

Hydrogen Fluoride Patient Information Sheet

This handout provides information and follow-up instructions for persons who have been exposed to hydrogen fluoride gas or hydrofluoric acid solution or vapor.

What is hydrogen fluoride?

Hydrogen fluoride is a colorless, highly irritating gas with a pungent odor. It dissolves easily in water to form hydrofluoric acid. Consumer products that contain hydrogen fluoride include rust removers, water-spot removers, and chrome cleaners.

What immediate health effects can be caused by exposure to hydrogen fluoride?

Most poisonings occur when hydrogen fluoride gets on the skin or in the eyes. Concentrated hydrogen fluoride solutions can cause severe, deep, and disfiguring burns. Absorption of the chemical into the body can cause the heart to beat irregularly, leading to death. Exposure to dilute solutions (less than 20% concentration) may cause few or no symptoms at first, but may cause severe pain later. Drinking hydrofluoric acid can cause severe burns to the throat and stomach and even death. Injury can also occur from breathing hydrogen fluoride gas or the vapor from concentrated hydrogen fluoride solutions. Breathing high concentrations of hydrogen fluoride vapor can cause rapid death from throat swelling or from chemical burns to the lungs.

Can hydrogen fluoride poisoning be treated?

Patients who have experienced serious symptoms, such as severe or persistent coughing or skin or eye burns, may need to be hospitalized. Calcium- or magnesium-containing medicines may be used to treat the skin, and doctors may inject calcium-containing medicines into burned areas or into the blood. If hydrofluoric acid is swallowed, a solution containing calcium or magnesium may be given.

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, you may not notice any symptoms for up to 36 hours. Scarring may result from skin contact with hydrogen fluoride.

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

The doctor may order blood tests, urine tests, chest x-ray, and heart monitoring to see whether damage has been done to the heart, lungs, or other organs. Testing is not needed in every case. If hydrogen fluoride contacts the eyes, the doctor may put a special dye into the eyes and examine them with a magnifying device.

Where can more information about hydrogen fluoride be found?

More information about hydrogen fluoride or hydrofluoric acid 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.

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:
 - difficulty breathing, shortness of breath or wheezing
 - hoarseness, high-pitched voice, or difficulty speaking
 - chest pain or tightness
 - any skin changes, discharge, or increased pain where skin is burned
 - stomach pain, vomiting, or diarrhea
 - increased pain or a discharge from exposed eyes

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 _____