

What is known about long COVID so far

The Austrian Institute for Health Technology Assessment (AIHTA), in cooperation with the Belgian Health Care Knowledge Center (KCE), analysed the current data on long COVID. The evaluation of a total of 28 studies showed that hospitalised COVID-19 patients are significantly more frequently affected by long COVID than patients with milder courses of acute infections. The range of symptoms also varies greatly.

In most cases, a SARS-CoV-2 infection is over after about two weeks in patients who did not have to be treated in hospital. In hospitalised patients, the acute phase of the disease often lasts much longer. However, some people are neither cured nor able to cope after the acute infection, they still complain about symptoms such as exhaustion, fatigue, headaches, high blood pressure, smell and taste disorders or respiratory problems, also called long COVID.

The Austrian Institute for Health Technology Assessment (AIHTA), in collaboration with the Belgian Health Care Knowledge Center (KCE), analysed the current data on long COVID to clarify the prevalence of long COVID following a confirmed or suspected SARS-CoV-2 infection, which symptoms occur how frequently and provide an overview of possible risk factors. As of May 2021, a total of 28 studies could be identified to summarise the existing evidence of the clinical picture.

"According to the studies, severe COVID-19 courses are more frequently associated with long COVID," says study leader Sarah Wolf from the AIHTA, "but a look at several studies also showed that the range of the frequencies of the individual symptoms is very large. Long COVID symptoms occurred in 39 to 72 per cent of the hospitalised COVID-19 patients within one to three months after the acute SARS-CoV-2 infection; in the group of non-hospitalised COVID-19 patients, it was 5 to 36 per cent. Even after more than six months, up to 60 percent of formerly hospitalised patients still reported fatigue, exhaustion, cognitive impairment and/or respiratory problems; in the cohort of non-hospitalised patients, this symptomatology applied to 13 to 25 percent.

Multiple symptoms

The most common symptoms among long COVID patients up to one to three months after the onset of the acute SARS-CoV-2 infection were "fatigue" with 16 to 98 per cent, followed by "shortness of breath" (10 to 93 per cent) and headache with 9 to 91 per cent. In addition, 11 to 34 per cent of the long COVID patients complained of "cough", "chest pain" affected between 10 and 86 per cent of the patients and 4 and 89 per cent of the test persons reported "cognitive difficulties".

After three to six months, "fatigue/exhaustion" (16 to 78 per cent) and "cognitive impairment" (13 to 55 per cent) were among the most commonly reported long COVID symptoms. In addition, 16 to 21 per cent of the long COVID patients had to deal with "respiratory problems".

Potential but not confirmed risk factors

Twelve of the analysed 28 studies also examined possible risk factors. The results of six studies suggest that the "female sex" may favour the development of long COVID. "However, the difference in the incidence of the disease between men and women could also have other reasons than the biological sex and the immune response associated with it. For example, it is known that there are gender-specific differences in health behaviour, according to which women, for example, more often report a poorer state of health than men in surveys," emphasises study leader Sarah Wolf.

Another potential risk factor for long COVID, which has not yet been confirmed, is the high number of symptoms during the acute infection phase. Also, older age of the patients does not per se increase the probability of contracting long COVID.

"The exact causes and risk factors leading to the development of long COVID symptoms are currently unknown. Due to the large variety of different symptoms, it can be assumed that several causes are interwoven," shows the KCE and AIHTA report. For example, patients with severe courses of COVID-19 who had to be artificially ventilated have an increased risk of developing long COVID symptoms. In these patients, for example, possible organ damage caused by intensive care treatment could be the cause of long COVID. Long COVID symptoms that are not due to organ damage are to be distinguished from this. "However, the studies do not distinguish between long COVID symptoms due to organ damage and other causes," explains Sarah Wolf. The study authors therefore emphasise that "a more precise characterisation and classification of long COVID symptoms and their causes are needed for future studies to improve efficient planning of treatment strategies for different long COVID patient groups".

In addition, a standardised definition of long COVID is needed to differentiate the symptomatology from other diseases (e.g. "Post-Intensive Care syndrome") or causes (e.g. psychological problems due to the long lockdowns/psychological difficulties as a consequence of the pandemic control measures).

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Link to the study: https://eprints.aihta.at/1321/1/HTA-Projektbericht_Nr.135a.pdf

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