

Press Release

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WHAT IS THE ROLE OF THE INFECTION AND THE PANDEMIC CONTEXT IN POST-COVID CONDITION? A GENEVA-BASED STUDY FINDS DIRECT EFFECTS OF THE VIRUS ON LONG TERM SYMPTOMS.

A study conducted by the Geneva University Hospitals (HUG) and the University of Geneva (UNIGE) addresses a main question that physicians and SARS-CoV-2 experts have been asking since the emergence of post-COVID condition (also called Long COVID): is it due to the infection itself or to indirect effects of the pandemic situation and the sanitary measures? The study confirms that the persistent symptoms are largely due to the infection with SARS-CoV 2 and to a lesser extent to the pandemic context. It shows that the symptoms persist 12 months the infection, and that they impact people's capacity to carry out their activities of daily living. This is the first major study comparing a SARS-CoV-2 infected population group to a population with a negative PCR test over a one-year period. The article, published in the [Journal of Internal Medicine](#), emphasizes the importance of implementing appropriate care and follow-up.

Post-COVID condition is characterized by persistent symptoms of COVID-19 at least three months after an infection by SARS-CoV-2. Faced with the great diversity of symptoms and the emerging knowledge on the subject matter, the scientific and medical communities wish to better understand the evolution and the exact causes of this condition. Are they mainly due to the infection itself or to indirect effects induced by the pandemic situation, in particular the sanitary measures and the resulting social and economic situations?

By comparing, one year later, people who tested positive for SARS-CoV-2 with those who tested negative, researchers from HUG and UNIGE report that 33.4% of infected people had mild to moderate residual symptoms, compared to 6.5% in the control group. “Our results confirm that the main cause of post-COVID condition is the infection by the virus, but that we must also consider the indirect effects generated by the pandemic situation”, specifies the first author of the study, Dr Mayssam Nehme, Senior resident at the Division of Primary Care Medicine at the HUG.

Functional capacity impacted

Symptomatic people tested for SARS-CoV-2 at HUG were followed, from April to July 2021, one year after their infection with the Alpha variant. 1,447 people were included in the study, 20% of whom had a positive PCR test and 80% a negative PCR test.

The main symptoms reported by participants included fatigue, dyspnea (difficulty breathing), headaches, insomnia and difficulty concentrating. People infected with SARS-CoV-2 reported that these symptoms impacted their functional capacity in 30.5% of cases, compared to 6.6% for the control group. Notably, productivity or the ability to work is up to three times lower in infected people. Mayssam Nehme is worried: "This loss in functional capacity affects the social, professional and personal aspects of life. It could therefore have an important cost on the society overall". Especially since everyone can develop persistent symptoms: men and women, people under 60 and people without a medical or psychiatric history.

Decline in quality of life

The quality of life and mental well-being were found to be poor in both groups, suggesting an overall impact of the pandemic on the quality of life, independently of the infection. Levels of anxiety and depression are even higher in the uninfected group than in the infected group.

Reduce the risk

Persistent symptoms affect the functional capacity for up to 12 months after the infection. "These results confirm that this long-term condition is complex, that it can impact everyday life, and that we are certainly only seeing part of it. It is therefore necessary to set up appropriate care, i.e. a multidisciplinary consultation and management plan given the great diversity of symptoms", indicates Idris Guessous, physician Head of the Division of Primary Care Medicine at HUG and associate professor at the UNIGE.

As SARS-CoV-2 continues to evolve and spread, physicians and professionals should continue monitoring patients and encouraging them to avoid an infection or re-infection, regardless of their age, gender and health status, to reduce the risk of developing a post-COVID condition.

Do you suffer from Post-COVID Condition?

The authors of the study also created the [RAFAEL platform](#) in November 2021 (in French). It allows citizens and users to determine whether or not they have persistent post-COVID symptoms and to orient them within the healthcare network. Rafael is for all age groups.

RAFAEL organizes monthly webinars until June, allowing Internet users to exchange with HUG doctors and other specialists in relation to this issue. The next one will be held on Wednesday, April 6.

Webinar schedule: <https://post-covid.hug.ch/evenements-agenda>

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The HUG: Care, Teaching, and leading-edge Research

The Geneva University Hospital (HUG) comprises [eight public hospitals and two clinics](#). Their missions are to provide health care to the community in all medical specialties, to help train physicians and health professionals, and to conduct medical and clinical research. The HUG operate as a national reference centre for [influenza](#), [emerging viral infections](#), [meningococcus](#), and transplant immunology, and are the [national reference laboratory for histocompatibility](#). They are also a WHO Collaborating Centre [in six areas](#), as well as [Centres of Excellence](#) in a number of sectors. The HUG treat 275,000 patients each year, with a capacity of 2,109 hospital beds, and employ 12.800 people.

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About the University of Geneva

The University of Geneva, Switzerland, was founded in 1559 by Jean Calvin and Théodore de Bèze and ranks amongst the top 100 best universities in the world. It enjoys worldwide recognition and develops an ever-strengthening international network. The University of Geneva welcomes about 19'000 students in its nine faculties teaching Sciences, Medicine, Humanities, Economics and Management, Social Sciences, Law, Theology, Psychology and Educational Sciences, as well as Translation and Interpreting. The University of Geneva fulfils three missions: education, research and knowledge-sharing. It is a member of the League of European Research Universities since 2002 and is a founding partner of Campus Biotech, the life science hub for the Geneva Lake region.

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