

CORONAVIRUS SARS COV-2/COVID-19

Information about pathogens in humans – protection through vaccination and practising good hygiene!

What is SARS-CoV-2?

SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus-2) is a coronavirus that has been spreading globally since December 2019. Infection can differ greatly and the severity of infection can also vary. The disease is known as COVID-19 (Corona Virus Disease 2019). There are different variants of SARS-CoV-2 caused by mutations, that is changes in the genome of the coronavirus. The characteristics of each variant, such as its disease course and transmissibility, can vary.

How is the SARS-CoV-2 coronavirus transmitted?

The SARS-CoV-2 coronavirus is mainly transmitted from human to human by inhalation of fluid particles containing the virus. People infected with the disease release these particles by coughing and sneezing, but also when they breathe, speak and sing. Larger particles (droplets) sink quickly to the ground. Smaller droplets, known as aerosols, can remain suspended in the air for longer and accumulate in enclosed spaces.

The risk of transmission is particularly high within one to two metres of an infected person. Aerosols can be transmitted over longer distances in small or poorly ventilated rooms in particular. Infection is very rare outside closed rooms. Infection by smear infections via the hands is also feasible.

What are the symptoms of the disease?

The SARS-CoV-2 coronavirus causes infections of the respiratory tract, but can also affect other organs of the body. COVID-19 is a systemic disease, meaning it affects the whole body. The symptoms and severity of the COVID-19 disease vary greatly. Some people experience no symptoms whatsoever. However, people can also experience severe symptoms or even die from the disease. Symptoms alone do not indicate infection by SARS-CoV-2.

Common symptoms include coughing, fever, head cold, and sore throat, as well as impaired sense of taste or smell. People may also experience other symptoms, such as shortness of breath, head and joint pain and general lethargy. Some sufferers report gastrointestinal symptoms, including nausea, loss of appetite, vomiting, abdominal pain and diarrhoea. Other symptoms have also been reported.

Severe progression of the disease can lead to **complications**, such as pneumonia, inflammatory diseases of the nervous system, brain or cerebral membrane, cardiovascular, liver or kidney disease. Impaired circulation, blood clots (embolisms) and inflammation of the cardiac muscle can also occur. The most severe inflammatory reactions (hyperinflammatory syndrome) can result in organ failure.

Symptoms of the disease can still be present or reoccur weeks or months after being infected by COVID-19. **Long-term health consequences** that continue for more than four weeks after being infected with SARS-CoV-2 are referred to as **long COVID**. The most common symptoms of 'long COVID' include tiredness, exhaustion and impaired capacity (fatigue), shortness of breath, concentration and memory problems, sleep disorders, muscle weakness and muscle pain, as well as mental problems including symptomatic depression.

Children infected with SARS-CoV-2 usually experience mild symptoms or no symptoms at all, although they can also suffer from more severe symptoms and long-term health consequences. Paediatric Inflammatory Multisystemic Syndrome (PIMS) is one of the rare complications found in children and adolescents. This is an inflammatory condition characterised by fever, gastrointestinal symptoms and cardiac problems. It often requires intensive medical treatment although its treatment is now very good.

When do the symptoms occur and for how long is a person contagious?

It usually takes three to five days from being infected with the SARS-CoV-2 coronavirus for the symptoms to occur, but this can also vary.

Infected individuals can infect others before they develop symptoms themselves. The risk of infection is highest in the five or so days around the onset of symptoms. With milder cases, a person's ability to infect another individual generally decreases continuously and markedly over the first ten days after the onset of symptoms. In exceptional cases, people suffering from a more severe progression of the disease or who are immunodeficient could also be contagious for much longer.

Who is particularly at risk?

Younger people and people without a known underlying condition can also suffer more severe cases of COVID-19. However, more severe cases have been observed more frequently among the following groups of people:

- ▶ Elderly people,
- ▶ Men,
- ▶ Smokers,
- ▶ Overweight or seriously obese people,
- ▶ Pregnant women,
- ▶ People with Down's syndrome (trisomy 21),
- ▶ People with certain underlying conditions of the cardiovascular system (such as coronary heart disease and high blood pressure), chronic lung diseases (such as COPD), chronic kidney and liver diseases, neurological-psychiatric diseases (such as dementia), diabetes, cancer, weakened immune system (possibly caused by a disease or by taking medication that weakens the immune system, such as cortisone).

Where can I find out more?

Elderly people and other people at increased risk of more severe symptoms should seek medical advice at an early stage if they experience symptoms suggesting COVID-19. Early treatment is the best way of treating more severe cases of the disease. It may be possible to use newly developed drugs that are very effective in the treatment of people at risk of a severe case of COVID-19 if they are used in time. This can often prevent very severe symptoms.

Call your local doctor's surgery or, if need be, the on-call doctor's service on 116 117 if your health does not improve within one week or even worsens. Call the emergency services on 112 in an emergency, for instance with acute respiratory distress.

Even younger people or people not at risk of more severe symptoms should perform a SARS-CoV-2 test if symptoms occur. If a SARS-CoV-2 coronavirus infection is confirmed by a coronavirus test, the affected individuals need to *isolate* to prevent transmission to others.

How can I protect myself from SARS-CoV-2?

Vaccination

Vaccination is the most important way of protecting yourself against COVID-19, and especially against a more severe disease. The German Standing Committee on Vaccination (STIKO) recommends primary immunisation as well as booster doses. The coronavirus vaccination provides good protection against more severe symptoms and reduces the likelihood of long COVID and PIMS in children. However, it cannot provide 100% protection. Immunised people can become infected and infect other people even if they have no symptoms of the disease themselves.

Information on current COVID-19 vaccination recommendations and mandatory vaccination for specific groups of people can be found at www.infektionsschutz.de/coronavirus/schutzimpfung/.

Hands-Face-Space rule

Depending on the level of infection, everyone – including people who have been vaccinated or recovered from COVID-19 – should follow the [Hands-Face-Space rule](#) to protect themselves and other people around them: keep your distance, practise good hygiene, wear a mask in everyday life, ventilate rooms and use the coronavirus Track and Trace app. Depending on the level of infection, specific measures, including mask-wearing or restricted contact, can be decided on a case-by-case basis.

Where can I find information about SARS-CoV-2 and COVID-19?

You can find comprehensive information on COVID-19 on the Federal Centre for Health Education (BZgA) website at <https://www.infektionsschutz.de/coronavirus/>.

You can also get information and advice from your [local health authority](#). However, it is often impossible to get through to local health authorities by phone at times of high incidence levels. Their websites usually provide options for contacting them. Further (specialist) information can be found on the pages of the Robert Koch Institute (RKI) at www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/nCoV.html.



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