
Severe acute respiratory syndrome (SARS)

Summary

- Severe acute respiratory syndrome (SARS) is a potentially fatal type of pneumonia caused by an unidentified organism.
 - It isn't known how infection occurs, but it is thought to spread person-to-person through close contact.
 - Treatment options include medications and supportive care, such as mechanical ventilation to assist breathing.
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Severe acute respiratory syndrome (SARS) is a type of pneumonia, or infection of the lungs, that can cause illness or death. It is caused by a virus called the SARS-associated coronavirus (SARS-CoV). Currently, there is no vaccine available, although research is ongoing. Treatment options include medications and supportive care, such as mechanical ventilation to assist breathing.

SARS global outbreak contained

SARS was first recognised as a potentially serious worldwide health problem in February 2003. Between November 2002 and July 2003, more than 8,000 probable SARS cases (774 of them fatal) were reported from 29 countries, with most cases in China, Hong Kong, Taiwan, Singapore and Canada. Only one SARS case was confirmed in Australia and there was no evidence of transmission within the community. There is currently no known SARS transmission anywhere in the world. There is always a risk that SARS could re-emerge, however, and the Australian Government continues to monitor the situation closely.

Symptoms of SARS

The symptoms of SARS can include:

- Fever – greater than 38 °C
- Chills
- Headache
- Malaise – lacking energy and feeling unwell
- Body aches and pains
- Stiff muscles
- Loss of appetite
- Diarrhoea – in 10 to 20 per cent of infected people
- Confusion
- Skin rash
- Dry, non-productive cough, which develops two to seven days after initial onset of symptoms
- Breathing difficulties such as breathlessness.

SARS affects lung function

Your lungs are filled with thousands of tubes (bronchi) that end in smaller sacs called alveoli. Each alveolus has a fine mesh of capillaries. This is where oxygen is added to the blood and carbon dioxide is removed. Most people infected with the SARS virus develop pneumonia, which causes the alveoli in one or both lungs to fill with pus and fluids, making breathing difficult. A person with SARS has a dry, non-productive cough, which may get so bad that the lungs can no longer deliver enough oxygen to the blood. Mechanical ventilation (breathing helped by a machine) is then needed.

SARS may be spread by personal contact

It isn't clear exactly how SARS infection occurs, but the virus is thought to spread person-to-person through close contact. Close contact can occur when someone is caring for, or living with, a person with SARS and they come into contact with their body fluids (for example, the droplets produced when an infected person coughs or sneezes). It may also be possible to catch the virus if you touch a surface or object contaminated with infectious droplets and then touch your mouth, nose or eyes. It is possible that SARS-CoV may also spread through the air or by other ways that are not now known.

Incubation period for SARS

The available information suggests that a person with SARS is probably contagious only when they have symptoms, such as fever or cough. The incubation period ranges from two to seven days, with most cases occurring three to five days after exposure. Patients are most contagious during the second week of illness. However, as a precaution against spreading the disease, SARS patients should stay at home for at least 10 days after their fever has gone away and their breathing is back to normal.

Diagnosis of SARS

SARS is suspected if the person has a high fever, one or more respiratory problems (such as shortness of breath), and has either been in contact with someone diagnosed with SARS or else has travelled to an area with known cases of SARS in the last two weeks.

Diagnostic tests include:

- chest x-rays
- dry swabs of both nostrils
- dry swab of throat
- sputum tests
- blood tests.

Treatment of SARS

Management strategies may vary but, generally speaking, SARS is treated in the same way as other serious pneumonias. The SARS virus is being tested against various antiviral drugs to see if a more specific treatment can be found.

Good supportive health care is all that most people require, with treatment for fever and pain and additional oxygen to make breathing easier.

Current treatment options include:

- isolation – people who are ill enough to need hospital care are placed in infection control wards to reduce the risk of transmission to others. If you are not sick enough to be in hospital, you may be asked to stay at home for a period of time and avoid contact with others
- protective clothing – hospital staff and visitors should wear gloves, gowns, eye protection, head covers, filter masks and other forms of protective clothing
- antibiotics – are given in case the infective agent is bacterial
- antiviral drugs – are given in case the infective agent is viral
- steroid drugs – may be oral or injectable
- supportive care – such as mechanical ventilation to help the person to breathe.

Australians being treated overseas would have access to consular assistance and advice from Australian health authorities, if required.

How to protect yourself if another outbreak of SARS occurs

There are some common sense precautions that you can take if transmission of SARS-CoV recurs. These apply to many infectious diseases. They include:

- Wash your hands often with soap and water or use an alcohol-based hand rub.
- Avoid touching your eyes, nose and mouth with unclean hands.
- Encourage people around you to cover their nose and mouth with a tissue when coughing or sneezing. If you

do not have a tissue, cough or sneeze into the crook of your elbow.

Advice to travellers in areas reporting a SARS outbreak

In case of a re-emergence of SARS, travellers to areas reporting SARS cases are advised to avoid places where transmission is most likely to occur, such as healthcare facilities caring for SARS patients and the homes of people infected with SARS. People who have travelled to areas with known cases of SARS should be alert for symptoms for a minimum of one week, and go to their doctor immediately if they develop any respiratory problems.

Preventing the spread of SARS

During an outbreak of SARS, it is important that quarantine and isolation practices are adopted to limit the spread of the disease.

If you have SARS, or you think you may be displaying symptoms of it, wear a surgical mask to reduce the risk of airborne particles infecting others as a result of coughing or sneezing, and avoid contact with other people. Where this is unavoidable, maintain a distance of one metre from other people.

If you have been diagnosed with SARS, but your case is mild, your doctor may decide that it is better to manage your case at home, in isolation, rather than in a hospital. In such a circumstance:

- Limit your activities outside the home except as necessary for medical care. For example, do not go to work, school, or public areas. If you must leave the home, wear a facemask. Do not use public transportation.
- Stay away from the other members of your household (in your bedroom with the door closed).
- Limit the number of persons in the household to those who are essential for patient support.
- Do not have visitors.
- Avoid sharing a bathroom or bedroom.
- If you need to share a common area with other people, try to stay one metre or more from other people to reduce the spread of illness, and wear a facemask.
- Keep your items separate from everyone else's. For example, don't share towels or eating utensils or store toothbrushes in the same holder.
- Wash your hands frequently, or use an alcohol-based hand rub, and ensure that other household members do so also.
- Follow these instructions for 10 days after your fever and respiratory symptoms have gone away or until your health care worker says you can return to normal activities.

You or your carer should:

- Be alert for any signs that you (or the sick person) are getting worse.
- Use disinfectant to clean items touched by the sick person, such as bedside tables and bathroom surfaces.
- Use facemasks to reduce the risk of infection.
- Make sure the sick person gets plenty of rest, drinks plenty of water and maintains a healthy diet.

Where to get help

- Your doctor– it may be best to ring first during a SARS outbreak if you think you may have symptoms
- Smartraveller website, Department of Foreign Affairs and Trade, for updated travel advice related to SARS Tel. 1300 555 135
- Australian Department of Health and Ageing National Hotline Tel. 1800 004 599 (8am to 6pm)

Things to remember

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This page has been produced in consultation with and approved by:

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