

Post-viral fatigue syndrome (PVFS) is a debilitating condition that affects a significant proportion of individuals following a viral infection. PVFS is characterized by severe fatigue, muscle weakness, and cognitive impairment. As one type of the PVFS, the emergence of long COVID as a significant health concern has raised several questions about its causes, symptoms, and possible treatments. The pathogenesis of PVFS is not well understood, and there is no definitive treatment for the condition. There have been several clinical trials testing potential treatments for PVFS, including cognitive-behavioral therapy, exercise therapy, and pharmacological treatments. Cognitive-behavioral therapy and exercise therapy have both been shown to be effective in reducing fatigue and improving physical function in individuals with PVFS. Additionally, pharmacological treatments, such as antiviral agents and immunomodulators, have been tested with some promising results. However, there is a need to develop more effective treatments and to gain a better understanding of the underlying mechanisms of PVFS. Studies using animal models of viral infection have revealed several potential mechanisms that may contribute to the development of PVFS. These include immune system dysfunction, alterations in the hypothalamic-pituitary-adrenal axis, and mitochondrial dysfunction. In particular, studies using mice and rats have shown that viral infections can cause persistent inflammation in the brain and the peripheral nervous system, which may contribute to the development of PVFS, and anti-inflammatory agents can improve fatigue-related behaviors in animal models of PVFS. In this presentation, I summarize recent advances in both basic and clinical studies on PVFS.