

Post COVID Symptoms: A Complex and Persistent Reality

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ABSTRACT

COVID-19 is a global pandemic that began in late 2019 which was caused by SARS-CoV-2 virus. This virus was first identified in Wuhan, China in December 2019. This virus primary spreads through respiratory droplets when an infected person coughs, sneezes, talks or breathes. People get affected with this virus by touching surfaces that are contaminated by the virus and then touching their faces. Fever, cough, fatigue, shortness of breath and loss of taste or smell are some of the common symptoms. After recovering from the initial infection some people may experience on-going symptoms like fatigue, brain fog and shortness of breath which was phenomenally known as long COVID. Post COVID symptoms commonly known as long COVID, have become an undeniable aspect of the pandemic's legacy. Even though, post COVID symptoms may vary widely from person to person. They are fatigue & exhaustion, respiratory issues, cognitive dysfunction (brain fog), sleep disturbances, joint & muscle pain and mental health struggles. Those who were once active may struggle with simple physical activities such as walking or climbing stairs due to the post COVID symptoms which have a great impact on their daily life. Post COVID symptoms can be resolved on their own within a period of few months. Self monitoring of the symptoms is also required by the patients by seeking the help of the health care professionals which can be useful to improve their quality of life.

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Introduction

COVID-19 is a global pandemic that began in late 2019 which was caused by SARS-CoV-2 virus. Millions of people over worldwide have been affected by this virus. It caused widespread of illness, death and major destruction in day to day life. This virus was first identified in Wuhan, China in December 2019. This began to spread rapidly leading to outbreaks and eventually been declared as a global pandemic by the World Health Organization on March 11 2020 [1,2]. This virus primarily spreads through respiratory droplets when an infected person coughs, sneezes, talks or breathes [3]. People get affected with this virus by touching the surfaces that are contaminated by the virus and then touching their faces [4].

Symptoms and severity

Fever, cough, fatigue, shortness of breath and loss of taste or smell are some of the common symptoms. Some people remain asymptomatic but still can be affected. To some people especially those with underlying health conditions (eg: heart disease, respiratory issues and diabetes) COVID-19 can cause severe respiratory problems like pneumonia, organ failure and even death. After recovering from the initial infection some people may experience on-going

symptoms like fatigue, brain fog and shortness of breath which can be phenomenally called as long COVID [5,6].

Prevention and control

Several vaccines were developed by Pfizer-BioNtech, Moderna, Astrazeneca and Johnson & Johnson. These vaccines were proved to be effective in reducing the severity of illness and deaths caused by this virus. To maintain the immunity, booster shots were also recommended. Some precautions like wearing masks, maintaining physical distance, frequent hand wash, avoiding large gatherings especially in the indoor settings were emphasized by the public health guidelines. White spray testing and contact tracing have played a key role in identifying & isolating the infected individuals. Quarantine measures have been implemented in many countries to slow down the virus spread [7].

Variants

SARS-COV-2 has mutated over time leading to new variants such as Delta and Omicron variants with increased transmissibility. Even though vaccines have remained largely effective against severe outcomes but, they remain less effective in preventing infections with some variants [8].

Global impact

Worldwide, the pandemic placed immense pressure on the health care systems. This led to shortage of medical supplies, hospital beds and healthcare workers. Economically, COVID-19 disrupted the supply chains by closing businesses and many people lost their jobs. Educational destruction has been a significant challenge along with social isolation and mental health issues. Many countries have made significant progress in controlling the virus through vaccination campaigns and public health measures. COVID-19 continues to pose a high risk particularly in regions with lower vaccination rates and more prevalent where variants are more in number. Vaccines improve treatments and better understanding of the virus that have helped in reducing the severity of the pandemic but the situation remains changing with periodic surges in the volume of cases and also in case of new emerging variants [9].

Post COVID symptoms

The world has been grappling since the onset of the COVID-19 pandemic not only with its immediate danger but also with the long term side effects faced by many survivors. Post COVID symptoms commonly known as long COVID, have become an undeniable aspect of the pandemic's legacy.

The spectrum of symptoms

Even though, post COVID symptoms may vary widely from person to person. They are as follows:

Fatigue and Exhaustion

The hallmark symptom of the long COVID is overwhelming fatigue which goes beyond the typical tiredness after an illness that can make them feel the basic tasks as impossible. Many of them report it as brain fog type of fatigue, make it hard to concentrate or engage in daily activities.

Respiratory Issues

Even after recovery from the acute phase of the illness, many individuals continue to experience respiratory issues such as dry cough or chest tightness and shortness of breath. This especially can cause trouble to those with pre-existing lung conditions or for those who were hospitalized with COVID-19.

Cognitive Dysfunction (Brain Fog)

Cognitive issues like difficulty in focusing, memory problems and brain fog are commonly reported. Routine tasks in day to day life can become mentally taxing leading to confusion, frustration and in some cases with decreased quality of life.

Sleep Disturbances

Insomnia and disrupted sleep patterns are frequent complaints from many long COVID sufferers. Trouble falling asleep at night is also reported by few. Even with adequate rest, many feel unrested and drained, that leads to ongoing fatigue.

Joint and Muscle Pain

Aches & pains, muscle soreness, general body discomfort with joint pains can persist for months. These symptoms can feel similar to those who experienced the acute phase of the virus but tend to stay long after the infection has passed.

Mental Health Struggles

The common side effects of long COVID are anxiety, depression and stress. Due to the uncertainty around recovery and the social isolation, many individuals experienced psychological issues which only amplify these concerns.

The Unpredictability of Recovery

One of the most frustrating aspects of post COVID symptoms is their unpredictability. Some people find themselves slowly improving over time, where as some others feel setbacks or symptoms that flare up unpredictably. Symptoms return with even more intensity when a patient finally feel normal and better for few weeks. For some patients the symptoms may emerge or worsen months after the initial infection. This unpredictability and uncertainty makes difficult for people to plan their lives and manage livelihood [10-12].

Impact on daily life

Those who were once active may struggle with simple physical activities such as walking or climbing stairs due to the post COVID symptoms which have a great impact on their daily life. For individuals working in demanding jobs, cognitive dysfunction and fatigue may make it nearly impossible



to perform at a pre-COVID level. In addition to these, social interactions can become challenging, as the fatigue and brain fog often effect the communication and engagement with others. The stigma surrounding post COVID conditions can also cause emotional burden, without visible signs of illness. People suffering from long COVID may experience disbelief or the suggestion that they were over reacting, which leads to feelings of isolation, sense of being dismissed and frustration. To manage fatigue one should pace themselves by gradually increasing physical activity and by practicing some relaxation techniques [13-15].

Conclusion

Post COVID symptoms can be resolved on their own within a period of few months. Self monitoring of the symptoms is also required by the patients by seeking the help of the health care professionals which can be useful to improve their quality of life.

References

1. Cucinotta D, Vanelli M. WHO Declares COVID-19 a Pandemic. *Acta Biomed.* 2020 Mar 19; 91(1):157-60.
2. Wu YC, Chen CS, Chan YJ. The outbreak of COVID-19: An overview. *J Chin Med Assoc.* 2020 Mar; 83(3):217-20.
3. Dhand R, Li J. Coughs and Sneezes: Their Role in Transmission of Respiratory Viral Infections, Including SARS-CoV-2. *Am J Respir Crit Care Med.* 2020 Sep 1; 202(5):651-9.
4. Chu DT, Singh V, Vu Ngoc SM, Nguyen TL, Barceló D. Transmission of SARS-CoV-2 infections and exposure in surfaces, points and wastewaters: A global one health perspective. *Case Stud Chem Environ Eng.* 2022 May; 5 :100184.
5. Tavakolifard N, Moeini M, Haddadpoor A, Heidari K, Rezaee M, Amini Z. Clinical Symptoms of COVID-19 and Their Association with Disease Outcome. *Adv Biomed Res.* 2022 Jan 31; 11:2.
6. Davis HE, McCorkell L, Vogel JM, Topol EJ. Long COVID: major findings, mechanisms and recommendations. *Nat Rev Microbiol.* 2023 Mar;21(3):133-146. doi: 10.1038/s41579-022-00846-2. Epub 2023 Jan 13. Erratum in: *Nat Rev Microbiol.* 2023 Jun; 21(6):408.
7. Pan L, Wang J, Wang X, Ji JS, Ye D, Shen J, Li L, Liu H, Zhang L, Shi X, Wang L. Prevention and control of coronavirus disease 2019 (COVID-19) in public places. *Environ Pollut.* 2022 Jan 1; 292(Pt B):118273.
8. Aleem A, Akbar Samad AB, Vaqar S. Emerging Variants of SARS-CoV-2 and Novel Therapeutics Against Coronavirus (COVID-19) [Updated 2023 May 8]. In: *StatPearls* [Internet]. Treasure Island (FL): StatPearls Publishing; 2024.
9. Naveed N, Ahmad K, Majeed H, Qureshi K, Ahmad I, Awan MF, Iftikhar T, Ahmad S, Noreen F, Amin MA, Batool H. The Global Impact of COVID-19: A Comprehensive Analysis of Its Effects on Various Aspects of Life. *Toxicol Res (Camb).* 2024 Mar 25; 13(2):tfae045.
10. Najafi MB, Javanmard SH. Post-COVID-19 Syndrome Mechanisms, Prevention and Management. *Int J Prev Med.* 2023 May 24; 14:59.
11. Fernández-de-Las-Peñas C, Palacios-Ceña D, Gómez-Mayordomo V, Cuadrado ML, Florencio LL. Defining Post-COVID Symptoms (Post-Acute COVID, Long COVID, Persistent Post-COVID): An Integrative Classification. *Int J Environ Res Public Health.* 2021 Mar 5; 18(5):2621.
12. Raj SVA, Jacob A, Ambu V, Wilson T, Renuka R. Post COVID-19 clinical manifestations and its risk factors among patients in a Northern District in Kerala, India. *J Family Med Prim Care.* 2022 Sep; 11(9):5312-9.
13. Leite NJC, Raimundo AMM, Mendes RDC, Marmeleira JFF. Impact of COVID-19 Pandemic on Daily Life, Physical Exercise, and General Health among Older People with Type 2 Diabetes: A Qualitative Interview Study. *Int J Environ Res Public Health.* 2022 Mar 27; 19(7):3986.
14. Hartley SL, Fleming V, Piro-Gambetti B, Cohen A, Ances BM, Yassa MA, Brickman AM, Handen BL, Head E, Mapstone M, Christian BT, Lott IT, Doran E, Zaman S, Krinsky-McHale S, Schmitt FA, Hom C, Schupf N; ABC-DS Group. Impact of the COVID-19 pandemic on daily life, mood, and behavior of adults with Down syndrome. *Disabil Health J.* 2022 Jul; 15(3):101278.
15. Haleem A, Javaid M, Vaishya R. Effects of COVID-19 pandemic in daily life. *Curr Med Res Pract.* 2020 Mar-Apr; 10(2):78-9.

