

# Long COVID and Heart

If you are diagnosed with COVID-19 and are continuing to experience symptoms more than 3 months later, you may be one of the more than 18 million adults in the United States with post Covid syndrome, also known as long Covid. It is known that COVID-19 can have lingering effects on the cardiovascular system, including among people with no previous evidence of heart disease.

Even mild infection with COVID-19 virus may increase risk of a heart attack, stroke, or heart failure up to one year after recovering from the infection. According to CDC, 25 to 40% of the individuals with long Covid are unable to carry out their normal daily activities and about 4 million are unable to return to work.

When Covid started, it was thought to be a respiratory illness and that would continue for specific timeframe, like flu. But it turned out that there may be a lingering impact on some people after the acute phase ends. This is not the first example of a virus having a post viral syndrome .

Other examples include Epstein-Barr virus linked to lymphoma, hepatitis C virus can cause cirrhosis and human immune deficiency virus can lead to AIDS

**SYMPTOMS OF LONG COVID:** Symptoms of long Covid includes many cardiac and non-cardiac symptoms. The most common symptoms are general fatigue, and tiredness, persistent brain fog, and sleep disorders. Many may have G.I. symptoms, new or worsening migraine, muscle pain, joint pain, temperature, intolerance, skin rashes. People can also have taste and smell disturbances.

From a cardiac standpoint, chest pain with exertion, palpitation, and fainting spells can occur. Since these are typical symptoms of traditional heart disease, thorough cardiac testing is needed. Many times these test turned out to be normal.

Although inflammation of the heart muscle called myocarditis and inflammation of the pericardium called pericarditis have been identified as a consequence of acute inflammation from COVID-19, actual incidence of inflammatory heart disease in long Covid syndrome is quite low.

**WHO IS AT RISK:** Long Covid can affect anyone, including young people who have not had any previous illnesses. Risk is higher.

- In people over the age of 65.
- Women are more likely to have long Covid.
- People with pre-existing heart and lung disease and also with inflammatory disorders like rheumatoid arthritis.
- People who did not have Covid vaccine
- People with initial severe infection.

However, it can also develop in people who had mild disease.

**WHAT CAUSES LONG COVID:** We don't know the exact mechanism of the syndrome.

- Virus that causes Covid – 19 may be upsetting the immune system, suggesting possibly this is an auto immune reaction.
- Coronavirus infection upsets the gut's ecosystem
- Virus may attack and injure the innermost layer of the arteries, called endothelium and cause endothelial dysfunction.
- The virus damages communication in the brain stem or a nerve that controls autonomic functions in the body, called Vagus Nerve.

This autonomic dysfunction affects the heart rate and blood pressure, resulting in **POSTURAL ORTHOSTATIC TACHYCARDIA SYNDROME ( POTS )**. POTS causes the heart rate go very fast when you stand up from seated or reclining position. Rapid heart rate, dizziness, and fainting are symptoms of POTS

**WHAT CAN YOU DO:** There is no effective treatment for long Covid symptoms. Supportive strategies, such as aggressive electrolyte replenishment, compression stockings, and exercise may be helpful for regulating autonomic dysfunction and POTS. . Exercise is a great rehabilitation tool. However, it seems counterintuitive to tell someone who feels exhausted to exercise.

If they even try only walking for five minutes, a couple of times a week should help. There are some studies, suggesting Paxlovid taken during acute illness, MAY reduce the risk of post-Covid syndrome. Until specific therapies becomes available, supportive therapy such as advice on nutrition, exercise, adequate sleep, and managing depression and pain are the only choices.

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