, or smells, can be either pleasant or unpleasant. In general, most substances that cause odors in the outdoor air are not at levels that can cause serious injury, long-term health effects, or death. However, odors may affect your quality of life and sense of well-being. Sometimes environmental odors can affect entire communities.

You may have signs and symptoms when exposed to environmental odors, but the symptoms usually go away when the odor is gone.

Common Symptoms

Substances that produce odors can sometimes trigger physical symptoms. Symptoms usually occur when the substance is present at "irritation levels". However, you can sometimes have symptoms when the substance in air is below levels of irritation.

The most common symptoms from environmental odors are headache and nausea. Others include

- » **Dizziness**
- » **Watery eyes, stuffy nose, irritated throat**
- » **Cough or wheeze, especially if you have allergies, asthma, and other chronic lung problems**
- » **Sleep problems due to throat irritation and cough**

Environmental odors can also cause stress; you may feel anxious, helpless, discouraged, sad, or depressed.

The following conditions may trigger symptoms when odors are below irritation levels:

- » **If the odor has a very unpleasant smell**
- » **If you've had a previous bad experience with the odor**
- » **If you believe the odor is harmful**
- » **If you feel stressed by the odor**

These signs and symptoms may be from other causes as well. For example, watery eyes and a stuffy nose may also be related to seasonal allergies, and depression may be the sign of other stressful events or problems. As always, you should see a doctor if you have questions about signs and symptoms.

Sensitive Populations

Not everyone reacts to environmental odors the same way. In general, if you are young or female, you may be more sensitive to odors. If you don't smoke, you are usually more sensitive to odors than smokers. If you suffer from depression and anxiety disorders, or have migraines, allergies, asthma, and other chronic lung conditions, you may feel worse when you smell unpleasant odors over a long time.

Reducing Exposure to Odors

You can reduce your exposure to odors by

- » Exercising indoors during days with more environmental odors
- » Staying indoors when your allergies, asthma, and/or chronic lung problems are acting up
- » Leaving the area for a few hours if possible

Odor Control Solutions

Communities and industries can work together to control odors using

- » Odor control laws and ordinances
- » Odor control technologies

(Watch the Odor Control Solutions and Requesting Action videos on ATSDR's Environmental Odors website. For more information visit <http://www.atsdr.cdc.gov/odors/videos.html>).

You may come into contact with environmental odors in your community if you live near industries that produce odors or use materials that produce odors. The chart below provides a short list of industries or processes and the odor-producing substances related to them.

Industries or processes and the odor-producing substances related to them	
Production of semi-conductors, pharmaceuticals, textiles (e.g., fabric, printing, dyes), paper, rubber, fertilizer	Ammonia
Food processing plants, livestock feeding facilities, paper mills, and landfills	Hydrogen sulfide
Wood treatment facilities	Pentachlorophenol and creosote, hydrogen sulfide, sulfur oxides
Petroleum refineries	Hydrogen sulfide, sulfur oxides, benzene, toluene, xylene
Coal-fired power plants, vehicle exhaust	Formaldehyde, sulfur dioxide

For more information about environmental odors, please contact the Agency for Toxic Substances and Disease Registry (ATSDR) at 1-800-CDC-INFO (236-4636) or visit the environmental odors website: www.atsdr.cdc.gov/odors

