

# Novel Coronavirus Outbreak in China

## Description

The World Health Organization (WHO) has reported an outbreak of disease originating in Wuhan City, Hubei Province, China, caused by a novel coronavirus (referred to as 2019 Novel Coronavirus (2019-nCoV)). The initial cases of this virus have been associated with a specific seafood and animal market in Wuhan. Additional cases have been identified in people who have not visited this market but have visited other markets or have interacted with infected individuals.

## Virus

Illness is being caused by a newly identified coronavirus, 2019-nCoV. Coronaviruses are common and typically cause mild to moderate respiratory and cold type symptoms, though certain strains of coronaviruses have caused more severe illness. This newly identified virus is in the same family as the viruses that cause Severe Acute Respiratory Syndrome (SARS), which was first identified in Asia in 2003, and Middle East Respiratory Syndrome (MERS), which was identified in 2012 with cases still occurring today. A main initial animal reservoir for the virus that caused SARS is believed to be civet cats that infected other animals, while the initial animal reservoir for the virus that causes MERS is believed to be dromedaries (e.g. camels). The reservoir for 2019-nCoV is not known at this time.

## Health Effects

The symptoms of the illness associated with this novel coronavirus are similar to those caused by influenza and other respiratory illnesses and include coughing, shortness of breath, fever, and difficulty breathing. A small number of people infected with this novel coronavirus have died.

## Transmission

This novel coronavirus was originally transmitted to humans via an animal reservoir (source), believed to be an animal that the initial cases encountered at the seafood and animal market in Wuhan.

Authorities have confirmed that human-to-human transmission has also occurred. Secondary cases (contracted from humans rather than a reservoir) include both members of the public and also healthcare workers who have had contact with other infected people and have occurred in several countries in addition to China.

## Recommendations

### World Health Organisation (WHO)

WHO recommends that everyone wash their hands regularly, cover their nose and mouth when sneezing and coughing, and avoid close contact with anyone who is coughing or sneezing or showing signs of respiratory illness. WHO also recommends thoroughly cooking meat and eggs. At this time WHO has not made any recommendations for personal protective equipment (PPE) use, including respirators, by the general public. WHO has published guidance intended for healthcare workers (HCWs), healthcare managers, and teams working in infection prevention and control. WHO recommends that eye protection (goggles or a face shield) be used during patient contact along with gloves, a medical mask, and a fluid resistant gown. Airborne precautions, including a respirator, should be used during aerosol-generating procedures.

[https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(nc-ov\)-infection-is-suspected](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(nc-ov)-infection-is-suspected)

## Denmark

When handling patients with suspected or confirmed 2019-nCoV, the Danish health authority, Sundhedsstyrelsen, recommends that healthcare professionals wear infection prevention equipment in the form of gloves, a long-sleeved coat, an FFP3 respirator and eye protection.

[https://www.sst.dk/-/media/Udgivelser/2020/Casedefinition\\_-diagnostik-og-haandtering-af-nCoV.ashx?la=da&hash=291B35F4F028BB1BC66299F85256ABF8BD481AEB](https://www.sst.dk/-/media/Udgivelser/2020/Casedefinition_-diagnostik-og-haandtering-af-nCoV.ashx?la=da&hash=291B35F4F028BB1BC66299F85256ABF8BD481AEB)

## Finland

The National Institute for Health and Welfare (THL) in Finland has advised healthcare professionals wear infection prevention equipment in the form of gloves, a long-sleeved coat, an FFP3 respirator and eye protection.

<https://thl.fi/en/web/infectious-diseases/what-s-new/wuhan-coronavirus-latest-updates>

## Norway

The Norwegian Institute for Public Health (NIPH) has advised healthcare professionals to use a surgical mask (or FFP3 where available), eye protection, long sleeve coat and gloves when handling and treating suspected 2019-nCoV patients within 1m distance.

<https://www.fhi.no/sv/smittsomme-sykdommer/corona/2019-ncov/rad-til-helsepersonell/>

## Sweden

The Public Health Agency of Sweden has advised healthcare professionals, in contact with a patient with suspected or confirmed 2019-nCoV, to use personal protective equipment including tight-fitting goggles or visors, respiratory protection (FFP2 or FFP3), and a long sleeved disposable protective gown with reinforced front and sleeves or a long-sleeved disposable plastic apron.

<https://www.folkhalsomyndigheten.se/smittskydd-beredskap/smittsamma-sjukdomar/coronavirus/rekommendationer-for-handlaggning-av-misstankta-fall/>

## United Kingdom

The UK Health & Safety Executive (HSE) offers some guidance on suitable respiratory protection for biological hazards in its guidance document, HSG53. "When in an airborne state, micro-organisms can be classed as particles, so they can usually be removed by filter-type RPE. You should always use equipment fitted with the highest efficiency filter possible (protection factor of at least 20) to control exposure down to the lowest levels." An FFP3 respirator, or reusable half mask fitted with P3 filters can offer an Assigned Protection Factor of 20.

<https://www.hse.gov.uk/pubns/priced/hsg53.pdf>

Public Health England (PHE) have additionally issued guidance with respect to 2019-nCoV, 'Wuhan novel coronavirus (WN-CoV) infection prevention and control guidance'. This recommends that healthcare professionals treating patients with 2019-nCoV use FFP3 respirators, gloves with long tight-fitting cuffs, disposable, fluid-resistant full-sleeved gowns and eye protection.

<https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control>

## Ireland

The Health Protection Surveillance Centre in Ireland recommend the following personal protective equipment as a standard precaution when handling or treating patients with confirmed or suspected 2019-nCoV, gloves, long sleeved-gown, eye protection and respiratory protection of at least FFP2.

<https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/algorithms/>

## Summary

A novel coronavirus has been identified, which has caused cases of pneumonia-like symptoms in people who have been in Wuhan City, Hubei Province, China, and cases have now been identified outside of China. The situation is evolving, and it is recommended that all concerned consult the WHO and their local health authority websites frequently for the most updated information regarding this situation.

## References

- CDC 2020: <https://www.cdc.gov/coronavirus/2019-nCoV/summary.html>
- <https://www.who.int/health-topics/coronavirus>
- <https://www.cdc.gov/coronavirus/index.html>
- Sundhedsstyrelsen: [https://www.sst.dk/-/media/Udgivelser/2020/Casedefinition\\_-diagnostik-og-haandtering-af-nCoV.aspx?la=da&hash=291B35F4F028BB1BC66299F85256ABF8BD481AEB](https://www.sst.dk/-/media/Udgivelser/2020/Casedefinition_-diagnostik-og-haandtering-af-nCoV.aspx?la=da&hash=291B35F4F028BB1BC66299F85256ABF8BD481AEB)
- National Institute for Health & Welfare (THL), Finland: <https://thl.fi/en/web/infectious-diseases/what-s-new/wuhan-coronavirus-latest-updates>
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- Health & Safety Executive, Respiratory protective equipment at work, a practical guide, HSG53. Appendix 6: Selecting RPE for radioactive or biological hazards'. <https://www.hse.gov.uk/pubns/priced/hsg53.pdf>
- Public Health England: <https://www.gov.uk/government/publications/wuhan-novel-coronavirus-infection-prevention-and-control>
- Health Protection Surveillance Centre, Ireland: <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/algorithms/>

## Additional Resources

- <https://www.who.int/health-topics/coronavirus>
- <https://www.cdc.gov/coronavirus/index.html>
- 3M Technical Bulletin - Respiratory Protection for Airborne Exposures to Biohazards



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