Health Effects* from Inhalation of Hydrogen Sulfide

Short-term Exposure
(less than 14 days)

Effects in Animals  Effects in Humans

Approximate Air Level**
(parts per billion)

1,000,000
nervous system failure

100,000
respiratory failure, unconsciousness
lung damage
loss of sense of smell
nose, throat and lung irritation, headache, dizziness, loss of sleep and appetite

10,000
OSHA*** Workplace Standard (15 min)
eye irritation
chemical changes in lung, decreased ability to fight infection

1,000
chemical changes in brain

100
chemical changes in blood and muscle

count

10
odor threshold

1
NYS ambient air standard (1 hr)

* Effects are listed at the lowest level with a significant increase in those effects. They are likely to occur at higher levels.
** Length of exposure varies for different studies
*** Occupational Safety and Health Administration
Health Effects* from Inhalation of Hydrogen Sulfide

Long-term Exposure
(14 or more days)

Effects in Animals

Effects in Humans

Approximate Air Level**
(parts per billion)

1,000,000

increased reports of
headache, irritability, memory
loss, fatigue, dizziness, eye and
respiratory irritation,
gastrointestinal disorders in an
occupational setting

100,000

OSHA*** Workplace
Standard (8 hr.)

10,000

decreased body and
brain weight, eye and
skin irritation, nasal
inflammation

1,000

increased complaints of eye, throat and lung
irritation, nausea, breathing difficulties, cough,
headache, fatigue, sleep loss, weight loss,
and chest pain in communities near hydrogen
sulfide sources

100

chemical, cellular and
electrical activity changes
in brain during development
(maternal exposure)

10

Workers exposed to hydrogen sulfide may have
decreased lung function and increased risk of impaired
neurological function (memory, reaction time, color
discrimination, balance and mood) and spontaneous
abortion. Residents living near industrial hydrogen sulfide
sources have an increased risk of lung and eye symptoms
and neurological effects similar to workers.

Hydrogen sulfide exposure levels associated with these
effects are unclear, but may often be below the OSHA 8-
hour standard. Other chemical exposures may have
contributed to these effects.

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** Length of exposure varies for different studies

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