
Formaldehyde

Patient Information Sheet

This handout provides information and follow-up instructions for persons who have been exposed to formaldehyde or formalin.

What is formaldehyde?

Formaldehyde is a nearly colorless, highly irritating gas with a sharp odor. It dissolves easily in water and is found in formalin (a solution of formaldehyde, water, and methanol). Formaldehyde is used in the manufacture of plastics; urea-formaldehyde foam insulation; and resins used to make construction materials (e.g., plywood), paper, carpets, textiles, paint, and furniture.

What immediate health effects can result from formaldehyde exposure?

Formaldehyde can cause irritation of the eyes, nose, and throat, even at low levels for short periods. Longer exposure or higher doses can cause coughing or choking. Severe exposure can cause death from throat swelling or from chemical burns to the lungs. Direct contact with the skin, eyes, or gastrointestinal tract can cause serious burns. Drinking as little as 30 mL (about 2 tablespoons) of formalin can cause death. Formate, a formaldehyde metabolite, can cause death or serious systemic effects. Generally, the more serious the exposure to formaldehyde, the more severe the symptoms. Previously sensitized persons may develop a skin rash or breathing problems from very small exposures.

Can formaldehyde poisoning be treated?

There is no antidote for formaldehyde, but its effects can be treated, and most exposed persons get well. Patients who have had a serious exposure (with signs and symptoms such as tearing eyes, running nose, or severe or persistent coughing) may need to be hospitalized. Patients with direct exposure to very concentrated vapors or liquid or who have swallowed formalin may require intensive hospital treatment and may experience long-term effects.

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, some symptoms may not occur for up to 18 hours. See *Follow-up Instructions* for signs and symptoms to watch for. If any of them occur, seek medical care. Long-term, repeated exposure to formaldehyde in the workplace may cause cancer of the nasal passages.

What tests can be done if a person has been exposed to formaldehyde?

Specific tests for the presence of formaldehyde in blood or urine may be available, but the results generally are not useful to the doctor. If a severe exposure has occurred, blood and urine analyses and other tests may show whether the lungs have been injured or if systemic effects are possible. If seizures or convulsions have occurred neurobehavioral toxicity testing may be necessary. Testing is not needed in every case.

Where can more information about formaldehyde be found?

More information about formaldehyde can be obtained from your regional poison control center; your state, county, or local health department; the Agency for Toxic Substances and Disease Registry (ATSDR); your doctor; or a clinic in your area that specializes in occupational and environmental health. If the exposure happened at work, you may wish to discuss it with your employer, the Occupational Safety and Health Administration (OSHA), or the National Institute for Occupational Safety and Health (NIOSH). Ask the person who gave you this form for help in locating these telephone numbers.

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, difficulty breathing or shortness of breath
 - chest pain, irregular heart beats
 - increased pain or a discharge from your eyes
 - increased redness or pain or a pus-like discharge in the area of a skin burn or other wound
 - fever
 - unexplained drowsiness, fatigue, or headache
 - stomach pain, vomiting, or 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 for at least 24 hours; alcohol may worsen injury to your stomach or have other effects.

Avoid taking the following medications: _____

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

Other instructions: _____

• Provide the Emergency Department with the name and the number of your primary care physician so that the ED can send him or her a record of your emergency department visit.

• You or your physician can get more information on the chemical by contacting: _____
_____ or _____, or by checking out the following Internet Web sites: _____; _____.

Signature of patient _____ Date _____

Signature of physician _____ Date _____