

# Parkinson's patients are particularly affected by COVID-19

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The risk of severe progression of covid-19 associated with Parkinson's disease was investigated for the first time. Credit: RUB, Kramer

A reason for these findings could be due to the fact that Parkinson's patients often also have many risk factors for a severe course of

COVID-19. For the first time, the cross-sectional study provides detailed nationwide data. The research team led by Professor Lars Tönges reports in the journal *Movement Disorders* of 4 May 2021.

## **Nationwide analysis of hospital data**

The team headed by Lars Tönges has analyzed data on Parkinson's treatment in 1,468 hospitals. The data were taken from nationwide databases in which information on the treated diseases and of treatments carried out in hospitals is publicly collected, for example by the Institute for the Hospital Remuneration System or the Federal Statistical Office.

A comparison between the period of the first wave from 16 January to 15 May 2020 with the same period of the previous year showed that overall hospital treatments due to Parkinson's disease had decreased by almost one third during the first wave. At the peak of the wave, the number of cases even fell by 70 percent. The reason for this was, on the one hand, the patients' concern about contracting the SARS-CoV-2 virus in hospital. On the other hand, many non-emergency treatments were postponed to ensure intensive care capacity.

## **Frailty increases the risk**

The analysis also showed that COVID-19 was more common in hospitalized patients with Parkinson's disease than in patients without Parkinson's disease, especially in those of advanced age over 65 years or with particularly severe Parkinson's disease. It was also confirmed that Parkinson's patients who had COVID-19 were more likely to be affected by the known high-risk conditions. "Parkinson's patients may be at particular risk for severe COVID-19 due to frailty, which increases with age and advanced disease stages," explains Lars Tönges. "Lung function may be impaired by common comorbidities and respiratory muscle

weakness associated with Parkinson's. In addition, dysphagia makes people more susceptible to pneumonia."

## **More deaths than in the previous year**

In the nationwide cross-sectional study conducted by the neurologists in Bochum, the hospital mortality of COVID-19 patients with Parkinson's disease was higher than that of COVID-19 patients without Parkinson's disease, especially in those between 75 and 79 years of age. The Parkinson's patients who died with COVID-19 were more likely to have chronic kidney disease and were more likely in a later stage of the disease compared to survivors. "Remarkably, more Parkinson's patients died in hospitals in 2020 than in 2019, which may also be due to circumstances associated with overall COVID-19 disease management," concludes Tönges.

"The study illustrates the need to ensure optimal treatment of Parkinson's patients despite the current pandemic," stress the authors. Telemedical services, for example, can also support this in the future. Data on the developments during the second and third waves are expected soon.

## **Parkinson's disease**

Parkinson's disease is one of the most common neurological disorders. It reduces mobility, fine motor skills, balance and the ability to walk. Depression, sleep disorders and memory problems can also be associated with the disease. It mainly affects people in the second half of life and is more common in men. Several people affected by Parkinson's have concomitant diseases such as coronary heart disease, high blood pressure or kidney [disease](#). "Since precisely these are significant [risk factors](#) for a severe course of COVID-19, the question arose whether inpatients with

Parkinson's also develop a severe course of COVID-19 more frequently or die from it," explains lead author Dr. Raphael Scherbaum from the RUB [hospital](#).

At the same time, the COVID-19 pandemic also affects the healthcare of all Parkinson's sufferers. "Rising numbers of patients show how important hospitalization is, especially during illness crises, for example after a fall or when medication is not effective enough," says Scherbaum. How much the first wave of the pandemic reduced the care of patients with Parkinson's was not known until now.

## Corona research at RUB

RUB has been conducting research on COVID-19 since the beginning of the coronavirus pandemic—across all disciplines. This means that not only medicine and life sciences are involved, but also, for example, psychology, sociology, law, education and history. An overview of the research projects can be found online.

**More information:** Raphael Scherbaum et al, Clinical Profiles and Mortality of COVID -19 Inpatients with Parkinson's Disease in Germany, *Movement Disorders* (2021). [DOI: 10.1002/mds.28586](https://doi.org/10.1002/mds.28586)

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