

## **Barium**

### **Patient Information Sheet**

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

#### **What is barium?**

Barium is a silvery-white to yellowish odorless metal that is found in nature primarily as barium sulfate or barium carbonate. Other barium compounds (barium acetate, barium chloride, barium hydroxide, barium sulfide) are manufactured from naturally-occurring barium compounds. Relatively water-soluble barium compounds (barium acetate, barium chloride, barium hydroxide, barium sulfide) and acid-soluble barium carbonate are a health concern. Barium sulfate is used in drilling muds. Insoluble barium sulfate has been safely used as an x-ray contrast material of the gastrointestinal tract, including barium enemas. Barium sulfate and other barium compounds are used in a variety of manufactured products.

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

High level inhalation or oral exposure to barium or soluble barium compounds may result in gastrointestinal effects (gastric pain, nausea, vomiting, and diarrhea), followed by hypokalemia (a reduction in blood potassium levels) that can result in ventricular tachycardia, hypertension and/or hypotension, muscle weakness, and paralysis.

#### **Can barium poisoning be treated?**

There is no antidote for barium, but its effects can be treated and most exposed persons get well. Seriously exposed persons may need to be hospitalized.

#### **Are any future health effects likely to occur?**

Barium-induced health effects appear quickly following high-level acute exposure. Symptoms usually resolve soon after exposure ceases. Chronic exposure may result in kidney damage.

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

Doctors can measure barium in body tissues and fluids, such as bones, blood, urine, and feces, using very complex instruments. These tests may not be available and have limited value in treating the acute effects of barium exposure.

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

More information about barium 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, wheezing, difficulty breathing, shortness of breath, or chest pain
- gastrointestinal discomfort
- irregular heartbeat or abnormal blood pressure
- muscle weakness or paralysis
- persistent eye or skin irritation

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 \_\_\_\_\_