

# OSHA FactSheet

## Severe Acute Respiratory Syndrome (SARS) An overview of worker protection issues

### SARS: Description and Concerns

SARS is a severe viral illness that was first reported in Asia in February 2003. The illness is characterized by a variety of symptoms including fever, cough, shortness of breath. In a minority of patients (6-9%), SARS may even progress to death. SARS has been reported in North America among persons returning from travel to Asia, among health care workers, and among others in contact with individuals with SARS. Because new outbreaks may occur, workers should be aware of the recommended measures to prevent occupational SARS infection.

### Transmission

SARS is spread primarily by close contact with a SARS patient or contact with respiratory secretions/body fluids from a SARS patient.

Transmission from contaminated objects has been reported. The incubation period is typically between two and seven days.

### Signs and Symptoms

SARS presentation is typical of a respiratory viral illness. Patients usually present with a high fever (>100.4 F), cough, chills and headache. Most will progress to develop pneumonia and some will even require mechanical ventilation.

### Diagnosis and Treatment

In the United States, the Centers for Disease Control and Prevention (CDC) classifies patients as either suspect or probable cases, depending on symptoms, history of exposure or other evidence of disease. A number of serological and other testing methods are being developed, including those to detect evidence of a newly identified SARS-associated coronavirus (SARS-CoV). Antiviral agents, steroids and other treatment options have been used to treat SARS patients with varying success; some SARS patients have required ventilator support.

### Workplace Policies and Procedures

OSHA and the CDC have published SARS-related guidance for several occupational settings. Both

agencies emphasize the need to prevent occupational transmission of SARS through early recognition, work procedures and engineering controls.

Early Recognition involves knowing the signs and symptoms of SARS and appropriately isolating affected individuals. Symptomatic workers should seek medical attention immediately and receive medical clearance prior to returning to the worksite. When seeking healthcare for a possible diagnosis of SARS, symptomatic individuals should alert the healthcare facility so that proper precautions can be taken. Patients suspected of SARS infection should wear a surgical mask and have appropriate isolation to prevent the spread of infection. Healthcare workers with an unprotected high-risk exposure to SARS should be excluded from duty for 10 days after exposure.

Work Procedures to prevent the spread of disease include frequent hand cleansing and avoiding direct contact with body fluids of SARS patients. Personal protective equipment (PPE) is appropriate in healthcare facilities and certain occupational settings, such as airline clean-up, when SARS infection is a known risk. Staff should not sort soiled linens suspected of SARS contamination at the point of use. Laundering soiled linens in warm water and detergent has been advised. Compressed air should not be used for cleaning areas where SARS patients or their body fluids were present.

Engineering Controls include use of airborne isolation rooms or negative air pressure environments for aerosol generating procedures (e.g. sputum induction in SARS patients) and handling laboratory specimens in biological safety cabinets.

### Protective Equipment for Healthcare Facilities

Healthcare workers face a real risk of acquiring SARS through their jobs and the precautions recommended for them are stringent. To prevent transmission of SARS in healthcare settings, PPE appropriate for standard, contact and airborne precautions, in addition to eye protection, is recommended for all contact with SARS infected patients. Standard precautions include hand washing. Contact precautions include the use of gown and gloves for contact with the patient or the patient's environment. Airborne precautions include the use of a respirator approved by the National Institute for Occupational Safety and Health (NIOSH) (see below).

PPE is only effective if used correctly. SARS infection in health care workers has been reported in locations where infection control precautions were not followed and PPE was not appropriately used. Special attention should be given to the use of disposable PPE (or proper disinfection of re-usable PPE) and proper donning and doffing procedures to prevent the spread of infectious particles through PPE use.

### Respirator Considerations for Healthcare Facilities

Respirators should be used in the context of a complete respiratory protection program in accordance with OSHA regulations. Appropriate respirators are NIOSH approved and are at least as effective as N-95. Hood or helmet powered air-purifying respirators (PAPRs) provide protection for workers who have fit limitations (e.g. facial hair). PAPRs and higher levels of respirator protection (e.g. full face piece) have been used during certain aerosol-generating procedures. Although surgical masks provide protection for large droplets, they are not adequate protection against airborne or aerosol particles.

Due to documented transmission through contaminated objects, disposable respirators and other PPE should be discarded after use. Reusable respirators should be decontaminated after each use according to manufacturer recommendations. Removal of PPE should minimize the potential for self-contamination and workers should be educated on standard procedures. Hand cleansing is necessary following the removal of PPE.

### Additional Information

The OSHA web site (<http://www.osha.gov/dep/sars/index.html>) provides further information. More detailed guidance for specific settings, case definitions and clinical recommendations are available on the CDC SARS website (<http://www.cdc.gov/ncidod/sars>).

**This is one of a series of fact sheets highlighting U.S. Department of Labor programs. It is intended as a general description only and does not carry the force of legal opinion. This information will be made available to sensory impaired individuals upon request. Voice phone: (202) 523-8151. TDD message referral phone: 1-800-326-2577.**

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