

## **Phosphine Patient Information Sheet**

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

### **What is phosphine? How are phosphides related?**

Phosphine is a toxic gas that has no color and smells like garlic or fish. A serious exposure to phosphine could occur, however, even if a person does not smell it. Phosphine is used widely in the semiconductor industry. Phosphine may be encountered in grain storage silos where it has been used as a fumigant, or zinc phosphide has been put down as a rat poison.

Certain pesticides containing zinc phosphide or aluminum phosphide can release phosphine when they come in contact with water or acid. The phosphine formed in the stomach when these solid phosphides are swallowed can result in phosphine poisoning.

### **What immediate health effects can be caused by exposure to phosphine?**

Exposure to even small amounts of phosphine can cause headache, dizziness, nausea, vomiting, diarrhea, drowsiness, cough, and chest tightness. More serious exposure can cause shock, convulsions, coma, irregular heartbeat, and liver and kidney damage. Generally, the more serious the exposure, the more severe the symptoms.

### **Can phosphine poisoning be treated?**

There is no antidote for phosphine, but its effects can be treated, and most exposed persons get well. Persons who have experienced serious symptoms may need to be hospitalized.

### **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 usually begin immediately but might not appear for 72 hours or more.

Some severely exposed persons have experienced long-term brain, heart, lung, and liver injury.

### **What tests can be done if a person has been exposed to phosphine?**

There are no specific blood or urine tests for phosphine itself. Breakdown products of phosphine can be measured in urine, but the result of this test is generally not useful to the doctor. If a severe exposure has occurred, blood and urine analyses and other tests may also show whether the brain, lungs, heart, liver, or kidneys have been damaged. Testing is not needed in every case.

### **Where can more information about phosphine be found?**

More information about phosphine and phosphides 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:
  - coughing or wheezing
  - difficulty breathing or shortness of breath
  - chest pain or tightness
  - headache, dizziness, tremor, or double vision
  - difficulty walking
  - nausea, vomiting, diarrhea, or stomach pain

- 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 \_\_\_\_\_