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To stretch or not to stretch? The conundrum of managing contracture in neurological rehabilitation.

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Background: Contractures are a common complication after stroke, brain and spinal cord injuries. They are undesirable for many reasons but in particular because they limit a person's ability to move and perform purposeful tasks. Even minor contractures can have profound implications for some patients, particularly those in the upper limb. The mainstay intervention used by occupational therapists to manage contractures is stretch: positioning, splinting, casting or range of movement exercises.

Purpose: To explore the clinical reasoning behind our common stretch interventions and discuss the mismatch between research evidence and clinical practice.

Methods: Drawing on systematic review and randomized controlled trial evidence, this paper will outline the conceptual underpinning of stretch interventions, study findings to date, and the clinical implications of the research.

Results: An overview of the latest research will be presented. Discussion will centre around findings pertaining to range of movement and spasticity; outcome measures will include goniometry, torque-controlled range of movement, and clinical measures of hypertonicity.

Conclusion: There is now high-level research evidence to suggest that stretch interventions are not as effective as first thought which has significant implications for acute care and rehabilitation following acquired brain impairment.

Learning Outcomes: This paper will present the best available evidence about stretch and discuss potential reasons why studies to date have failed to find an effect. It will provide clinical practice guidelines aligned with evidence to assist clinicians to make evidence-based practice decisions about stretch interventions.