

## Physical Rehabilitation in the ICU



Approximately 65% of patients who survive critical illness suffer clinically detectable weakness due to muscle mass loss, myopathy and polyneuropathy. These changes occur early in ICU admission and are associated with prolonged weaning from mechanical ventilation and increased ICU and hospital length of stay. Clinical weakness is also associated with increased mortality both in the hospital and in the ICU and over the first year after ICU discharge. Despite the high prevalence of clinical weakness among critically ill survivors, there is significant variability in physical rehabilitation modalities and dosage used in the ICU.

Physical rehabilitation is commonly used to manage the physical sequelae of critical illness. Rehabilitation in the ICU is intended to reverse muscle catabolism, mitigate neuropathy and minimise the effects of immobility. Early systematic reviews have shown the safety and feasibility of physical rehabilitation in the ICU and improvements in physical function, muscle strength, ventilator-free days, health-related quality of life, and reduced length of stay in the ICU. However, recent systematic reviews do not support these findings.

A study was conducted to investigate the effect of physical rehabilitation in the ICU on patient outcomes and the impact of task-specific training and dose-response profile. Study researchers included randomised controlled trials and controlled clinical trials that investigated physical rehabilitation commencing in the ICU in adults. Outcomes included muscle strength, physical function, the duration of mechanical ventilation, length of ICU and hospital stay, mortality and health-related quality of life.

A total of sixty trials with 5352 participants were included in the analysis. Findings showed that physical rehabilitation improved physical function at hospital discharge, reduced ICU length of stay by 0.8 days, and reduced hospital length of stay by 1.75 days. There was no impact on other outcomes from physical rehabilitation. It was also observed that interventions were more effective in trials where the control group received low-dose physical rehabilitation and those that investigated functional exercises.

These findings show that physical rehabilitation in the ICU can help improve physical function and reduce the ICU and hospital length of stay. However, it does not appear to impact other outcomes.

Source: [Critical Care Medicine](#)

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