

The Wuhan Coronavirus Outbreak and You

Understanding risk, impact and how to prepare against infections

January 2020



Overview of the outbreak

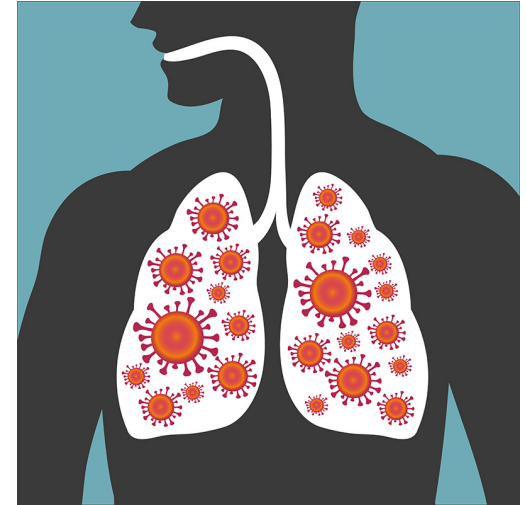
- An outbreak of a coronavirus in Wuhan China has infected several hundred people causing viral pneumonia in many of those infected. Only a few have died, but the rest of those infected have or are recovering.
- The virus causing the outbreak is a new coronavirus that has not been identified before, so many of the potential risks associated with the disease are unclear.
- There is a large seafood market in Wuhan and all those infected were in the market, making it the likely source of the outbreak. It is also likely the virus was being carried by animals at the market and was transmitted from animals to people.
- This presentation summarizes what is known about the outbreak and shares infection prevention practices likely to help prevent human infection.





Coronaviruses

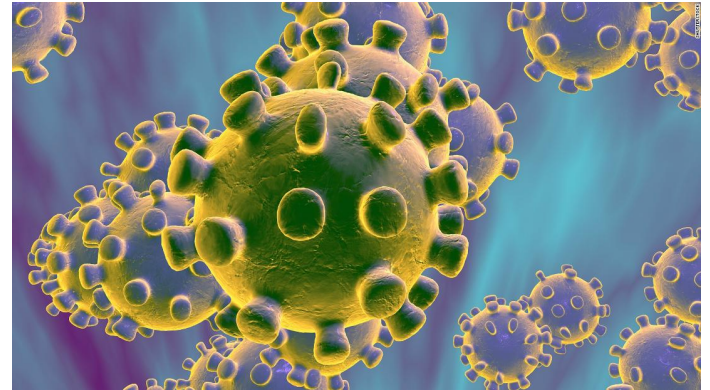
- Coronaviruses (CoV) are a broad family of viruses named after the crown-like spikes on their surface.
- They typically cause mild to moderate upper respiratory tract disease in humans, but can also cause more severe infections such as pneumonia and other lower respiratory tract infections.
- Mild illness caused by CoV includes the common cold and influenza-like illness. Severe illness caused by CoV includes Severe Acute Respiratory Syndrome (SARS) CoV, Middle East Respiratory Syndrome (MERS)-CoV, and some pneumonias.
- There are some coronaviruses that can be transmitted from animals to people. Both the SARS-CoV and MERS-CoV are believed to have originated in animals and were transmitted to people, causing infection.





Wuhan Coronavirus Outbreak

- In Jan 2020 a novel CoV was initially identified in a group of 40 people in Wuhan China, most or all of whom had contact with the same seafood market in Wuhan.
- If the virus is zoonotic, as is believed (meaning animal to human transmission), contact with animals spread the virus to people. Person to person transmission is likely with coronaviruses, and while not initially detected, it appears that person to person transmission is occurring.
- The market where the outbreak occurred sells seafood, chickens, bats, cats, marmots, and other wild animals. It is not known which animal(s) are likely the cause of the outbreak.
- So far the people infected have had pneumonia, but otherwise mild symptoms with low numbers of deaths, with 10-20% of those infected requiring hospitalization for more severe forms of the disease.





Diagnosis & Symptoms of Infection

- For other coronaviruses, the incubation period is 2-5 days for the development of symptoms, suggesting people exposed to CoV may rapidly present symptoms of infection after exposure to the virus, but it may take up to a week to show symptoms.
- The symptoms likely to present early in the illness are often seen in patients with more commonly occurring diseases, such as the common cold, and influenza-like illness, or even other CoV infections.
- Diagnosis and treatment should only be performed by a trained physician who can rule out other potential diseases.
- Most of those infected with the Wuhan Coronavirus develop a sudden fever with other flu-like symptoms. Many develop pneumonia, which is inflammation of the lung often involving a fluid buildup in the lung.





Method of Transmission

- The Wuhan Coronavirus may be transmitted from animal sources, but the animals carrying the virus have not been identified to date.
- In the Wuhan outbreak, if the reservoir is animal(s), the mechanism of transmission to people appears to be inefficient or more people would have been infected in the current outbreak.
- For all animal carriers of the virus, the animals do not show symptoms of infection, so they are likely to otherwise appear normal.
- Coronaviruses can live on environmental surfaces from a few hours to a few days, so surfaces in contact with the animals may carry the virus and cause human infection.
- The primary site for preventing the spread of the Wuhan Coronavirus is unknown at this point. If the virus has an animal host, which seems most likely, the housing where the animals are kept will be the primary point to control the virus's spread.





Person to Person Transmission Risk

- When person to person transmission occurs, it is most likely where there is close personal contact with a person that is visibly sick.
- Casual contact in the public with an infected person is unlikely to result in transmission unless contact with contaminated body fluids occurs.
- Both SARS and MERS are spread by droplet transmission. In droplet transmission, infected droplets of liquid are discharged from the infected person (such as by coughing and sneezing) and only travel up to 1 meter before rapidly settling onto surfaces. The droplets are not carried in air currents over a larger area, minimizing the risk of ongoing transmission.
- When the method of transmission for a pathogen is not well understood, the CDC and WHO recommend additional caution for healthcare workers when in close contact or when treating symptomatic patients.

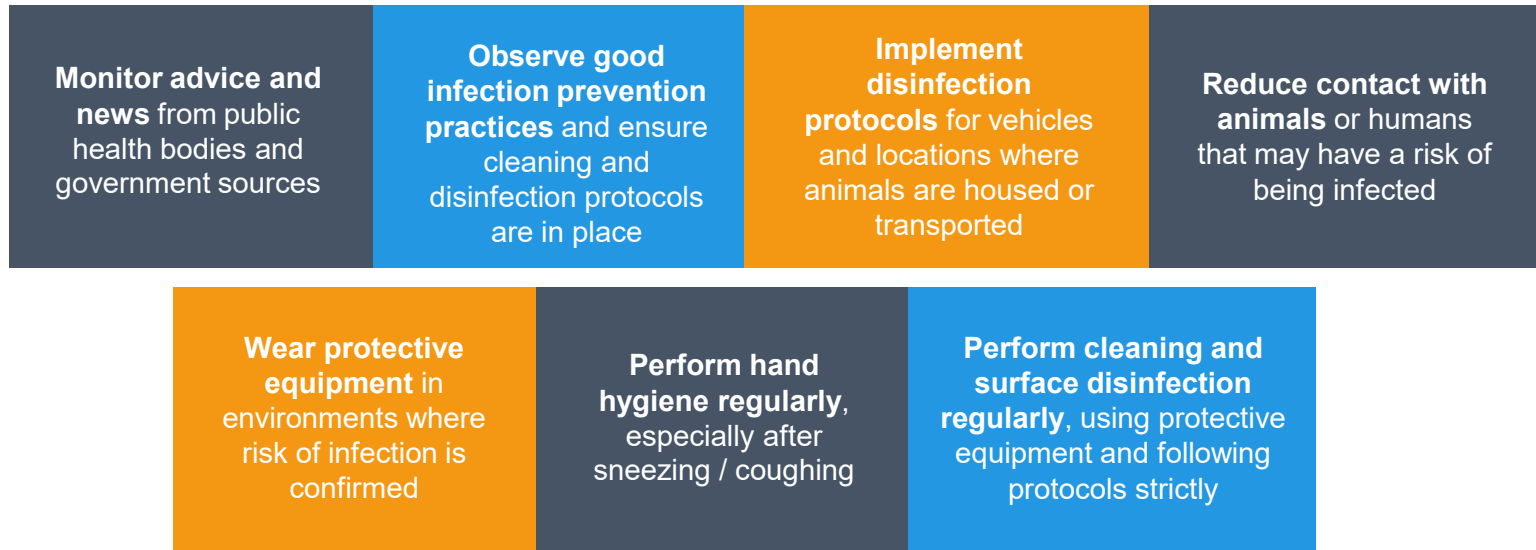




What you should do?

If a person has been to the seafood market in Wuhan or in contact with people that have been to the market in the last 60 days and have the symptoms listed, he / she should seek medical attention for proper diagnosis.

General precautions for avoiding risks of this type of infection:





Prevention Practices for the General Public

- Avoid areas where the outbreak occurred until notified that it is safe to reenter.
- Minimize direct contact and/or prolonged contact with animals that may carry the virus.
- Avoid or minimize contact with sick people, especially those with influenza-like (respiratory) infections. People who are already sick with a cold or influenza-like symptoms should stay home for at least 24 hours after their fever subsides.
- Frequent hand hygiene is the single best way to prevent many diseases and is likely helpful in preventing infection with the Wuhan coronavirus.





Prevention Practices for Workers Handling Animals

Workers that handle living or dead animals should:

- Use protective clothing, gloves, and masks when handling feed, water, feces, or in close contact with the animals. They should wash clothing after contact with animals and change clothing each day.
- Perform frequent hand hygiene through the day, especially when entering and leaving animal housing areas. Hand hygiene should be performed after sneezing or coughing.
- Workers should avoid touching their face, mouth, eyes, and nose, especially when around animals.
- Coronaviruses are easily killed on environmental surfaces with healthcare disinfectants. Standard cleaning and disinfection practices are effective and can help prevent the spread of coronaviruses.





Prevention Practices for Healthcare Workers

- Use of proper personal protective equipment including gloves, gowns, eye protection and masks and where needed, N-95 respirators (or equivalent).
- Frequent cleaning and disinfection of environmental surfaces and patient care equipment.
- People infected with the Wuhan Coronavirus may seek treatment through a hospital's emergency room. Staff should be prepared to identify and isolate people that may be carrying the Wuhan Coronavirus.
- Frequent hand hygiene using the WHO 5 Moments of hand hygiene model.
- Fabrics that may be soiled from contact with infected patients should be handled with minimal agitation and laundered using standard laundering practices.
- Follow good respiratory hygiene practices.

