

### What's included in this review?

- Clinical effectiveness of rehabilitation in ambulatory care
- Symptom trajectories two years after SARS-CoV-2 infection
- Long-term impacts of COVID-19 in Wellington, New Zealand
- Digital interventions and personal support
- Mental health interventions
- Rehabilitative interventions
- Glossary

### Clinical effectiveness of rehabilitation in ambulatory care for patients with persisting symptoms after COVID-19: A systematic review

(Dillen et al., 2023)

[Find abstract here.](#)

#### SUMMARY:

This review collated and synthesised all available evidence on the effects of rehabilitation treatments applicable in ambulatory care. Studies that examined physical training programmes, breathing exercises, olfactory exercises, multidisciplinary treatment programs, nutritional supplements, and other complementary therapies were included. The review concluded that physical training, breathing exercises, olfactory training and multidisciplinary treatment may be effective rehabilitation therapies for patients. However, given the inconsistency, indirectness and imprecision of included studies, the quality of the evidence is very low.

#### COMMENT:

This review calls for high-quality, rigorous studies, particularly in self-management methods and occupational therapies, given the lack of evidence.

## Kia ora koutou katoa.

Welcome to the second edition of the Long COVID Literature Review. We aim to bring you monthly summaries of interesting literature concerning Long COVID. We prioritise Aotearoa New Zealand and Indigenous literature and publications determined to be high-quality, evidence-based research.

### Recovery and symptom trajectories up to two years after SARS-CoV-2 infection: Population based longitudinal cohort study

(Ballouz et al., 2023)

[Find abstract here.](#)

#### SUMMARY:

This population-based longitudinal study evaluated symptoms and health outcomes associated with COVID-19. Over half (55%) of participants reported returning to their normal health status in less than a month after infection. At six months, 23% (95%CI: 20% to 27%) reported they had not recovered, with this proportion decreasing over time. When assessing changes in self-reported health status, most participants reported that they had recovered at all follow-up time points (6, 12, 18 and 24 months). However, five per cent (95%CI: 4% to 8%) of participants reported worsening health status, and 4% (95%CI: 3% to 7%) reported stable levels of health impairment. Despite a decrease in the severity of symptoms and health impairment, 18% (95%CI: 15% to 22%) of participants reported COVID-19-related-symptoms at 24 months, and 9% (95%CI: 6.5% to 11.2%) reported symptoms were continuously present at all time points.

#### COMMENT:

At all-time points, 9% of participants reported COVID-19-related symptoms. Extrapolating this proportion to Aotearoa New Zealand's population, it is estimated that more than 220,500 people, including 32,400 Māori, are expected to experience persisting COVID-19-related symptoms for up to 24 months. This will significantly impact individuals, whānau, communities and the demand for healthcare services.

# LONG COVID REVIEW

## The long-term impacts of COVID-19 on confirmed cases at least 12 months post-infection in Wellington, New Zealand: An observational, cross-sectional study

(Kearns et al., 2023)

[Find abstract here.](#)

### SUMMARY:

This cross-sectional study explored the prevalence of symptoms in confirmed cases of COVID-19 after at least 12 months post-infection within the Wellington Region. Of the 42 participants, over half (52%) felt their overall health was worse than before infection. Almost all participants (93%) reported having at least one ongoing symptom at 12 months post-infection. Half of the participants indicated some level of depression or anxiety, and nearly a third of participants attributed their depression and anxiety solely to COVID-19. Participants also reported having issues conducting usual activities, mobility and having poorer sleep quality. Half of the participants were classified as fatigued.

### COMMENT:

As reflected in the participant sample of this study, the first wave of COVID-19 in Aotearoa New Zealand predominantly impacted European residents. Ongoing and future studies need to investigate the ethnic differences between the long-term impacts of COVID-19 or Long COVID in the Delta and Omicron variants, which disproportionately impacted Māori and Pasifika.

**Mātauranga Raranga**  
Long COVID Registry  
Aotearoa New Zealand

<https://www.lcregistry.auckland.ac.nz/>

## Longitudinal evaluation of an integrated Post-/Long COVID management programme consisting of digital interventions and personal support:

### A randomised-controlled trial

(Derksen et al., 2023)

[Find abstract here.](#)

### SUMMARY:

This randomised controlled trial investigated whether participants who received a healthcare facilitation programme would experience fewer COVID-19-related symptoms and have higher social participation and workability than an untreated comparison group. Three groups of participants were recruited: an intervention group, which included a diagnostic assessment from a team of specialists to ensure digital interventions were tailored to an individual's capacity; an active control group, which received digital interventions based on participants primary symptoms; and a care-as-usual comparison group. There was a significant reduction in symptom severity across all time points, with a more pronounced effect in the intervention and the active control group than the comparison group. There was no evidence to suggest workability and social participation improved with interventions. Across all measures, there was no significant statistical difference between treatment groups.

### COMMENT:

Digital interventions reduced the experience of COVID-19-related symptoms but did not improve workability or social participation. Interestingly, there was no significant difference between treatment groups, suggesting digital interventions without specialist assignment provides beneficial results. This finding could benefit the those with Long COVID who cannot access specialist healthcare.

This study has not yet been peer-reviewed.

# LONG COVID REVIEW

## Interventions to support mental health in people with Long COVID: A scoping review

(Al-Jabr et al., 2023)

[Find abstract here.](#)

### SUMMARY:

This scoping review identified interventions to support the mental health of those with Long COVID. A total of 17 studies were included, all of which reported positive findings. Studies that included interventions that used drug products (some in combination with standard rehabilitation programs) reported significant improvements in depression, anxiety, health-related quality of life and sleep. Other studies examined rehabilitation programs or wellbeing services and found positive findings. Cognitive treatment and physiotherapy significantly improved symptoms of anxiety and depression. Other unconventional interventions, such as an English National Opera programme and a Neurofeedback programme, reported significant improvements in mental health.

### COMMENT:

It is important to emphasise that Long COVID is not a psychological illness but can have psychological impacts that need treatment. Mental health interventions may provide beneficial effects relating to anxiety, depression and health-related quality of life for those with Long COVID. However, the quality of evidence is low and, therefore, more research is needed to identify the impact of mental health interventions for those with Long COVID.

## Glossary

### 95% Confidence Interval [95%CI]

The range of values we are certain the true value lies.

## Rehabilitative interventions in patients with persistent post-COVID-19 symptoms: A review of recent advances and future perspectives

(Gloeckl et al., 2023)

[Find abstract here.](#)

### SUMMARY:

This review describes phenotypes [groups] of post-COVID-19 patients that may be useful for health professionals to evaluate and plan patient rehabilitation options. It describes the symptoms presented most commonly in different severities of COVID-19 and potential rehabilitative interventions. The review also includes the barriers and facilitators to rehabilitation, identifying red flags for rehabilitation and the importance of setting realistic expectations within care. The review emphasises the importance of individualising rehabilitation programs, as many patients do not fit into one specific rehabilitation discipline (i.e., neurology, cardiology or pulmonology). As highlighted by Gloeckl et al. (2023), previous evidence is based on observational trials without control groups; the review calls for randomised controlled trials to be conducted to explore the benefits of multidisciplinary rehabilitation on COVID-19 symptoms, quality of life, and working ability.

### COMMENT:

A review that all should read, especially those treating or supporting people with Long COVID. As a good summary, Figure 2 provides a proposal regarding the relevant factors to consider when developing a Long COVID rehabilitation programme for individuals.

If you or your family member has Long COVID and are interested in being involved in future Long COVID research, please contact **Bailey Yee**.



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