

Chronic fatigue syndrome: Number of patients expected to double due to long-term effects of COVID-19 pandemic

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Up to 80,000 people in Austria are estimated to suffer from chronic fatigue syndrome, also known as ME/CFS or myalgic

encephalomyelitis/chronic fatigue syndrome. The number of ME/CFS patients is expected to rise drastically due to long-term effects of the COVID-19 pandemic. However, research in the field has neither identified mechanisms of disease onset nor causal treatment approaches.

Scientists at MedUni Vienna have now identified possible biomarkers that could improve the diagnosis and treatment of long-lasting and debilitating fatigue. The study has recently been published in the [*Journal of Clinical Medicine*](#).

The study by Eva Untersmayr-Elsenhuber and her team from MedUni Vienna's Center for Pathophysiology, Infectiology and Immunology builds on earlier research on [immune disorders](#) and the intestinal barrier function in patients with ME/CFS. It is well known that ME/CFS patients often differ greatly in the clinical manifestations of their disease. However, despite intensive research, there is still no measurable parameter (biomarker) that clearly indicates the disease.

As the MedUni Vienna research team shows, ME/CFS patients can be divided into subgroups based on the function of their immune system.

The study was able to identify various biomarkers in the patients that indicate immune system disorders or reduced intestinal barrier function. As a result, differences relevant to clinical care were identified in ME/CFS patients that would have remained undetected without the previous immunological stratification of the ME/CFS patient group.

"In our study, we see that the immunological evaluation of ME/CFS patients is of crucial importance. Patients suffering from immunodeficiencies are characterized by an altered innate immune function. In ME/CFS patients with an intact immune system, the intestinal barrier function was reduced," explains the study's principal investigator Eva Untersmayr-Elsenhuber.

According to the researchers, this not only provides a more detailed insight in different disease mechanisms, but also indicates that depending on the patient's immune competence, some treatment approaches might be more suitable than others.

The next step will be to review the study results on a larger scale. In order to advance research in the field, the first ME/CFS Biobank in Austria is currently being set up at MedUni Vienna with the support of the WE&ME Foundation.

"ME/CFS Biobank Austria" collects human samples, which will be made available for future research projects. Untersmayr-Elsenhuber said, "To ensure that ME/CFS research can take place quickly and transnationally in the future, we have been coordinating with research groups in the UK, the Netherlands and Germany from the outset."

25% of those affected are bedridden

ME/CFS is a severe multisystemic disease that often leads to a high degree of disability. Some 60% of patients are unable to work full-time and 25% are bedridden. The exact causes of the [disease](#) are still unclear.

As diagnosis is difficult due to the lack of biomarkers, the number of people affected cannot be precisely quantified. According to current studies, between 26,000 and 80,000 people in Austria suffer from chronic fatigue.

Due to COVID-19, this number could double in the next few years. The links between infection with SARS-CoV-2 and ME/CFS are also the subject of intensive research.

More information: Johanna Rohrhofer et al, Immunological Patient Stratification in Myalgic Encephalomyelitis/Chronic Fatigue Syndrome,

Journal of Clinical Medicine (2024). [DOI: 10.3390/jcm13010275](https://doi.org/10.3390/jcm13010275)

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