
Information and recommendations for patients

- Patients exposed only to epichlorohydrin vapor do not pose a significant risk of secondary contamination. Patients whose clothing or skin is contaminated with liquid epichlorohydrin can secondarily contaminate rescue and medical personnel by direct contact or through evaporation of epichlorohydrin.
 - Epichlorohydrin can produce eye, skin, and respiratory tract irritation. Signs of accumulation of fluid in the lungs (shortness of breath, cyanosis, expectoration, cough) may evolve 12 hours or more after exposure. Skin reactions may be delayed and may heal very slowly.
 - Inhalation and skin contact may result in systemic absorption resulting in headache, nausea, vomiting, abdominal pain, lung, liver, and kidney damage.
 - There is no antidote to be administered to counteract the effects of epichlorohydrin. Treatment consists of supportive measures.
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Substance information

Epichlorohydrin (C₃H₅ClO), CAS 106-89-8

Synonyms: 1-chloro-2,3-epoxypropane, 3-chloro-1,2-epoxypropane, 1-chloropropenoxide, 3-chloropropenoxide.

Epichlorohydrin is a colorless and flammable liquid at room temperature (boiling point 116°C, 241°F, respectively) with an odor comparable to chloroform. However, dangerous exposures may occur at levels too low to smell. Epichlorohydrin vapor may form an explosive mixture with air and is heavier than air; exposure will be higher in enclosed, poorly ventilated, or low-lying areas. It is slightly soluble in water.

Epichlorohydrin is used in the manufacture of epoxy and phenoxy resins, glycerol, surface active agents, pharmaceuticals, insecticides, coatings, adhesives, solvents, and other chemicals. It is used as a solvent in the rubber and paper industry.

What immediate health effects can result from exposure to epichlorohydrin?

Most exposures to epichlorohydrin occur from breathing the vapor. Exposure to small amounts can cause eye, nose, and throat irritation. More serious exposure can cause severe breathing difficulty which may not develop for as long as 24 hours after exposure. Skin contact with epichlorohydrin vapor or liquid may cause irritation with redness of the skin, blistering, itching, and pain. Skin reactions may also be delayed and may heal very slowly.

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. After a severe exposure, symptoms may not develop for 24 hours, and permanent breathing difficulty, recurrent respiratory tract infections, liver or kidney damage may result. The reverse side of this page lists some signs and symptoms to watch for- if any of them occur, seek medical care. Epichlorohydrin may cause cancer in the case of high and long-term exposure.

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 or wheezing
 - difficulty breathing or shortness of breath
 - increased pain, itching, or a discharge from exposed skin or eyes
 - blister formation on the skin
 - stomach pain, vomiting, diarrhea
- () 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 _____

References

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