

COVID-19

Background information for the Health Council

COVID-19 is a disease caused by infection with the SARS-CoV-2 virus. This coronavirus first emerged in China at the end of 2019 and has since spread worldwide, causing a pandemic. The first COVID-19 case in the Netherlands was reported in February 2020.

Currently, many candidate COVID-19 vaccines are under development. The Ministry of Health, Welfare and Sport requested the Health Council of the Netherlands to advise on possible target groups for COVID-19 vaccination to prepare for the situation once a vaccine becomes available.

To support the Health Council's advice, the RIVM has gathered background information on vaccination against COVID-19. This overview provides currently available information on COVID-19, including information on the pathogen, its routes of transmission, disease symptoms and risk factors, immunological knowledge on infection, development of candidate vaccines and their potential protective mechanism, passive immunization, the registration process for vaccines, the perception of the public towards vaccination and considerations regarding cost-effectiveness of vaccination.

COVID-19 symptoms range from very mild to very severe. Respiratory symptoms vary from mild, non-specific complaints through persistent dry cough and breathing difficulties, to severe pneumonia requiring mechanical ventilation and acute respiratory distress syndrome. The most common symptoms are fever, dry cough, shortness of breath, fatigue, nausea/vomiting or diarrhoea, and myalgia. Loss of smell and taste are also reported. Common complications are thrombosis and hypoxemic respiratory failure. Systemic disease may lead to myocarditis, cardiomyopathy, encephalitis, acute kidney injury, and liver dysfunction. People with comorbidity and people aged above 70 years are at increased risk of severe disease and death.