

## **Severe Acute Respiratory Syndrome (SARS)**

### **What is SARS?**

Severe acute respiratory syndrome (SARS) is a viral respiratory infection caused by a coronavirus (SARS-CoV).

### **What are the symptoms of SARS?**

Symptoms usually appear within 2 – 7 days after contracting the disease, but the incubation period can be up to approximately 10 days.

The initial symptoms are influenza-like. Patients with SARS usually begin with fever, which is often high (38°C or above), and sometimes associated with chills, rigors, headache, malaise, muscle pain or even diarrhoea. At the onset of illness, some patients may only have mild respiratory symptoms. After a few days, symptoms of lower respiratory tract infection may follow, including cough without sputum and difficulty in breathing. In around 10% of patients, the illness may rapidly progress to respiratory failure requiring intensive medical care. Symptoms can be more variable among elderly patients.

### **How is SARS diagnosed?**

Several laboratory tests can detect SARS-CoV, the virus that causes SARS. Some tests can detect virus in clinical specimens, including respiratory secretions and stool. Serological tests can detect antibodies to SARS-CoV which are produced from around 10 days after onset of the illness.

### **How can SARS spread?**

SARS is predominantly transmitted through close person-to-person contact, especially via respiratory droplets produced when an infected person coughs or sneezes. Droplet spread can take place when droplets from the cough or sneeze of an infected person are propelled a short distance and deposited on the mucous membranes of the mouth, nose, or eyes of persons who are nearby. The virus can also spread when a person touches a surface or object contaminated with infectious droplets and then touches his or her mouth, nose, or eyes.

### **How is SARS treated?**

The medical professionals are working towards identifying an effective treatment regimen.

## **How to reduce the risk of contracting SARS?**

There is no vaccine currently available. Good hygiene practice remains the most effective way to minimize the risk of contracting and spreading the disease:

### **During the Non-SARS Period**

#### **1. Maintain good personal hygiene**

- Wash hands frequently:
  - Wash hands:
    - ✓ Before touching eyes, nose and mouth, if there is a need to do so;
    - ✓ Before handling food or eating;
    - ✓ After handling objects soiled by faeces, respiratory or other body secretions;
    - ✓ After going to the toilet;
    - ✓ After touching public installations or equipment, such as escalator handrails, elevator control panels or door knobs.
  - Proper way of hand washing:
    - ✓ Wet hands under running water;
    - ✓ Apply liquid soap and rub hands together to make a soapy lather;
    - ✓ Away from the running water, rub the front and back of hands. Massage all the finger tips properly including the thumbs, the web of the fingers, around and under the nails. Do this for **at least 10 seconds**;
    - ✓ Rinse hands thoroughly under running water;
    - ✓ Dry hands with either a paper towel or a hand dryer;
    - ✓ Avoid direct contact between clean hands and the tap. It can be turned off by wrapping the faucet in a paper towel.
  - Rub hands with a 65-95% alcohol solution to disinfect them when hand washing facilities are not available.
- Always carry a handkerchief or tissue paper. Cover the nose and mouth with it when sneezing or coughing. Remember to wash hands immediately with liquid soap afterwards.
- People with symptoms of respiratory tract infection or fever should wear a mask and consult a doctor promptly.
- Use serving chopsticks and spoons at meal time. Do not share lunch boxes and drinks.

#### **2. Under some situations, people are recommended to wear a mask. Examples include:**

- People with symptoms of respiratory infection or fever;
- People caring for patients with respiratory infection or fever;

- People visiting or working in healthcare facilities.
- 3. Maintain a healthy lifestyle – a balanced diet, regular exercise and adequate rest. Do not smoke.**
- 4. Maintain good environmental hygiene**
- Keep home clean. Clean furniture and household facilities with a solution of washing up liquid and water or a diluted household bleach solution in the ratio of 1:99 (1 part of household bleach mixed with 99 parts of water) daily. Then rinse with water and wipe dry.
  - Ensure good ventilation:
    - Keep windows open to maintain good indoor ventilation;
    - Wash dust filters of air-conditioners frequently.
  - Keep the toilet clean:
    - Clean the toilet at least once daily with 1:99 diluted household bleach solution.
    - When using the toilet, it is essential to observe hygienic practices:
      - ✓ Dispose of used toilet paper in the toilet bowl;
      - ✓ Before flushing, lower the toilet lid to prevent contaminated water from splashing out;
      - ✓ Flush the toilet;
      - ✓ When flushing has stopped, raise the lid;
      - ✓ Ideally, wipe the rim, seat and lid with a cloth soaked in 1:99 diluted household bleach solution. Rinse clean with water. Wipe dry.
      - ✓ Wash hands thoroughly with liquid soap. Dry hands with a paper towel or a hand dryer.
  - Maintain proper function of toilets, drains and pipes:
    - Clean the floor drain outlets regularly;
    - Pour about half a litre of water into each floor drain outlet at least once a week in order to prevent foul air and insects from entering the premises;
    - Then pour a teaspoonful of 1:99 diluted household bleach solution and pour clean water down the drain after 5 minutes;
    - For floor drains, spray insecticide into the drain outlets after cleaning;
    - Make sure drains and pipes do not leak or aren't blocked. Do not alter them without prior authorization. Repair immediately if there is a defect in the trap or smell of foul air is coming from drain outlets.
  - Do not spit or litter.
  - Make sure that common facilities such as staircases, lifts, lobbies, refuse collection chambers, canopies and ventilation fans are cleaned, disinfected and maintained regularly.

- Prevent pest infestation – proper storage of food, proper disposal of rubbish, be aware of signs of pest infestation and arrange for pest disinfestations where necessary.

### **When SARS is reported overseas**

#### **Additional to the above measures, a mask is recommended for:**

- Outbound travellers visiting SARS affected areas;
- Staff working at border control points and deployed for public health control actions;
- As per instructions given by hospitals/ clinics for staff, patients and visitors.

### **When SARS is reported locally**

#### **A mask is further recommended for:**

- People visiting crowded or poorly ventilated places;
- People who have been in close contact<sup>1</sup> with SARS patients should wear a mask for 10 days from the last contact. Social contacts<sup>2</sup> of a SARS patient may also wear a mask.

As this list cannot be exhaustive, members of the public are reminded to exercise judgment in accordance with guidance given above. In general, anyone who feels the need to wear a mask is advised to do so.

<sup>1</sup> Close contact means someone who cares for, lives with, or has direct contact with the respiratory secretions or bodily fluids of a person with SARS.

<sup>2</sup> Social contact means someone who has casual contact with a person suffering from SARS, i.e. someone not involved in the care of, not living with, or not having direct contact with the respiratory secretions or bodily fluids of an infected person.

### **When wearing a surgical mask**

- Wash hands before putting on a mask, before and after taking one off;
- Follow the instructions given by the supplier;
- The proper method of putting on a mask:
  - The coloured side of the mask faces outwards, with the metallic strip uppermost;
  - The strings or elastic bands are positioned properly to keep the mask firmly in place;
  - The metallic strip moulds to the bridge of the nose and the mask should fit snugly over the face;
  - The mask should cover the nose, mouth and chin.
- Try not to touch the mask once it is secured on your face. If you must do so, wash your hands before and after touching the mask;
- When taking off the mask, avoid touching the outside of the mask as this part may be covered with germs;
- After taking off the mask, put the mask into a plastic or paper bag before putting it into a rubbish bin with a lid;
- A surgical mask should be discarded after use and under no circumstances should it be used for longer than a day. Replace the mask immediately if it is damaged or soiled.

Wearing a mask is just one way to help prevent respiratory tract infections. Remember to observe good hygiene practice and healthy lifestyle.

### **Psychological management during the SARS period**

It is understandable, with a new disease, that people will have lots of fear and anxiety. It is thus important for people to take appropriate steps to manage their anxieties in order not to adversely affect health. The following suggestions may help manage anxiety when SARS is reported:

1. Be sensible. Take all necessary preventive measures as advised by the Government for self-protection and control of the disease.
2. Look after yourself. Have a well-balanced diet, regular exercise and adequate rest. Find time for leisure and/or relaxation!
3. Avoid unnecessary changes. Carry on with your routines at work or at home.
4. Avoid obsession. Take a break from watching the news or talking about SARS all day long.

5. Be prepared. Develop an action plan in consultation with family members and colleagues to fight SARS.
6. Stay connected. Keep in touch with family members and friends through regular phone calls or emails. Share your feelings and opinions with them.
7. Seek help. If you cannot manage your anxiety with the above measures, see a professional for help. (Social Welfare Department Hotline: 2343 2255)

People at high risk of or are affected by SARS need all the support we can give them. Be considerate and show them our concern and acceptance. This will help them go through a smooth and effective treatment course as well as speed up their recovery. Discrimination and rejection DO NOT keep SARS away from you. Thorough understanding of the disease, a proper attitude and stringent preventive actions DO.

**The public should cooperate with the relevant authorities and comply with the following public health control measures which may be enforced when there are local SARS cases reported:**

- Isolation and cohorting of patients admitted for exclusion or management of SARS;
- Tracing and follow up of contacts of affected persons;
- Quarantine of close contacts<sup>1</sup> for 10 days or any specified period;
- Enhanced border control measures including health declaration, temperature checking and interception of cases and contacts;
- School suspension or cancellation of public functions.

## **General advice for some settings:**

### **Schools**

#### **Without SARS**

- All staff and students should observe good personal hygiene.
- The staff should clean and disinfect furniture and equipment using 1:99 diluted household bleach solution regularly. Rewipe with a towel soaked in clean water and wipe dry.
- If cleaning vomitus, use 1:49 diluted household bleach solution. Rinse the area with water and wipe dry.
- Windows of classrooms should be opened from time to time for better ventilation. Ensure the air-conditioning system is well maintained. Clean the air filter regularly.
- Ensure toilet facilities are properly maintained.
- Liquid soap and disposable towels or hand dryer should be provided in toilets.
- Sick children must not be taken to schools or child care centres.
- If a child becomes sick while at school:
  - Inform parents/ guardians immediately and advise them to take the child to a doctor.
  - Separate the sick child from others. Recommend the child to wear a mask if displaying symptoms of respiratory infection or fever.
  - Also recommend the carers to wear a mask.
- Schools should keep good sick leave records of staff and children. When there is an increase in the number of absentees:
  - Contact the staff or parents/ guardians of absentees to ascertain the reasons for their absence.
  - Inform the Department of Health when a large number of absentees with similar symptoms are noted.

#### **With SARS reported**

- Staff members/ students who have close contact<sup>1</sup> with SARS patients would be put under quarantine for 10 days. They should wear a mask and strictly observe personal and environmental hygiene. They should also watch out for symptoms suggestive of SARS.

### **Workplaces**

#### **Without SARS**

- All staff should observe good personal hygiene.
- Office management should maintain a clean and hygienic working environment. Clean and disinfect the furniture and commonly-used equipment using 1:99 diluted household bleach solution. Rewipe with a towel soaked in clean water and wipe dry.

- If cleaning vomitus, use 1:49 diluted household bleach solution. Rinse the area with water and wipe dry.
- Windows of offices should be opened from time to time for better ventilation. Ensure the air-conditioning system is well maintained. Clean the air filter regularly.
- Ensure toilet facilities are properly maintained.
- Liquid soap and disposable towels or hand dryer should be provided in toilets.
- If a staff member develops symptoms of respiratory infection or fever, recommend the staff to stay at home, wear a mask and consult a doctor immediately.

### **With SARS reported**

- If a staff member lives in a building with an occupant found to have SARS, he/she should continue to maintain good personal hygiene, both at home and in the office. His/ her household environment should be disinfected using 1:99 diluted household bleach solution daily.
- If a staff member has been in close contact<sup>1</sup> with a SARS patient, he/she would be put under quarantine for 10 days. He/She should wear a mask and strictly observe personal and environmental hygiene. He/She should also watch out for symptoms suggestive of SARS. Social contacts<sup>2</sup> of a SARS patient should continue to observe good personal environmental hygiene both at home and in the office. They may also wear a mask.
- If a staff member had contracted SARS, the office management should strengthen the measures to ensure environmental hygiene. This involves cleaning all surfaces (desk, chair, PC, telephone, floor, toilet, handwashing basin, door knobs, lamp switches, etc) with 1:49 household bleach solution for the first time and thereafter with 1:99 diluted household bleach solution daily, rinsing with water and then wiping dry. Remember to maintain good ventilation. If the premises is mechanically ventilated, ensure frequent air exchange with proper maintenance and cleaning of the system.

### **Public places**

#### **Without SARS**

- All staff and customers should observe good personal hygiene.
- People with symptoms of respiratory infection or fever should avoid going to crowded places. Wear a mask and consult a doctor immediately.
- The management of public places should maintain a clean and hygienic environment. Clean and disinfect public facilities using 1:99 diluted household bleach solution regularly. Rewipe with a towel soaked in clean water and wipe dry.
- If cleaning vomitus, use 1:49 diluted household bleach solution. Rinse the area with



water and wipe dry.

- Ensure toilet facilities are properly maintained.
- Liquid soap and disposable towels or hand dryer should be provided in toilets.
- If a staff member develops respiratory symptoms or fever, recommend the staff to stay at home, wear a mask and consult a doctor immediately.

**With SARS reported**

- Wear a mask in crowded or poorly ventilated areas.
- Observe strict personal and environmental hygiene measures.

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<sup>2</sup> Social contact means someone who has casual contact with a person suffering from SARS, i.e. someone not involved in the care of, not living with, or not having direct contact with the respiratory secretions or bodily fluids of an infected person.

## **Roles of the Department of Health**

The Department of Health takes proactive actions to protect the health of the public. Some examples include:

- Implement public health measures (e.g. contact tracing, medical surveillance and quarantine of contacts) to control the spread of disease in the community;
- Step up port health control measures;
- Liaise with hospitals and health care professionals to ensure their preparedness;
- Communicate with and disseminate latest information to health care workers and the community on infection control guidelines;
- Provide public health laboratory support; and
- Liaise with the WHO and international health authorities for information sharing.

## **For more information**

Please call the Department of Health's 24-hour pre-recorded health education hotline at **2833 0111**, or the DH hotline at **187 2222** during office hours, or visit the DH website at [www.dh.gov.hk](http://www.dh.gov.hk) .

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