Hydrogen Sulfide Stats and Facts

FACTS

1. 170 to 300 ppm is the maximum concentration that can be endured for 1 hour without serious consequences.
2. Olfactory fatigue occurs at 100 ppm.
3. 50 to 100 ppm causes mild conjunctivitis and respiratory irritation after 1 hour.
4. 500 to 700 ppm may be dangerous in 0.5 to 1 hour.
5. 700 to 1,000 ppm results in rapid unconsciousness, cessation of respiration, and death.
6. 1,000 to 2,000 ppm results in unconsciousness, cessation of respiration, and death in a few minutes.
7. Hydrogen sulfide toxicity is uncommon, but potentially deadly. Toxicity is predominantly in new workers and co-worker fatalities occur in a significant minority of cases.

STATS

- Hydrogen sulfide is one of the leading causes of workplace gas inhalation deaths in the United States. According to the Bureau of Labor Statistics (BLS), hydrogen sulfide caused 60 worker deaths between 2001 and 2010.
- A review of the United States Bureau of Labor Statistics (USBLS) Census of Fatal Occupational Injuries (CFOI) for occupational deaths related to hydrogen sulfide. Fifty-two workers died of hydrogen sulfide toxicity in this 7-year period.
- Deaths were most commonly reported in workers who were white (85%), male (98%), and in their first year of employment with the company (48%). Common industries included waste management, petroleum, and natural gas. In 21% of cases, a co-worker died simultaneously or in the attempt to save the workers.

- Inhaling carbon monoxide 2014 led to the most fatalities during this time period (116 fatal injuries) followed by inhaling hydrogen sulfide (46 fatal injuries).
- Of the fatal single episode inhalations of chemicals and chemical products from 2011 through 2017, 37 percent occurred in a confined space (110 fatal injuries). All fatal single inhalations of methane gas involved a confined space (9 fatal injuries).
- Number of fatal work injuries from exposure to chemicals and chemical products in a single inhalation episode, 2011–17 were in 2011 there were 52 deaths caused by hydrogen sulfide, in 2012 were 33, in 2013 were 39, in 2014 were 55, in 2015 were 43, in 2016 were 34 and in 2017 there were around 41 deaths as a result of chemical exposure.