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Research on connective tissue rehabilitation: A meta-analysis

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Abundant research has been conducted on connective tissue rehabilitation, focusing on contracture reduction. The purpose of this study was to examine the different testing methods and experimental designs used to conclusively prove protocols and modalities for contracture reduction. Sequential papers following the level of evidence (increases) have shown benefits in case studies, cohort trials (for population confirmation) followed by randomized, controlled trials with cross-over arms and or blinding. The highest level of evidence is the Meta Analysis or Systematic Review which is meaningful in proving efficacy of a therapeutic protocol with one dependent variable. An example of this was the series of studies on dynamic splinting for contracture reduction of joints including jaw, shoulder, elbow, wrist, knee, ankle, and toe. The connective tissue of these joints have different lengths and alignment but the molecular structures are similar so protocols for contracture reduction (low load, prolonged duration stretch) were hypothesized to yield the same results. This was proven in a systematic review by Furia *et.al.* (2013) which showed that a direct linear correlation existed between the hours of therapeutic stretching and reduced contracture as measured with active range of motion. Other variables were examined separately including animal studies for reducing surgically induced contracture, but the aggregate change in controlled trials was proven in the meta-analysis with change in AROM as the dependent variable. Different studies are beneficial in testing unique variables, and a progressive sequence of studies building the level of evidence to a meta-analysis is best to prove therapeutic protocols.

Biography

F Buck Willis after suffering an unsurvivable plane crash conquered the challenges of a brain injury and a 3-year series of operations to rebuild his legs by earning four degrees and squatting 505lbs. He earned his Medical degree (MBBS) in the British Commonwealth with a PhD in Kinesiology before publishing 25 manuscripts in eight years and being chosen as a Fellow of the American College of Sports Medicine.

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