Early Mobilization After Stroke: A Systematic Review of the Literature

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Purpose/Hypothesis: Physical therapy has been shown to have a positive impact on functional recovery after stroke by reducing disability and facilitating achievement of mobility goals. Currently, there is no consensus on the optimal time at which to initiate mobilization in the acute phase after a stroke, and there is wide variation in acute stroke clinical practice patterns with respect to this issue. More recent research suggests that neuroplastic changes may begin within hours of stroke onset, fueling the argument that early physical therapy intervention may be better for long-term recovery. The purpose of this review is to determine if early mobilization is more effective than standard care in improving functional outcomes in individuals with stroke.

Number of Subjects: Eight research articles

Materials/Methods: This systematic review of the literature was completed in accordance to the PRISMA guidelines, using the PEDro scale to assess for risk of bias. The search terms “stroke” and “early mobilization” were applied to multiple database searches.

Results: Five of the 8 articles reviewed found that early mobilization resulted in a greater functional recovery post-stroke as compared to standard care. The majority of these articles initiated mobilization within 24 hours, and the greatest gains were reported when the early mobilization was followed by an increased frequency of mobilization. Two of the 8 articles linked early mobilization to a reduction in post-stroke complications. One article reported a non-significant trend of worse outcomes with early mobilization.

Conclusions: This review suggests that patients with acute stroke may have better functional outcomes and reduced risk of complications if physical therapy mobilization is initiated earlier and more often than what is typically done across acute care settings today. Specifically, the articles that initiated mobilization within 24 hours and mobilized patients more than once per day demonstrated maximal impact on long-term functional recovery. These findings suggest that the first 24 hours may be the optimal time to mobilization, and that increased frequency may be equally important. More research must be done to pinpoint the optimal time to mobilization and
the frequency and intensity that yield the best long-term functional outcomes for this patient population.

**Clinical Relevance:** Physical therapists in the acute care setting should consider collaboration with the interdisciplinary medical team upon admission of patients with stroke in order to discuss the appropriateness of, and advocate for, early initiation of physical therapy services. Emerging evidence suggests that physical therapy intervention should be considered as early as the first 24 hours, and at least twice per day.