Archives of Pulmonology and Respiratory Medicine

ISSN: 2639-362X | Volume 4, Issue 1, 2021

DOI: https://doi.org/10.22259/2639-362X.0401004

Long Covid-19

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Long COVID is also known as post-acute sequelae of SARS-CoV-2 infection, post-acute sequelae of COVID-19 (PASC), chronic COVID syndrome (CCS), or a chronic lesion that persists after the acute phase of COVID-19. It can affect any system or organ such as the respiratory, nervous, cardiovascular, gastrointestinal systems, as well as the brain and metabolism. In addition, fatigue, musculoskeletal pain, anemia, and many other symptoms may also be observed, as mentioned below.1,2,3,4

The exact number of symptoms, but also the number of people suffering from the syndrome is unknown and varies depending on the population studied, definitions used, and time period studied. However, it appears that approximately 10% of people who test positive for COVID-19 have some, or all these symptoms.5

The definition, as well as the underlying mechanisms of the syndrome remain unclear. Diagnosis of the syndrome is confirmed by exclusion. Anyone infected with SARS-COV-2 may have CCS, thereby mistakenly believing that the disease is totally eliminated. A 2020 study claims that COVID-19 leads to heart inflammation (myocarditis). However, there are objections from other researchers who claim that findings and correlations are due to diagnostic errors and their similarities with other conditions, or even syndromes. 7

However, it is a fact that this syndrome does not occur after vaccination against COVID-19.

Currently, CCS cannot be strictly defined. However, it is a fact that people who showed severe symptoms or were hospitalized in ICUs usually require longer than two months to recover, although certainly, this time limit cannot be totally clear.1,2

Interesting statistics: 20-30% of people who developed COVID-19 had symptoms for more than a month.1

In another study, 21% of positive COVID-19 cases showed symptoms for more than 5 weeks.

More than 80% of those admitted to the hospital with severe symptoms experienced long-term fatigue and shortness of breath for a long period of time2. Additionally, most of the patients admitted to ICUs were highly likely to develop CCS after recovery. A study conducted in Wuhan showed that the majority of patients had COVID-19-related symptoms 6 months after disease onset. They also had respiratory failure during the same period. The most common symptoms in these patients were muscle weakness and fatigue (63%), sleep disorders (26%), as well as anxiety and depression (23%). 8,9,10

In a UK study, 30% of patients with COVID-19 were readmitted to hospital after 140 days and 12% of them died. In the same study, many patients developed diabetes mellitus and cardiovascular diseases, as well as liver and kidney problems. To date, causes of insulin resistance remain unknown. A March 2021 study conducted in Indonesia has shown that 63.5% (of patients) had symptoms after recovering from the disease. The most common symptoms in this study were fatigue and cough, followed by chest pain and headache.11,12,13,14.

However, it should be noted why some patients recover after 2-3 weeks and others have symptoms for many weeks or even months; this information remains unknown15.The United Kingdom's National Institute for Health Research assumes that there are four reasons:

- Persistent lung disease and heart failure

- Post-intensive care syndrome (PICS)

- Post-viral fatigue that appears to be the same as myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS), and

- Ongoing symptoms following COVID-19 infection

Other factors that cause new and persistent symptoms are:

- Persistence of the virus with respect to an inadequate immune response for a longer period of time.

- Reinfections with different viral strains or reinfections caused by other microbes

- Damage caused by the infection due to an overactive immune response

- Post-traumatic stress disorder in people who have previously experienced anxiety, depression, insomnia, or other mental disorders.16,17,18,19,20

Risk factors for CCS

Are the following:

- Age >50 years

- Obesity

- Asthma

- Existence of more than five (5) symptoms (e.g., cough, fatigue, headache, diarrhea, anosmia, tastelessness) within the first week of COVID-19.

Women are less likely to develop severe COVID-19, but more likely to develop CCS. According to some studies conducted for both sexes, this is due to chromosomal abnormalities, differences in sex-associated immune responses, and other biological factors.21,22,23

It should also be noted that the syndrome is not uncommon among pediatric populations. In an Italian study, 53% of children had symptoms 120 days after disease onset. Persistent symptoms were chest pain, nasal congestion, concentration disorders, myalgias, and palpitations. The latter symptom lasted for 6-8 months after diagnosis.24,25,26,27,28,29

Ultimately, it is recommended to list the symptoms shown by patients suffering from CCS.

- Extreme fatigue

- Persistent cough

- Muscle weakness

- Low-grade fever

- Difficulty concentrating

- Memory deficits

- Mood swings, often accompanied by depression and other mental disorders

- Headache

- Arthralgias

- Sharp, stabbing pain in the hands and feet

- Diarrhea and vomiting

- Taste and smell losses

- Dry throat and mouth

- First appearance of diabetes mellitus and hypertension

- Gastroesophageal reflux disease (GERD)

- Skin redness

- Shortness of breath

- Chest pain

- Palpitations

- Kidney problems (acute or chronic kidney injury)

- Changes in oral health (teeth, saliva, gums)

- Thrombosis of the deep venous system and pulmonary embolism

- Anemia 30,31,32,33

In conclusion, we can say that chronic COVID syndrome (CCS) is characterized by chronic, persistent damage, especially in people who developed severe COVID-19 or were hospitalized in intensive care units. Symptoms vary, but the pathogenic mechanisms by which they arise are unknown. Relevant assumptions have been made. However, more time and research are required to confirm them or formulate new, more valid ones.

COVID-19 is here. Vaccines, masks, handwashing, and social distancing are our weapons.

Each one should be well, for the whole society to be well. Societies are either altogether lost or saved.

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Citation: **Vasileios Spyropoulos, Agathi Spiropoulou, et al.** *Long Covid-19. Archives of Pulmonology and Respiratory Medicine. 2021; 4(1): 16-20. DOI: https://doi.org/10.22259/2639-362X.0401004*