

# The Brain in COVID-19: No One Is Okay

*Be kind, for everyone you meet is fighting a hard battle.*

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*Fed Pract.*  
2020;37(9):396-397.  
doi:10.12788/fp.0046

**K**nowing that I am a psychiatrist, my friends and colleagues recently started to ask me, “Am I losing my mind?” The symptoms underlying these concerned queries are remarkably similar: inability to concentrate, becoming easily frustrated, forgetting things, not being as productive as usual, being overly tired despite doing less, and feeling unusually irritable, among other vague somatic symptoms. This condition is to be distinguished from COVID-19 *in the brain*, which is the protean serious neuropsychiatric manifestations of infection with the virus ranging from strokes and seizures to encephalopathy and psychosis especially in severe cases of infection.<sup>1</sup>

As federal health care professionals (HCPs), many of us are familiar with acute high stress medical situations, which the pandemic has expanded and intensified: In New York City during the surge, the US Department of Veterans Affairs (VA) intensive care physician pushing life-sustaining resources to their limits in a valiant effort to keep alive as many people as possible; the US Public Health Service HCP working miracles without adequate supplies or staff in underserved hard-hit areas of the country; or the US Department of Defense clinician deftly trying to contain outbreaks in contained spaces like ships.

Emerging data already show that HCPs and other first responders facing these repeated episodes of acute stress are experiencing increased depression and anxiety.<sup>2</sup> Research from prior pandemics suggests that this is only the beginning of a wave of negative mental health complications in HCPs.<sup>3</sup>

In the acute form of stress, the hypothalamic pituitary axis (HPA axis) is an evolutionary engine that coordinates multiple organ systems from lungs to liver to ensure efficient escape from primeval dinosaurs or more modern threats like viruses. Fueling that engine is the hormonal cascade that ends in excessive secretion of cortisol.

Chronic stress affects the body and brain in a different way than does acute stress. The problem is that this sympathetic nervous system surge is meant to power a sprint to survival not the marathon of uncertainty that COVID-19 has become. As long as the body stays in acute stress mode, the brain cannot downshift to the parasympathetic system that would usually moderate and regulate our neurobiologic circuits and neuropsychological processes. Like any other engine in overdrive, the stress gear erodes the machinery of our body and brain. Hence, the symptoms of psychophysical wear and tear—allostatic load—that most of us are experiencing.<sup>4</sup>

The subject of this column is the lower level of prolonged chronic stress. The mild and amorphous perturbations that can be described as “the brain in COVID-19.” It is a syndrome that affects even those who have never been infected with the actual virus. Though not usually life-threatening or disabling, it is unnerving and distressing as the queries from my colleagues and friends show. Their reports and my observations have led me to opine that “no one is okay” due to months of living under the strain of a pandemic.

The degree and scope of chronic stress that a person experiences caused by COVID-19 has to be contextualized and individualized. Those who have lost jobs, who are working while children are going to school online, who are caring for relatives, or who are in fear of losing their home face tremendous stress and challenges.<sup>5</sup> Yet even those like me, whose biggest worry is a dog barking through important teleconference meetings, still undergo a milder form of near constant stress.

Consider that all of us have become strangers in an even stranger land. Masks have become an object of political controversy. In states where masking is mandatory, you must be mask vigilant every time you go out. In many areas of the country stores have limited

hours, access, and supplies and any trip away from the house risks infection. Conversely, for those in a high-risk population, it may have been months since they have left home at all, and many sick, older, and vulnerable persons are suffering from isolation, loneliness, and boredom. The minor distractions and innocent pleasures that relieve day-to-day stress are no longer safe or available options, like eating out, attending shows, or taking trips.

Most of us are waiting for news of an effective available vaccine, some with yearning and others with dread. For George Gershwin, summertime meant that “the livin’ is easy,” but the summer of 2020 has been anything but easy and that takes its toll on the mind. Without adequate positive stimulation, attention wanders and memory fails to encode details, making even routine tasks more difficult; without meaningful social contact, emotions become sharp and ragged often hurting others. Most important, without periods in which we can relax, there is psychic exhaustion.<sup>6</sup>

At this point you may be thinking, “So, now that you told us we are all under chronic stress, are you going to tell us whether we can do anything about it?” There are many fantastic websites (including the VA) where experts far more qualified than I am offer excellent advice on coping with the pandemic.<sup>7</sup> What I can provide is 5 reflections on managing the stress that I have used and that others with whom I shared them have found helpful.

1. **Set realistic expectations.** We are in a different reality in which we may need to take on smaller tasks, pace our work and take more breaks and, most of all, give ourselves a break when we are not as functional as we were before the pandemic.
2. **Get out in nature.** Find a green space to walk or sit, spend time with companion animals, go for a hike or bicycle near water or mountains, or watch the birds in a forest. Nothing can help restore our perspective or calm frayed nerves like the socially distanced outdoors.
3. **Reach out.** Even though we cannot hug or even shake hands, we can still pick up the phone or mouse and check on someone who is down. All the great

traditions of the world agree that the best way to lift our own spirits is to help others.

4. **Be kind.** This is among the most important responses. As the epigraph suggests, everyone is engaged in an often silent and secret struggle and deserves our compassion. This call for kindness should be extended to ourselves so that we can be patient and compassionate to others.
5. **Have courage and hope.** This may be the most important of all. Whether we are infected or are fearing/avoiding infection, COVID-19 makes us sick in body and brain. We must have faith that there is something—the mind, the spirit—beyond the purely physical that gives us courage to outlast COVID-19 and to have hope for a postpandemic future that though not the same as before may well be in some ways better.

#### Disclaimer

The opinions expressed herein are those of the author and do not necessarily reflect those of *Federal Practitioner*, Frontline Medical Communications Inc., the US Government, or any of its agencies.

#### References

1. Troyer EA, Kohn JN, Hong S. Are we facing a crashing wave of neuropsychiatric sequelae of COVID-19? Neuropsychiatric symptoms and potential immunologic mechanisms. *Brain Behav Immun*. 2020;87:34-39. doi:10.1016/j.bbi.2020.04.027
2. Pappa S, Ntella V, Giannakas T, Giannakoulis VG, Papoutsis E, Katsaounou P. Prevalence of depression, anxiety, and insomnia among healthcare workers during the COVID-19 pandemic: a systematic review and meta-analysis. *Brain Behav Immun*. 2020;88:901-907. doi:10.1016/j.bbi.2020.05.026
3. Salazar de Pablo G, Vaquerizo-Serrano J, Catalan A, et al. Impact of coronavirus syndromes on physical and mental health of health care workers: systematic review and meta-analysis. *J Affect Disord*. 2020;275:48-57. doi:10.1016/j.jad.2020.06.022.
4. Harkness K. Strange physical symptoms? Blame the chronic stress of life during the Covid-19 pandemic. <https://the-conversation.com/strange-physical-symptoms-blame-the-chronic-stress-of-life-during-the-covid-19-pandemic-139096>. Published June 11, 2020. Accessed August 29, 2020.
5. Centers for Disease Control and Prevention. Coronavirus Disease (COVID-19) 2019. Coping with stress. <https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/managing-stress-anxiety.html>. Updated July 1, 2020. Accessed August 29, 2020.
6. Greenberg M. How the stress of the COVID-9 pandemic scrambles your brain. <https://www.psychologytoday.com/us/blog/the-mindful-self-express/202006/how-the-stress-the-covid-19-pandemic-scrambles-your-brain>. Published June 28, 2020. Accessed August 29, 2020.
7. US Department of Veterans Affairs, National Center for PTSD. Healthcare workers and responders. [https://www.ptsd.va.gov/covid/list\\_healthcare\\_responders.asp](https://www.ptsd.va.gov/covid/list_healthcare_responders.asp). Updated August 12, 2020. Accessed August 29, 2020.