

Sulfur Dioxide (SO₂) Patient Information Sheet

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

What is sulfur dioxide?

Sulfur dioxide is a colorless gas that has a strong, stinging odor. It has many industrial and agricultural uses. Most sulfur dioxide comes from burning fossil fuels containing sulfur and is a major part of air pollution. It is shipped and handled as a compressed gas in a special container. Some foods and wines are preserved with small amounts of sulfur dioxide that are safe for most people.

What immediate health effects can be caused by exposure to sulfur dioxide?

Inhaling sulfur dioxide causes irritation to the nose, eyes, throat, and lungs. Typical symptoms include sore throat, runny nose, burning eyes, and cough. Inhaling high levels can cause swollen lungs and difficulty breathing. Skin contact with sulfur dioxide vapor can cause irritation or burns. Liquid sulfur dioxide is very cold and can severely injure the eyes or cause frostbite if it touches the skin. Some people with asthma who are sensitive to sulfites might have an asthma attack if they eat foods preserved with sulfur dioxide or other sulfur-containing chemicals.

Can sulfur dioxide poisoning be treated?

There is no antidote for sulfur dioxide, but its effects can be treated and most exposed persons recover completely. Persons who have inhaled large amounts of sulfur dioxide might 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 serious exposure, damage to the lungs can occur, causing asthma, pneumonia, and bronchitis. Permanent damage to the lungs is possible.

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

Specific tests for the presence of sulfur dioxide in blood or urine are not generally useful. If a severe exposure has occurred, blood analyses, x-rays, and breathing tests might show whether the lungs have been injured. Testing is not needed in every case.

Where can more information about sulfur dioxide be found?

If the exposure happened at work, you might be required to contact your employer and the Occupational Safety and Health Administration (OSHA).

Employees may request a Health Hazard Evaluation from the National Institute for Occupational Safety and health (NIOSH).

More information about sulfur dioxide 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. 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:

- eye, nose, throat irritation
coughing or wheezing
difficulty breathing or shortness of breath
chest pain or tightness
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 _____