

## To Mobilise or Not to Mobilise



Patients who receive prolonged ventilation are at significant risk of muscle atrophy, severe weakness, long-term disability, and increased mortality. Early mobilisation has been advocated in multiple international guidelines, with widespread support from healthcare professionals.

Early mobilisation is believed to have potential benefits, such as reducing the duration of mechanical ventilation, decreasing the occurrence of delirium, and enhancing functional recovery. However, evidence from individual trials regarding these outcomes is inconsistent.

Clinical practice guidelines universally recommend implementing early mobilisation activities in the ICU. However, the specific recommendations for operationalising early mobilisation vary across guidelines. Most guidelines highlight the importance of the ABCDE bundle of care, which includes awakening, breathing, circulation, delirium monitoring and management, and early mobility. Sedation is often a barrier to early mobilisation. Other crucial factors for implementation include clinician expertise and the availability of appropriate mobilisation equipment. Regular evaluation of a patient's physiological status is necessary to determine the suitability of mobility activities, and discussions should be held in advance regarding the termination of a mobility session if required.

Early mobilisation involves implementing an exercise intervention. The goal is to facilitate mobilisation as soon as it is deemed safe. However, there are several difficulties with interpreting the evidence for early mobilisation due to the lack of a clear definition of "early." Different randomised controlled trials have used varying time frames to define early mobilisation, such as within two days of mechanical ventilation, within five days of ICU admission, or at any time during ICU stay. In a large randomised controlled trial published in 2022 with 750 participants, the mean time from ICU admission to randomisation was 2.5 days, and early active mobilisation was assessed on the day of randomisation for 86% of the intervention group. In a more recent study by Patel and colleagues in 2023 with 200 participants, early mobilisation occurred within 1.1 days.

Another challenge is that the definition and intensity of "mobilisation" can vary among trials, including variations in the use of passive or active exercises and different types of equipment. Evidence indicates that functional exercises, such as standing, sitting, and walking, appear most effective.

There is a possibility of heterogeneity in the treatment effect of early mobilisation. Some patients may respond more favourably than others.

International clinical practice regarding early mobilisation varies widely with varying terminologies such as usual, standard, conventional, or routine care. Some trials include a usual care arm with minimal mobilisation in the ICU, while others have a usual care arm that includes a substantial amount of mobilisation.

The recent phase III TEAM trial has raised concerns about the safety of early mobilisation compared to standard care. The trial involved 750 critically ill patients from multiple hospitals across six countries. The participants had a diverse range of conditions. Adverse events were 2.5 times more likely to occur in the intervention group receiving early mobilisation than in the usual care group. These adverse events were more likely to reoccur in the same patients but resolved upon discontinuing the early mobilisation session. Following this trial, a systematic review examined the effects of early mobilisation on 6-month functional recovery. Results indicated a 75% probability of early mobilisation being associated with an increase in the number of days alive and out of the hospital at six months. There was a 95% probability of improved physical function at six months. However, early mobilisation was also associated with a 66% chance of increased adverse events and a 72% chance of increased mortality at six months.

In the TEAM trial, the usual care group received active or active-assisted mobilisation for an average of nine minutes per day, approximately five days per week, compared to 21 minutes per day, approximately seven days per week, in the intervention group. Although similar mobility milestones were eventually achieved in the usual care group compared to the intervention group, it took slightly longer for 89% of patients, including those on mechanical ventilation. On the other hand, the study by Patel and colleagues reported improved cognitive function with early mobilisation compared to standard care. This study's standard care included mobilisation during mechanical ventilation for only 6% of patients.

Although there are still unanswered questions regarding the specifics of early mobilisation regarding type, timing, and dose to achieve optimal patient outcomes, early mobilisation should be tailored to individual patients. Clinicians should consider and apply the best available evidence to their clinical setting, prioritising safety and functional recovery while minimising risks. Future trials investigating early mobilisation should adopt an individualised approach and use innovative trial designs to assess cumulative exposure to mobilisation.

Source: [Intensive Care Medicine](#)

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