# Treating the emotional components of Covid "Brain fog"

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About one third of patients who recover from Covid 19 develop a persistent condition, emerging weeks after recovery, called "Covid Brain Fog". (dysexecutive syndrome). The most common symptoms of this syndrome include confusion, headaches and impairment in sustained attention…short-term memory problems. Recently, researchers at Memorial Sloan Kettering believe they've identified the cause: **the presence of inflammatory molecules called cytokines in the cerebrospinal brain fluid of covid patients.** [1]

Cytokines are molecules released by the immune system in response to infections. Most people who died from Covid, died, not from the corona virus, but from their own body's hyper-immune response to the virus-an out-of-control immune response called: "cytokine storm". In this condition, the immune system doesn't turn off when the infection is gone, but instead, continues unregulated attacking the bodies' organs-including the heart and particularly, the lungs.

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[1] Jan Remsik, Jessica A. Wilcox, N. Esther Babady, Tracy A. McMillen, Behroze A. Vachha, Neil A. Halpern, Vikram Dhawan, Marc Rosenblum, Christine A. Iacobuzio-Donahue, Edward K. Avila, Bianca Santomasso, Adrienne Boire. **Inflammatory Leptomeningeal Cytokines Mediate COVID-19 Neurologic Symptoms in Cancer Patients**. *Cancer Cell*, 2021; 39 (2): 276 DOI: 10.1016/j.ccell.2021.01.007

Becoming infected with Covid 19, like medical events and procedures associated with **life threat**, are associated with high rates of PTSD. A strong predictor of PTSD in response to a trauma arises, in particular, from exposure to adverse childhood experiences (ACE)[2] such as: physical and/or sexual abuse or emotional abuse, neglect and witnessing violence towards one's mother, etc. Children witnessing deliberate, reoccurring interpersonal violence are associated with higher rates of PTSD development then soldiers exposure to heavy combat.

For the third of people who develop Covid Brain Fog, their PTSD symptoms can easily get lost amidst the multiple neurological symptoms associated with brain fog. Some of these patients, as children, witnessed physical, emotional or sexual abuse, and had to learn to detour their emotional responses away from their conscious awareness in order to protect their conscious mind from collapsing. This process is called somatizing: when strong emotions, such as fear, are "converted into physical pain,"

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[2] Schickedanz, A., N Halfon, N., Sastry, N., Chung, P. (2018). Parents' Adverse Childhood Experiences and Their Children's Behavioral Health Problems. Pediatrics,142 (2) e20180023; DOI: https://doi.org/10.1542/peds.2018-0023

most commonly in the form of headaches, back aches, fatigue and bowl irregularities.

## Covid “Brain Fog” case study

Brian, a 42 y/o married father of two children, was included in a 6-month Covid “long haul” study conducted by the neurology department of a teaching hospital in the Chicago area, a month after he and his family recovered from Covid. His symptoms included a persistent loss of concentration and focus, trouble finding words, slurring of speech, becoming overwhelmed by simple tasks, chronic headaches, irritability, fatigue and a temporary return to a childhood “stutter”. At the end of the study, Brian was encouraged to seek psychotherapy and was referred to the author by a colleague.

### Initial interview

During the initial interview with the author, Brian reported feeling an intense, intrusive fear of becoming ill again. “I’m terrified it will happen again. I’m afraid of becoming a vegetable.” Of note, in his childhood history: Brian was a witness to his parents’ abusive marital dysfunction, which was characterized by his father’s chronic physical and emotionally abuse of his mother. He reported that 15years ago he “cut off “all relations with his

father. When asked about any history of headaches, Brian reported having them often as a child. He also reported a history of stuttering from age 6-14. He reported playing soccer on his high school team and at age 18 he received an athletic scholarship to a midwestern college to play soccer. During his freshmen year he ruptured ACLs in both knees and had to give up playing soccer. Since these injuries he reported chronic pain in his knees.

Given the history mentioned above, the author suspected PTSD symptoms arising from Brain's covid illness as well as a predisposition for PTSD based on his childhood ACEs. Given his history of headaches, Brain may have also somatized his emotional responses (fear, anger) to witnessing his father's abuse of his mother in the form of headaches as a child.

A treatment plan was proposed that was based on a hypnotherapeutic approach to the treatment of PTSD. [3] In his first and only session, Brain proved to be an excellent hypnotic subject and rather quickly developed hypnotic trances suitable for therapy. Near the end of his third trance, the author established ideomotor signaling with Brian, in particular "yes" and "no" and "I don't know". [4]

[3] For a further description of this treatment approach, see pp.8-23 in 'New Hypnotherapeutic Treatment for PTSD" Located in https://www.hypnoticpsychotherapy.com/educational-materials.

[4] For a more detailed description of the development and use of ideomotor signaling, see: Ibid, pp13-18

Using his unconscious signals, Brian was asked what percentage of his headaches he thought were physical and what percentage were emotional. He responded “yes” to 20% emotional and 80% physical. The author then suggested that he would shortly bring Brain out of trance by counting back from 20-1. Furthermore, Brian was given a posthypnotic suggestion: when the author reached the count of one, Brain would awaken and the author would ask him: “are you awake?” Brain was told he would answer “yes” and, as soon as he answered “yes”, suddenly, but not immediately, the emotion that comprised the 20% of his headaches would hit him very hard. He was told to share whatever he wanted to share about his experiences and feeling and then, after a few minutes, the author would restart counting from one to twenty and he would go into a fourth trance. He was further told that as soon as he began to enter a fourth trance, the feelings that hit him hard would quickly subside, his mind would become blank and he would feel deeply relaxed. Finally, Brian was told that in a fourth trance, the author would have another task for him to complete.

Upon reaching the count of “one”, Brain awakened. The author asked him how he felt, to which Brain answered: “very relaxed. I was very deep”. When the author asked

him if he was awake, Brian responded causally by saying “yes” and then hesitated. Shortly, he began to breath heavily, his face grimaced and body began to shutter, then he moaned and began to cry. The author then asked him to describe the emotion he was feeling. “Fear…really scared”. After a few minutes, the author started slowly counting from 1-20. On the count of 10, Brain’s breathing began to slow and his body began to relax and he closed his eyes. As the author continued his counting to “twenty, he interspersed suggestions for deepening his relaxation and the development of feelings of comfort and ease-“feelings you haven’t felt in a long time.” After a few minutes of silence, while Brian sat deeply relaxed and breathing slowly, the author told Brain that he was going to start counting back from 20-1 again. He gave Brian a post hypnotic suggestion that, upon awakening, Brain didn’t need to try and remember anything and that everything that he had felt, learned and understood, his unconscious would remember and share with him, to one degree or another, in the future anytime he wanted to or needed to recall it. The author also suggested that, in the future, whenever his head ached, the pain would quickly leave his head and go into his knees-a place in his body where he learned how to manage pain since college.

Upon awakening from his fourth trance, Brain reported feeling lighter and happier than he had in a long time-without a head ache. The author asked him how his knees felt. “Like they always hurt, but I’m used to that. I can live with them hurting.” Shortly thereafter, the author told Brian that he could return for another session in the future anytime he wanted. However, no further appointments were scheduled. A week later Brain texted the author reporting that he had been doing a lot of self-work: “the last five days have been great. I seem to have found a path to fixing this crap in my head. I’ve been working on breathing techniques and this seems to be helping. I did read about PTSD and there seems to be some correlation or similar symptoms. My pain is minimal and livable so far.” Two weeks later Brain called the author to refer a “buddy” who he said had head issues like his and asked the author to talk to him.

## Summary

In the author’s opinion, Brain appeared to utilized his trance experience in a rather idiosyncratic manner which left him feeling pleased and proud of his own progress. He shared his hypnotic experiences with his neurology team, who were most encouraging. They provided him with an extended treatment plan which included a medication

called modafinil (used to treat narcolepsy) and they recommended that he use a CPAP machine to improve his sleep.

Furthermore, the author hypotheses that the suggestion provided for amnesia regarding the content of Brian's experiences in his fourth trance (including his "fear" catharsis), appears to have been accepted and enacted upon unconsciously resulting in an integration of his adult "fear" (covid) response relative to his past childhood traumas. Consequently, Brian quickly began to regain a degree of self-control he felt he'd lost since becoming infected with Covid. His overall response, to date, has been to take an active role in taking control of his "brain fog".

## References:


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