

		Active cases	Deaths	Recovered
30	World	536,345	33,944	151,004
March	Aus.	3,920	17	226
2020	NZ	514	1	56

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Coronavirus | Symptoms, Transmission and Prevalence

VIRUS ORIGINS

Severe Acute Respiratory Syndrome Corona Virus 2 (SARs-CoV-2), the virus that causes COVID-19 (Coronavirus Disease 2019), emerged in November 2019 in Wuhan, Hubei Province, China. From there it spread to a global pandemic, affecting every continent except Antarctica. SARs-CoV-2 is a zoonotic virus (transmitted from an animal to humans), most likely originating in a bat and transferred via an intermediate host¹. As this virus has not been seen before, there is currently no pre-existing immunity in humans.

TYPICAL SYMPTOMS

COVID-19 typically causes flu-like symptoms including a fever and cough. It seems to start with a **fever**, followed by a **dry cough**. After a week, it can lead to **shortness of breath**, with about 20% of patients requiring hospital treatment¹. The COVID-19 infection rarely seems to cause a runny nose, sneezing, or sore throat¹ (symptoms of the cold).

SEVERITY

Based on current understanding¹:

- 80.1% of infections are mild to moderate (with flu-like symptoms) and can recover at home.
- 13.8% are severe, developing severe diseases including pneumonia and shortness of breath.
- 6.1% as critical and can include: respiratory failure, septic shock, and multi-organ failure.

In approximately **3.4%** of cases the virus is fatal (the mortality rate for the seasonal flu is approx. 0.1%). The mortality rate increases with a person's age as follows:

Years	Mortality Rate ¹
80+	14.8%
70-79	8.0%
60-69	3.6%
50-59	1.3%
40-49	0.4%
30-39	0.2%
20-29	0.2%
10-19	0.2%
0-9	0%

Note: if there are pre-existing health conditions (e.g. diabetes, heart conditions, cancer), the mortality rate will increase.

TRANSMISSION

COVID-19 is spread through airborne droplets released when an infected person coughs, sneezes or talks. The droplets can travel up to 2 meters. However, they can be transferred from a surface, to the nose, eyes or mouth of another person. The COVID-19 Ro (average number of people to which a single infected person will transmit the virus) is 1.4-2.5 and the incubation period is 2-14 days (most cases - 5 days).

PREVALENCE

The following reflects a study² conducted at 21-23°C and 40% relative humidity using the SARS-CoV-2.

Aerosol/Surface Prevalence	Prevalence Time
Aerosols	at least 3 hours
Copper	4 hours

1. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19), 19-24 February 2020
2. Doremalen et al 2020 "Aerosol and surface stability of SARS-CoV-2 as compared with SARS-CoV-1", New England Journal of Medicine, 1-3
3. Kampf et al 2020 "Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents" Journal of Hospital Infection 104:246-251

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Cardboard	24 hours
Plastic	3 days
Stainless steel	2 days

Other studies using coronaviruses other than SARS-CoV-2 have indicated a prevalence on surfaces for up to 9 days but can be inactivated using surface disinfection procedures with 62-71% ethanol, 0.5% hydrogen peroxide, or 0.1% sodium hypochlorite within 1 minute³.

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