

Hydrogen Sulfide Patient Information Sheet

This handout provides information and follow-up instructions for persons who have been exposed to hydrogen sulfide.

What is hydrogen sulfide?

Hydrogen sulfide is an extremely rapidly acting, highly toxic, colorless gas with a rotten-egg odor. It is produced naturally by decaying organic matter and is released from sewage sludge, liquid manure, sulfur hot springs, and natural gas. It is used in several industries and is a by-product of many industrial processes such as oil refining, mining, and rayon manufacturing.

What immediate health effects can result from hydrogen sulfide exposure?

Even in small amounts, hydrogen sulfide has a strong rotten-egg odor. However, with continued exposure and at high levels, the poison may deaden a person's sense of smell. If the rotten egg odor is no longer noticeable, it may not necessarily mean that exposure has stopped.

After a serious exposure, symptoms usually begin immediately. At low levels, hydrogen sulfide causes irritation of the eyes, nose, and throat. Moderate levels can cause headache, dizziness, nausea, and vomiting, as well as coughing and difficulty in breathing. Higher levels can cause shock, convulsions, coma, and death. Generally, the more serious the exposure, the more severe the symptoms.

Can hydrogen sulfide poisoning be treated?

There is no proven antidote for hydrogen sulfide poisoning, but the effects of hydrogen sulfide can be treated and some exposed persons get well. Persons who have had serious exposures may need to be hospitalized.

Are any future health effects likely to occur?

A single small exposure from which a person recovers quickly is not likely to cause delayed or long-term effects. Moderate exposure can cause residual damage and a serious exposure that causes coma or convulsions may damage the brain and heart.

What tests can be done if a person has been exposed to hydrogen sulfide?

Specific tests for the presence of hydrogen sulfide in blood and urine generally are not useful to the doctor. If a severe exposure has occurred, blood and urine analyses and other tests may show whether the brain, nerves, heart, or kidneys have been injured. If hydrogen sulfide was inhaled, blood tests and a chest x-ray may be necessary to determine if the lungs have been injured. Testing is not needed in every case.

Where can more information about hydrogen sulfide be found?

More information about hydrogen sulfide can be obtained from your regional poison control center; your state, county, or local health department; the Agency for Toxic Substances and Disease Registry (ATSDR); your doctor; or a clinic in your area that specializes in occupational and environmental health. If the exposure happened at work, you may wish to discuss it with your employer, the Occupational Safety and Health Administration (OSHA), or the National Institute for Occupational Safety and Health (NIOSH). Ask the person who gave you this form for help in locating these telephone numbers.

Follow-up Instructions

Keep this page and take it with you to your next appointment. Follow *only* the instructions checked below.

- Call your doctor or the Emergency Department if you develop any unusual signs or symptoms within the next 24 hours, especially:
 - coughing, wheezing, difficulty breathing, or shortness of breath
 - chest pain or tightness
 - stomach pain, or vomiting
 - headache
 - increased redness or pain or a pus-like discharge in the area of a skin burn

- No follow-up appointment is necessary unless you develop any of the symptoms listed above.
- Call for an appointment with Dr. _____ in the practice of _____.
When you call for your appointment, please say that you were treated in the Emergency Department at _____ Hospital by _____ and were advised to be seen again in _____ days.
- Return to the Emergency Department/ _____ Clinic on (date) _____ at _____ AM/PM for a follow-up examination.
- Do not perform vigorous physical activities for 1 to 2 days.
- You may resume everyday activities including driving and operating machinery.
- Do not return to work for _____ days.
- You may return to work on a limited basis. See instructions below.
- Avoid exposure to cigarette smoke for 72 hours; smoke may worsen the condition of your lungs.
- Avoid drinking alcoholic beverages for at least 24 hours; alcohol may worsen injury to your stomach or have other effects.
- Avoid taking the following medications: _____
- You may continue taking the following medication(s) that your doctor(s) prescribed for you: _____

- Other instructions: _____

- Provide the Emergency Department with the name and the number of your primary care physician so that the ED can send him or her a record of your emergency department visit.

- You or your physician can get more information on the chemical by contacting: _____
_____ or _____, or by checking out the following Internet Web sites: _____; _____.

Signature of patient _____ Date _____

Signature of physician _____ Date _____