



Is Brain Fog a Temporary or Life-long Condition?

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To Editor,

In the 1880s, German physician Georg Greiner coined the concept of “brain fog” to describe the cognitive deficits associated with delirium. The term “brain fog” has been used intermittently since then to describe sluggish cognition. It gained popularity again in the 1990s as a way to describe chronic fatigue syndrome and some autoimmune diseases. However, there are no diagnostic criteria for brain fog and it is not a medical condition.¹

The term “brain fog” describes cognitive difficulties that are increasingly used colloquially. Long-term COVID-19 is characterized by persistent symptoms following a COVID-19 diagnosis that cannot be explained by any other illness. Persistent symptoms following COVID-19 are often described as “brain fog.” Brain fog syndrome, which is associated with excessive academic strain, was revived in the 1960s and was included in the DSM-IV.²

As a result of post-COVID-19 infection, residual cognitive impairment (“brain fog”) often interferes with work and daily activities.³ Recent investigations have shown that fungal co-infections significantly affect the morbidity and mortality of patients with COVID-19.⁴

Many people think that brain fog cannot be cured, but fortunately, it can be treated, and the most effective treatments are listed here. Patients with complaints of brain fog, especially those who need intensive care in the acute phase, should be evaluated for neurological causes, such as strokes and seizures, which may require additional evaluation and medication. When those factors are controlled or ruled out, psychologists advocate for evaluating cognition, neuroinflammatory markers, psychological factors, and sleep disorders in the treatment of brain fog. As the four components of brain fog may not apply to all patients, each patient will likely need an individualized treatment plan. Based on two broad categories, psychologists use the factors outlined here to determine the initial evaluation and referrals: (a) the patient’s medical and psychiatric history, current symptoms, goals and motivations to improve, and limitations (inflexible work schedules or financial constraints); and (b) the health service psychologist’s

ability to treat these symptoms or make appropriate referrals. Additionally, some health service psychologists may be well-prepared to manage sleep, mood, and related disorders. To effectively manage chronic diseases such as brain fog, it is imperative to assess the adequacy of treatable lifestyle factors and educate patients on how to optimize health behaviors, such as stress management, sleep quality, and exercise.⁵

A study conducted by Fesharaki and colleagues suggested that N-acetylcysteine (NAC), which is being tested for traumatic brain injury, could also improve long-term cognitive deficits following COVID-19. In fact, the combination of guanfacine and NAC in long-COVID-19 shows beneficial neurocognitive effects.⁶

Thus, brain fog is not a lifelong condition, and fortunately, it can be cured.

Competing Interest

There are no conflicts of interest to declare.

Ethical Approval

Not applicable.

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