

# Zhang Wenhong

# Prevention and Control

# Covid-19

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## About the Writer

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Translator: Xiaoxia Liu + google translate

This document was published by Shanghai Science and Technology Press. It includes many useful information and instructions of the daily life under the outbreak of coronavirus. Due to the limit of time, I selectively translated some sections that I think will be helpful for the general public from other countries. Hopefully it will help to contribute to this battling of Covid-19. If everyone is paying attention to their daily hygiene, we will stop the virus.

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# Learn about pneumonitis infected by a new coronavirus in one minute

## Virus Overview

New coronavirus (abbreviated as New Coronavirus), World Health Organization (WHO) named 2019-nCoV, where n stands for novel, and “CoV” is an abbreviation for Coronavirus, which belong to the same general as “SARS”. It makes severe acute respiratory syndrome like “SARS”, but COVID-19 is different from “SARS”.

## Source of infection

The sources of infection seen so far are mainly the infected people that carries the virus. Asymptomatic infection can also be a source of infection.

## Way for spreading

Can pass from person to person. Respiratory droplets and contact transmission are major ways for spreading. Transmission routes such as aerosol and digestive tract are yet to be clarified.

## Susceptible people

The general crowd is all susceptible. Infections in the elderly and those with chronic underlying diseases were severe, and children and infants also developed symptoms.

## Symptom

Main symptoms are fever, fatigue, and dry cough. Few patients with symptoms such as nasal congestion, runny nose, and diarrhea. Some patients only show low fever, slight fatigue, etc. Severe patients often show difficulty to breath after 1 week of infection.

## Incubation period

The incubation period is 1 to 14 days, mostly 3 to 7 days.



## Prognosis

Most patients have a good prognosis, and a few patients are critically ill. Seniors and patients with underlying disease have a poor prognosis. Relative light symptoms in children

## Treatment

Effective drugs are under development and no effective anti-viral methods.



## Personal Protection

### Purpose of Home Quarantine and What is the Significance?

The purpose of home isolation is to prevent the disease spreading through physical distancing so that the infected individuals cannot spread the virus. It can avoid the formation of second- and third-generation cases.

When there are a large number of close contacts of asymptomatic or potential patients, home isolation should be an important option to solve the over exploitation of medical services. *If you have any symptoms, go to a doctor hospital visits (This only applies to China. Every government has their own policies).* During home isolation, you can spend time on leisure activities such as reading books and tea, let the new coronavirus lose its own transmission.



# How to do home quarantine?

## Isolated environment

- The isolated person should live in well-ventilated single rooms; The common area (kitchen, bathroom, etc.) should be well ventilated (windows open).
- Family members should live in different rooms. If it is not possible, other family members need to keep more than 1 meter distance from the isolated person.
- Reduce the scope of activities of the isolated person and minimize the area that family members have to share with the isolated person, especially avoid dining together.
- Do not share toothbrushes, towels, tableware, toilets, quilts, etc.
- Refuse all visits.

## Caring

- Fix a person who is in good health and has no chronic diseases for nursing.
- When the caregiver is in the same room with the isolated person, they should wear a mask (details see “Masks” on page 9).
- After any direct contact with the isolated person or entering the quarantine area, hand hygiene is important during the care (e.g. before preparing meals, before meals, after using the stool, when dirt is visible). If there are no obvious dirt on your hands, you can use alcohol-free disposable lotion; If there is obvious dirt on your hands, wash them with soap and water.

## Disinfection

- Clean bedroom furniture and bathroom countertops daily with chlorine-containing disinfectants.
- Clean the laundry (e.g. clothing and bedding) of the isolated person with hot water at 60 ~ 90 °C and detergent. Avoid the contact between the contaminated laundry with the clean ordinary housing laundry.
- The above operations should be carried out with disposable gloves. Also, wash your hands afterwards.



## Secretions and excreta

- Respiratory secretions: Everyone should wear a medical face mask when coughing or sneezing, or cover with tissue and sleeves, after coughing and sneezing, clean your hands immediately. Dispose of tissues or towels covering your nose and nose, or clean properly after use (such as with ordinary soap / detergent and water wash).
- Excretion: contact with the mouth, respiratory secretions, urine of the isolated person disposable gloves should be worn when handling liquid or feces. For the excreta of a isolated person, it should be sealed and discarded into "harmful garbage" bins. When flushing the toilet, please put on the toilet lid to prevent aerosols contamination.
- Contaminants: gloves, paper towels, masks and other pollutants should be concentrated and placed in the patient's room and discarded separately afterwards.
- Tableware: For tableware used by the isolated person, you can wash them after use. You do not have to discard them after one usage.

## Desegregation criteria

- If no relevant symptoms occur, stay under quarantine after 14 days of the last contact with the patient or left from an endemic area.

## About Face Masks

### When do I need to wear a mask?

**Wearing masks** during the epidemic, meeting with people, going to public places, and entering crowded or confined places such as public transportation etc.

**Do not wear masks** alone or in open spaces.

### Which mask should I wear?

- For the general public (except medical workers or epidemic-related workers), it is recommended to wear disposable medical masks.
- Staff in crowded places (hospitals, airports, trains stations, subways, ground buses, planes, trains, supermarkets, restaurants, etc.) and police, security, courier and other practitioners, as well as home isolation and separation co-living personnel, it is recommended to wear medical surgical masks, or wear a mask higher than the FFP2 (N95/KN95) mask.

Paper masks, activated carbon masks, cotton masks are not recommended.

### How to use a mask correctly?

Proper use of disposable medical masks / surgical masks as follows:

1. Keeping the nose clip on the top and the dark-colored side facing outside
2. Pull open the folding to cover the entire mouth, nose, and bottom jaw.



3. Use your finger tips to push the metal strip of the mask along the bridge of your nose from the middle to both sides to seal the space
4. Adjust the mask appropriately so that the surrounding facial mask sufficiently sealed. The standard surgical mask is divided into 3 layers: Hydrophobic layer to stop the droplets from entering the mask; the middle layer that has a filter layer; the hydrophilic and hygroscopic inner layer near the nose and nose.

### Can I use a mask with a breathing valve?

**Yes** for the general population because the valved mask can protect the person wearing it

**No** for suspected patients or diagnosed patients, because the breathing valves cannot block the wearer's droplet into the environment



### How long can a mask be used?

Normally for the general public, if you have no contact with confirmed or suspecting patient, the masks can be reused usage can be elongated according to the its cleanness. However, the masks can only by reused by the same person. Washing hands are necessary before and after the reuse of the mask. Any touching of the inner side of the mask should be avoided.

As long as the inner side is contaminated, or the mask is out of shape, broken, or smelly, the mask should be changed immediately.

### How to save reused masks?

If you need to reuse the mask, you can hang it in a clean, dry, and ventilated place, or place it in a clean, breathable paper bag. Masks should be stored separately to avoid contact with each other, label the personnel who has used it.

Medical standard protective masks cannot be cleaned and disinfection by poisons, heating, etc .; other non-medical masks can be used according to instructions.

### Do I have to use a disposable one?

The masks that is used by the general public without coronavirus transmission risk can be sealed in plastic bags and dispose into general waste.

The masks used by suspecting or confirmed patients, caregiver of the patients, should be collected and disposed as medical waste. Wash your hands after the disposal of contaminated masks.

### How do pregnant women and children choose masks?

- Pregnant women should choose product that provides more comfort.
- Children are at the stage of growth and development, and their faces are small, therefore need to use children masks.

### What to do if the elderly and patients with other diseases are

#### uncomfortable wearing masks?

Elderly people and patients with chronic diseases such as heart and lung diseases may develop uncomfortable feelings while wearing masks. If it worsen the condition, you should seek a doctor for professional guidance.

## About Gloves and Goggles

### Do I need to wear gloves in my daily life?

**It does not require** for the general public, wash your hands on daily life is enough  
**Require** for health care workers, close contacts, and other crew in the crowd places. But wearing gloves is not a substitute for hand hygiene. Wash your hands frequently.

### Do I need to wear goggles in my daily life?

**It does not require** for general life and work, good hand hygiene is enough,  
If you wash your hands frequently, especially without rubbing your eyes with dirty hands, you do not need to wear goggles.

## About Disinfection Methods

### What are the disinfection methods?

According to the New Coronary Virus Pneumonia Diagnosis and Treatment Program (Trial Fifth Edition) ", the virus is sensitive to UV and heat, 56 °C for 30 minutes, Ether, 75% ethanol (alcohol), chlorine-containing disinfectants, peracetic acid, and fat-soluble solvents such as chloroform can effectively inactivate the virus, but chlorhexidine cannot have inactivated virus effectively.

According to insufficient information on the other methods, other disinfection methods are not recommended for the elimination of new coronaviruses.

### What are the possible disinfection methods at home?

**Skin disinfection** wiping or immersion in alcohol,.

**Disinfection home environment** sterilization with alcohol or chlorine disinfectant wipe

Pay attention to the active ingredients of the disinfectant and the safe use of the disinfectant:

1. Alcohol is flammable. Keep it away from fire and flammable materials, and do not spray or sterilize a large area, otherwise the concentration of ethanol in the air may cause fire.
2. Pay attention to the configuration method and dilution ratio when using chlorine-containing disinfectant. In particular, it should be avoided to be mixed with other disinfectants. The specific usage is in accordance with the product manual.

**Heat sterilizing** can be used for heat resisting material by putting it in boiling water for 15 mintues.



## About how to wash your hands and cough etiquette

I did not translate that part because it is already widely known.

## About using Elevator

### Do I need to wear a mask when taking the elevator? Is it risky to press a button?

Poor air circulation in an elevator, therefore, it is recommended to wear a mask inside of an elevator. There may be droplets and viruses on the buttons and on the floor. It is best not to use your fingers directly when pressing the floor buttons. If you use your fingers, avoid touching other parts of your body after it. After exit the elevator, you should wash your hands.

You should reduce the frequency of taking the elevator and take the stairs as much as possible on the lower floors.

However, in non-endemic areas, the risk of transmission is low, so you don't have to wear a mask, but you always need to wash your hands.

## About using Air Conditioner

### Is the air conditioner on or off?

Central air-conditioning may spread diseases. So during the outbreak, the use of central air-conditioning should be stopped or reduced.

Note the following:

1. Turn on the exhaust fan at the same time.
2. Need to clean and disinfect the air conditioner. Even for non-centralized air conditioners, you should clean them regularly.
3. Regularly open doors and windows to maintain indoor air circulation.

## About your Pet

### Will pets spread the new coronavirus?

There is no evidence that pets such as cats and dogs will be infected with the new corona virus. But after contact with pets, washing hands with soapy water can significantly reduce transmission of other common bacteria between pets and humans, such as E. coli And salmonella. There are many types of pets, but the sources of new coronaviruses, And the intermediate hosts are unclear, and animals of unknown origin are not recommended, especially the a wild animals.

## How to disinfect pets when they go home?

No special disinfection, daily cleaning and regular pets health examination is sufficient.

## Should pets with suspected case history be quarantined?

During outbreaks, quarantine observations are recommended.

## Can pets play together outdoors?

Yes.

# About the close contacts

## Who are the close contacts?

Close contact refers to the following contacts with suspected and confirmed cases when without effective protection:

1. Cohabitation, study, work or other close contacts such as working from close distance or sharing the same room or same house.
2. Clinics, nurses, health care workers, patients visitors, or any other individual that has been together with the patient in the same closed environment.
3. People who are in the same transportation and have close contact with a patient. This includes people taking care of the patient, family, friends, colleagues etc. as well as the other passengers that have been found to stay in close distance with the patient after investigation.
4. On-site investigators can evaluate and define whether someone is a close contact.

## How do I know if I am a close contact?

To decide on the close contact and analyzing their risk of infection, the investigators need to comprehensively evaluate the clinical symptoms of the patients when they had contact with the other people, the protective measures during the contact and exposure, and make judgments based on different factors.

Therefore, the determination of close contacts should be left to professionals. For the general public, it is sufficient to report and provide relevant information. Except the friends, relatives, and colleagues that are most likely to become close contacts, the people travelling with the same transport are the most common close contact. So pay attention to your own flight number, high-speed rail trip information, and pay attention to public announcements to verify whether you have been to the same transportation with a patient.

## What do close contacts need to pay attention to?

Do a home quarantine. for details, see "Home Segregation" on page 6.

# About Shopping and delivery

### Do the groceries need disinfection?

No, just wash your hands frequently.

If you touch the object contaminated by the new coronavirus with your hand, and then touch your eye, mouth and nose may cause indirect contact transmission. Because the new coronavirus has limited time to survive in vitro, and in non-endemic areas, the virus has a low probability to be contaminated by the patient's droplets.

### Is Takeaway Safe? Do you need disinfection?

Takeaway is generally safe, but you need to choose a regulated store. In this way, we can ensure that the meat and fresh food we eat are quarantined, and the manufacturing process is compliant.

If you are worried about the contact and droplet transmission brought by the delivery method and the courier risk, you can ask the delivery personnel to leave food at the door. Please wash your hands after opening the package and before eating.

### How to deal with the Express Delivery coming from endemic region?

Covid-19 has limited time to survive in-vitro. It is not likely that the virus can survive through the transportation process. For extra precautions, you can wash your hands before and after you open the packaging. Especially before touching your mouth, nose, or eyes.

## About Showering

### Taking a hot bath or sweating can help to kill coronavirus?

The coronavirus will die in 56 ° C for 30 minutes. But generally bathing or sweating can't reach this temperature and duration. Also, if the water temperature is too high and the bath time is too long, it may cause discomfort to the human body such as dizziness, rapid heartbeat, etc., and severe symptoms may also occur such as fainting. However, taking a regular bath can reduce the risk of infection.

## About Surface of Public Facilities

### Will there be a coronavirus on public facilities such as stair handrails and community equipment

Viruses may attach to these public facilities surfaces and touching should be avoided. Avoid touching your nose and mouth and rubbing your eyes with dirty hands. Once touched any public facilities, wash your hands as soon as possible. Community managers should strengthen the cleaning and disinfection of public facilities.

## About Trash

### Is the trash used by confirmed patients contagious?

The possibility is very small. It is recommended to wash your hands frequently and not to touch suspicious contaminants. Pay attention to protection when throwing trash, and wear disposable gloves if necessary.

## About Traveling

### What are the precautions for traveling?

- Wear masks in public places, especially in public transportation or a public place with dense crowds.
- If it is possible, it's better to walk, bike or travel by car.
- Avoid contact with people who have fever, cough and other symptoms. Keep a distance of more than 1 meter.
- Cover your mouth and nose with a tissue or elbow flexion when coughing or sneezing (See "Cough" on page 20 for details).
- Reduce exposure to public goods in public places.
- Avoid touching your nose and mouth with dirty hands and rubbing your eyes.
- Wash your hands frequently, you can bring your own hand sanitizer containing disinfectant alcohol, disinfection of wipes and other products.

- Try to avoid attending various parties during the epidemic

## What do I need to pay attention to when I enter my home from outside?

Take off your clothes normally → Hang your clothes at the door (or ventilated place)  
→ Masks → wash your hands → change the bath time from “before going to bed” to “after coming home”. If you do this, the probability of infection with the new coronavirus is very low.

It is recommended to hang your coat in a specific place at the door, not with clean clothes mixed. The probability of virus contamination on the surface of the jacket is low. But the jacket surface carries a lot of dust and it is not recommended to bring it to the bedroom. For details on how to handle and wash your face, see “Masks” on pages 12 to 13, and page 18 “Handwashing” related content.

## How to protect yourself in the private car when there are many people?

People in the car need to wear masks to reduce conversations, pay attention to coughing or sneeze etiquette, and open windows as much as possible.

## What should I pay attention to when traveling by high-speed rail and plane?

See “Travel” on page 35 for details.

1. Must cooperate with staff temperature measurement when entering and exiting the station;
2. Minimize the need to eat food. Try to avoid taking off masks; avoid frequent contact of hands with mouth, nose and eyes;
3. Cover your mouth and nose with a tissue or elbow clothing when sneezing or coughing; on the way
4. Try to keep a safe distance from others and pay close attention to the health of nearby passengers
5. If the passenger is a suspected patient, the car should be thoroughly cleaned afterwards
6. disinfection. See “Disinfection” on page 15 for details.
7. If abnormality is found, try to change seats if conditions allow, and actively report to staff.
8. Stay far away from busy corridors, avoid using public water supply for drinking. Try to bring your own or buy bottled water.
9. Pay attention to your flight number, high-speed rail trip information, and pay attention to social publicity
10. The information of the patient's shared transportation will be announced to the public, if it is a shared passenger, report it and start a home quarantine.



## Protections at Work

For the people return from non-endemic areas, can you go to a job directly? What needs attention?

- If you have not touched the patient and have no related symptoms, you can return to work on time in accordance with national and enterprise regulations.
- If you have contacted the patient or have related symptoms, please report and temporarily isolate at home if it is necessary.

### How to protect a multi-person office?

- Ensure that the working environment is clean and hygienic, and maintain indoor air circulation.
- Multi-person office is a public space at risk of coronavirus infection, it is recommended to wear a mask.
- Stop or reduce the use of central air-conditioning during the epidemic period, and it must be empty frequently. Turn on the exhaust fan at the same time. Clean the air conditioner regularly.
- Open doors and windows regularly for ventilation.
- Regularly use disinfectant to eliminate office equipment, door handles, etc.
- Pay attention to hand hygiene. Various places should be equipped with hand washing faucets, hand washing liquid,
- If someone has fever, fatigue, dry cough and chest tightness. He should not go to work temporarily and seek medical treatment in a timely manner according to the situation. See details

### Do I need to wear a mask to attend a meeting?

- It is recommended to wear a mask at all times.
- Keep a moderate distance from the conversation.
- Various windows for ventilation.
- Reduce the number of centralized meetings.
- Control meeting time.

## About Work out

### How to protect when exercising outdoors?

For details, see "Travel" on page 35.

During the epidemic, try to avoid people in a confined space, including gym.

For outdoor activities, you should also avoid going to crowded places. Exercises can be adjusted at home, such as aerobics, yoga, etc.