

What does this new study mean for patients?

Our recent research focuses on how changes in the muscles contribute to reduced exercise capacity and post-exertional malaise (PEM) in long COVID patients. Long COVID, a condition where symptoms persist for more than three months after an acute COVID-19 infection, often brings significant limitations. Common complaints include extreme fatigue, muscle pain, cognitive problems ("brain fog"), and PEM: a worsening of symptoms after physical or mental exertion, which can last for days or even weeks.

In our review, we discuss the potential causes of these symptoms. We focus on specific muscle-related changes, such as disruptions in mitochondrial function, which reduce the muscles' ability to generate energy, issues with oxygen delivery to the muscles, and a shift to less efficient muscle fibre types. We also highlight the role of inflammation and muscle tissue damage following exertion. These findings offer new insights into why physical activity leads to worsening symptoms, such as fatigue, muscle pain, and PEM, in some patients, and why many find it challenging to resume their usual daily activities—or even light physical exertion—without triggering symptom flare-ups.

It is important for patients to understand that the exact mechanisms behind PEM and long COVID are not yet fully understood. While progress is being made in research, there are currently no specific treatments available to directly address muscle-related problems or PEM. This can be frustrating for many patients but also underscores the importance of carefully managing physical activity and listening closely to the body's signals.

We encourage patients to work with their healthcare providers to develop a personalised plan for daily activities and exercise. Avoiding overexertion by tailoring activities to what is manageable and building in sufficient rest is crucial. Striking a balance between activity and recovery can help manage symptoms and reduce the risk of worsening them.

For those seeking more information or who have questions about our findings, we recommend reaching out to specialised patient organisations. These organisations not only provide information and support but also foster a community where patients can share experiences and find understanding.

With this research, we aim to contribute to a better understanding of long COVID and PEM, paving the way for more targeted treatments in the future.