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COMMENTARY

# Long Term Effects Post-COVID-19

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## Introduction

COVID-19, previously known as "2019 novel coronavirus" is a highly contagious respiratory disease caused by the SARS-CoV2 virus. COVID-19 was first detected in Wuhan, China, in late 2019. It then set off a global pandemic. China has infected over 36.5 million individuals and claimed over one million lives worldwide, as of October 8, 2020. [1] COVID-19 continues to spread rapidly across China and other countries. It has been transmitted to over 200 countries across the globe.

This virus is known to spread through person to person contact such as when an infected person coughs, sneezes, or talks. A person may also be exposed to COVID-19 by touching surfaces that are contaminated then subsequently touching one's mouth, eyes, or nose.

After getting exposed to the virus, symptoms may appear in 2-14 days. The symptoms include fever or chills, shortness of breath, cough, fatigue, headache, sore throat, congestion or runny nose, muscle or body aches, nausea and vomiting, and diarrhea. When a person experience any of these signs, they are encouraged to seek medical care as soon as possible [2]. After being diagnosed with COVID-19, it is recommended to self-isolate for 14 days.

This virus became a pandemic due to the fact that people flew out from China to Washington D.C after having symptoms of COVID-19. In research they have reported that the virus is constantly evolving, spreading through asymptomatic carriers, further making it a high global health threat [3].

With the information found on the CDC website, there are studies still developing on the long-term effects of life post-covid. Post-COVID effects may manifest symptoms as early as one month and as late as six months after infection [4]. It is estimated that 13.3% get these symptoms at one month or longer, 2.5% at 3 months or longer, if self-reporting, but more than 30% at 6 months among patients who were hospitalized [4].

## Negative Effects

COVID-19 has and continues to cause many complications such as loss of smell, diabetes signs, respiratory problems, and problems in our circulatory system. And these are just some of the many complications COVID-19 has caused. A 2021 study followed 100 people who had mild cases of COVID-19 and 100 people who repeatedly tested negative. More than a year after their infections, 46% of those who had COVID-19 still had smell problems. By

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contrast, just 10% of the control group had developed some smell loss, but for other reasons. Furthermore, 7% of those who had been infected still had total smell loss, or 'anosmia', at the end of the year. Given that more than 500 million cases of COVID-19 have been confirmed worldwide, tens of millions of people probably have lingering smell problems [5].

A French research team tracked the sense of smell of 97 patients averaging about 39 years of age. All had lost their sense of smell after contracting COVID-19 [6]. In November 2020, a global analysis published in the journal Diabetes, Obesity and Metabolism found that up to 14.4% of people who were hospitalized with severe COVID-19 also developed diabetes [7]. COVID-19 can cause lung complications such as pneumonia and, in the most severe cases, acute respiratory distress syndrome, or ARDS. Sepsis, another possible complication of COVID-19, can also cause lasting harm to the lungs and other organs [8].

Acute cardiovascular complications of COVID-19 infection include myocarditis, pericarditis, acute coronary syndrome, heart failure, pulmonary hypertension, right ventricular dysfunction, and arrhythmia [9].

COVID-19 has also affected our living situations and not just our health. The pandemic has decimated jobs and placed millions of livelihoods at risk. As breadwinners lose jobs, fall ill and die, the food security and nutrition of millions of women and men are under threat, with those in low-income countries, particularly the most marginalized populations, which include small-scale farmers and indigenous peoples, being the hardest hit. The economic and social disruption caused by the pandemic is devastating: tens of millions of people are at risk of falling into extreme poverty, while the number of undernourished people, currently estimated at nearly 690 million, could increase by up to 132 million by the end of the year [10].

## Mental Health

Reports indicate that COVID-19 may have influenced mental health issues with disturbances to include anxiety, depression, stress/trauma related disorders and even substance abuse. Children and adolescents are experiencing higher levels of anxiety and depression and reports indicate social isolation, loneliness, lack of physical exercise, and family stress to be contributing factors of these issues. In addition, it is believed that females may be at greater risk of suffering from COVID-related mental health issues.

It is believed that social distancing, school closures and physical restrictions has negatively impacted the mental health of children. The pandemic may have increased long term consequences in the mental health concerns including social anxiety and depression that many are suffering and will continue to suffer from [11].

COVID-19 is not only affecting the mental health of children and adolescents, but also parents and health care providers. Parents have the added stress of children being homeschooled and the fear of children being infected with COVID-19 which has led to an increase of child maltreatment. Public healthcare providers suffer from the same fear and anxiety of COVID-19 contact in patients they treat which has led them to isolate themselves, increasing their risk of falling into a mental health crisis.

This pandemic also caused an increase in eating disorders. There are three identified pathways in which the pandemic may have caused an increase in eating disorder risks. People began to limit their outdoor activities, an increased exposure to anxiety-provoking media and fears of contagion. Increased stress, social isolation all play a role in the increases of eating disorders which could have long term health effects on one's body [12].

COVID-19 has had a personal effect on some more than others and for some none at all. However, for many the effect has been detrimental, and they will suffer long term effects, whether they be physical healthcare issues of the organs or mental health issues due to the loss of family, friends or just their own struggle of depression and anxiety. Mental healthcare professionals and schools must work together to monitor, identify and assess when a person is falling into crisis and provide the best care possible [13].

## Positive Effects

While COVID-19 has had detrimental effects on public health, the environment may experience some benefit after the isolation period that COVID-19 provoked. There is a dramatic difference within the gas going into our lungs; we have cleaner, fresher air since going into contamination [14]. Animals returning to their natural behaviors without the in trepidation of humans, Some are tracking how fish and mammals are reacting to the decline in tourism [15]. This is probably the best the environment has looked.

Yet not all the positives just affect nature; New vaccines for children under 5 months are going into the clinical trials. Technology has also evolved new contactless paying systems through phone apps for online entertainment and long distance learning [16].

Social mannerisms and cleanliness are now highly acceptable. We've made up new ways of being respectful, like swapping out handshakes for head nods. Crime has been going down ever since COVID-19 ended. Public health messages are being taken seriously now as the public now has a new understanding of them. Hygiene quality has improved as families educate their children on the spreading of germs and establish safer mannerisms, such as covering their mouths when sneezing, coughing, and yawning [17].

Family, friends, and coworkers are more tightly knit. We as humans continue to thrive even after the pandemic. We look after each other more and worry about others we didn't even think about beforehand. Even in the medical community, medical collaboration between healthcare providers was unprecedented and worked together to contain the virus in their communities. That communication continues, even today.

## Conclusion

COVID-19 has impacted our communities in both positive and negative ways. COVID-19 has had a detrimental effect on our health and the economy. Post-COVID-19 syndrome involves a variety of ongoing symptoms that people experience more than four weeks after getting COVID-19 including fatigue, fever, respiratory symptoms, heart symptoms or conditions [18]. COVID-19 has also affected our economy in numerous ways such as people losing their jobs, reports on 10 million households being behind on rent, and 20 million households reporting having too little to eat in their home [19].

COVID-19 is a healthcare crisis that has led to unprecedented impact on healthcare services. At the heart of the unparalleled crisis, doctors face several challenges in treating patients with COVID-19. The psychological burden and overall wellness of healthcare workers have received heightened awareness, with research continuing to show high rates of burnout, psychological stress, and suicide. Also noted by researchers was anxiety and stress were significantly increased, leading to negative impacts on both self-efficacy and sleep [20].

There have been, however, some positive outcomes from the pandemic. Government imposed isolation and lockdowns have had a positive impact on environmental, air pollution, and hygiene [14]. Social mannerisms have also improved since the pandemic has come to the United States. Many people are now considerate of what they do in public, and they have taken into account keeping our communities clean [17]. One of the most positive outcomes of this pandemic is that many physicians, doctors, and nurses have come together to collaborate on how to take care of our communities and citizens. We have united as humans to overcome this virus, and we have, for the most part.

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