
Information and recommendations for patients

- Exposed or intoxicated patients do not pose a significant risk of secondary contamination.
 - Ingestion of 30 ml ethylene glycol or more can cause severe systemic toxic effects, in particular central nervous system depression. Dosage of approximately 100 ml ethylene glycol may result in death.
 - Ethylene glycol is slightly irritating when it comes in contact with the eyes, skin, and upper respiratory tract causing redness and tearing of the eyes, coughing, defatting and inflammation of the skin.
 - Inhalation of the aerosol or ingestion of the liquid may result in significant systemic toxicity. Skin absorption is poor.
 - Ethylene glycol intoxication can be treated by the administration of ethanol. If conscious after ingestion of ethylene glycol, the adult patient should immediately drink alcoholic beverages, e.g. 150 ml of whiskey/brandy.
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Substance information

Ethylene glycol (HOCH₂CH₂OH), CAS 107-21-1

Synonyms: 1,2-dihydroxyethane, 1,2-ethane diol, 2-hydroxyethanol

Ethylene glycol is, at room temperature, a colorless, odorless, viscous, hygroscopic liquid (boiling point 198°C, 387°F, respectively). Ethylene glycol is soluble in water, ethanol, and acetone, little soluble in ether, and insoluble in oil, fat, and hydrocarbon halogens.

Ethylene glycol is widely used as a solvent, an antifreeze and hydraulic fluid, as a softener, dehydrating agent and as an intermediate in chemical production.

What immediate health effects can result from exposure to ethylene glycol?

Ingestion of ethylene glycol may result in damage to the kidneys and cause agitation, dizziness, nausea, vomiting and abdominal cramping. Drowsiness, elevated blood pressure, rapid heart rate and rapid breathing are typical clinical features of poisoning. Larger amounts can cause gasping, irregular heartbeats, seizures, loss of consciousness, and even death. Generally, the more serious the exposure is, the more severe the symptoms. The lethal dose can be as little as 100 ml. Severe signs or symptoms of intoxication may be preceded by an asymptomatic latent period of 1 to 4 hours.

Ethylene glycol is slightly irritating when it comes in contact with the eyes, skin, and upper respiratory tract causing redness and tearing of the eyes, coughing and, dryness (defatting) and inflammation of the skin. Ethylene glycol intoxication can be treated by special antidotes and hemodialysis, inhibiting the formation of toxic metabolites

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. Immediately treated intoxication usually does not result in permanent damage. After serious exposures, permanent dysfunction of the central nervous system may persist.

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:
 - dizziness, agitation, nausea, vomiting, abdominal cramping
 - increased heart rate, breathing difficulties
 - decreased amount of urine
- () 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; alcohol may worsen your clinical condition.
- () Avoid taking the following medications: _____

- () You may continue taking the following medication(s) that your doctor(s) prescribed for you: _____

- () Other instructions: _____

Signature of patient _____ Date _____
Signature of physician _____ Date _____

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