

Hydrogen Sulfide (H₂S) Awareness

What Is Hydrogen Sulfide?

Hydrogen sulfide (H₂S) is a toxic, potentially deadly gas that is formed in nature when organic materials decay. Hydrogen sulfide is also a by-product of various industrial and chemical processes.

It is colorless. It smells like rotten eggs and is sometimes called sour gas, swamp gas or sewer gas. **Even though it has a distinct odor, it can instantly inhibit your sense of smell so that you cannot detect it.**

Hydrogen sulfide is heavier than air, so you should expect to find it in low areas, especially sewer lines, pits and cellars.

If you ignite hydrogen sulfide, the fire will flash back to the source of the gas.

Health Effects

Since hydrogen sulfide can impair your sense of smell, the first indication you may notice is burning or irritation of the eyes, throat and respiratory tract. This may cause you to cough, have a metallic taste in your mouth, cause your eyes to burn or water, give you a headache, and make you feel sleepy.

Hydrogen sulfide is both an irritant and a chemical asphyxiant and poses several health effects, such as:

- Temporary loss of your sense of smell
- Metallic taste
- Headache
- Labored breathing
- Unconsciousness
- Asphyxiation (can cause brain damage, cardiac arrest even death)

<u>IMPORTANT:</u> In high concentrations, hydrogen sulfide can cause IMMEDIATE unconsciousness followed by death.
--

What Protection Should I Use?

Your employer may require tests to check the atmosphere where hydrogen sulfide may be present.

Use atmosphere-supplying respirators like SCBAs and air-line respirators that provide clean air from a bottled source or breathing air compressor.

Escape-only air packs may be available for you to use **ONLY** when exiting a toxic atmosphere.

You should receive additional training about respiratory protection, a fit test and a medical evaluation BEFORE you use any respiratory equipment.

What Should I Do?

You should receive training about the emergency response plan for your employer and location.

If you suspect hydrogen sulfide is present:

1. ENSURE YOUR OWN SAFETY.
2. Call for assistance.
3. Wear an atmosphere-supplying respirator (NOT an escape-only air pack).
4. Move the victim to a safe area with fresh air.
5. Begin cardiopulmonary resuscitation (CPR).
6. Get professional medical care for the victim as soon as possible.

Do NOT attempt a rescue unless you are qualified to wear respiratory protection and perform rescue tasks.