

Phosgene - Information on Options for First Aid and Medical Treatment

Background:

The American Chemistry Council (ACC) Phosgene Medical Task Group consisting of physicians from industry with input from academia and public health agencies developed these guidelines to help better assess, support, and treat workers who may be exposed to phosgene.

Key Points:

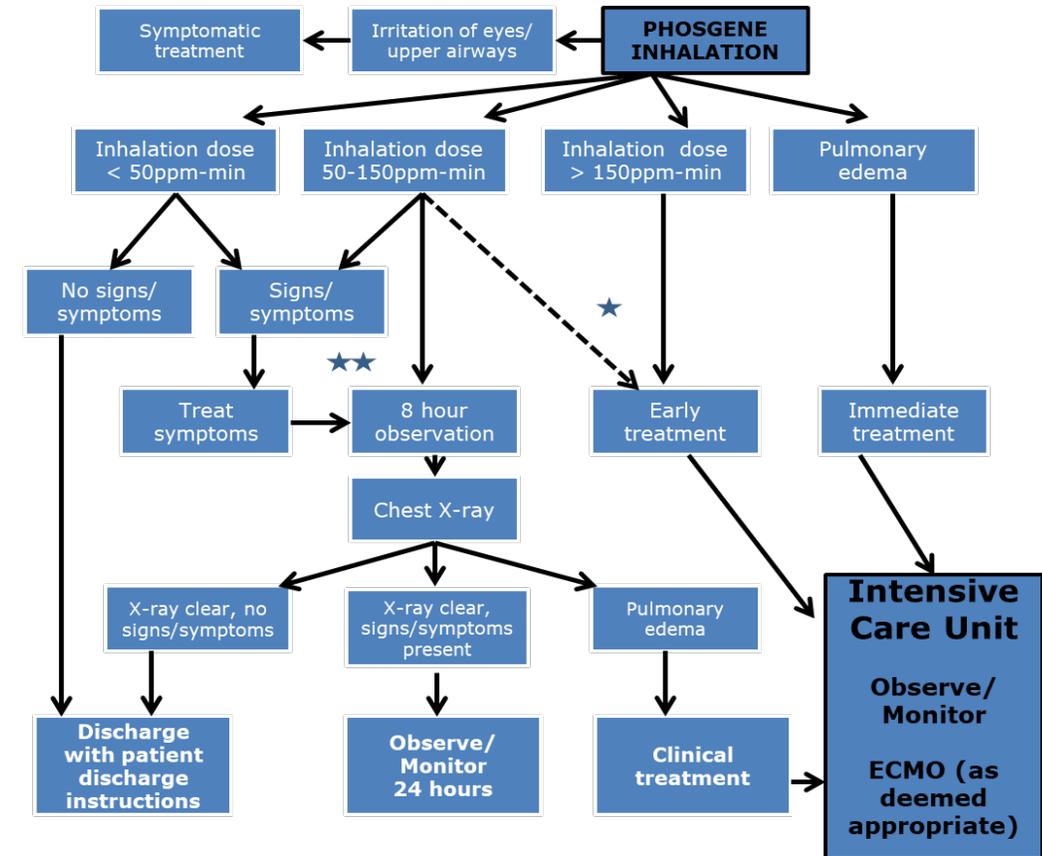
- Medical evaluation and treatment is dependent on type and level of exposure
- Health effects from exposure can include, but are not limited to, the following:
 - **Subjective Effects** - Such as headache, nausea and anxiety; believed to be due to the person experiencing the event and not a direct effect of the chemical. Treatment generally symptomatic.
 - **Irritant Effects** – Dictated by concentration of exposure, measured in ppm. May include such symptoms as irritation of the mucous membranes & upper airway; generally present immediately after the exposure and usually resolve relatively quickly. Treatment generally symptomatic.
 - **Pulmonary Effects** – Dictated by exposure level, measured in ppm-min. May include symptoms consistent with pulmonary edema. These symptoms are latent (delayed), starting hours after the exposure and are related primarily to the exposure dose.
- Exposures levels: < 50ppm-min-no clinical pulmonary effects expected; 50 – 150 ppm-min-Pulmonary edema unlikely; 150 ppm-min or > - Pulmonary edema probable; 300 ppm-min or > - Life threatening edema expected
 - If exposure unknown - consider as a significant exposure (>150ppm-min) - evaluate & treat accordingly
- Prolonged respiratory effects are not expected after phosgene exposures <150 ppm-min

For Additional Details & Full Reference:

<http://www.americanchemistry.com/ProductsTechnology/Phosgene/PDF-Phosgene-Information-on-Options-for-First-Aid-and-Medical-Treatment.pdf> or contact Erin Dickison at erin_dickison@americanchemistry.com or 202 249 6740.

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Treatment Decision Tree



- ★ If information (such as a badge) to estimate the actual exposure is not available or not clear, or if there is liquid phosgene or phosgene in solvent exposure to the facial area, then it would be prudent to assume that an exposure of 150 ppm-min or greater occurred.
- ★★ The dotted line indicated that treatment at levels as low as 50ppm-min may be considered. **Note:** The exposure level at which treatment is warranted is undetermined.
- ★★★ For inhalation doses <50 ppm-min only significant, especially respiratory symptoms need to be observed for 8 hours, and not minor irritant or subjective symptoms.

Notes: "Early Treatment" options when indicated (before pulmonary edema develops), may include sedation, steroids, positive airway pressure ventilation & *N*-acetylcysteine. Extracorporeal Membrane Oxygenation (ECMO), as a support option, is a consideration for life threatening pulmonary edema.