

Blister Agents
Nitrogen Mustard (HN-1, HN-2, and HN-3)
Patient Information Sheet

This handout provides information and follow-up instructions for people who have been exposed to nitrogen mustards.

What are nitrogen mustards?

Nitrogen mustards are compounds that were initially developed as chemical warfare agents or pharmaceuticals. They have never been used on the battlefield. HN-2 has been used in chemotherapy.

What immediate health effects can be caused by exposure to nitrogen mustards?

Nitrogen mustards cause injury to the skin, eyes, nose and throat. Eye damage may occur within minutes of exposure. Nausea and vomiting also may occur shortly after exposure. Skin rashes, blisters, and lung damage may develop within a few hours of exposure but may take 6 hours or more. Nitrogen mustards can also suppress the immune system.

Can nitrogen mustard poisoning be treated?

There is no antidote for nitrogen mustard, but its effects can be treated and most exposed people recover. Immediate decontamination reduces symptoms. People who have been exposed to large amounts of nitrogen mustard will need to be treated in a hospital.

Are any future health effects likely to occur?

Adverse health effects, such as chronic respiratory diseases, may occur from exposure to high levels of these agents. Severe damage to the eye may be present for a long time following the exposure.

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

There are no routine tests to confirm exposure.

Where can more information about nitrogen mustard be found?

More information about nitrogen mustards can be obtained from your regional poison control center; the Agency for Toxic Substances and Disease Registry (ATSDR); your doctor; or a clinic in your area that specializes in toxicology or occupational and environmental health. Ask the person who gave you this form for help 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:

- coughing, wheezing, shortness of breath, or discolored sputum
- increased pain or discharge from injured eyes
- increased redness, pain, or a pus-like discharge from injured skin
- fever or chills

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 _____