

Reliability and Validity of Therapy Localization as Determined from Multiple Examiners and Instrumentation

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Abstract

Objective: Therapy localization demonstrates a change in muscle function when a patient's hand is placed over an area of suspected involvement. In manual muscle testing, is there agreement between examiners (reliability) and is there instrumental confirmation (validity) of their muscle classifications produced by therapy localization? **Methods:** Three diplomates in applied kinesiology performed manual muscle tests of the middle deltoid of 30 volunteers with or without neck pain to assess the degree of examiner concurrence and documentation by surface electromyography. An additional 5 patients with neck pain were tested by the same protocol by 2 diplomates to assess forces applied with a clench transducer, degree of arm movement with an electrogoniometer, and vibration of the middle deltoid by vibromyography. **Results:** Statistical tests revealed no significant differences among examiners in their muscle classifications or in the forces applied during muscle testing. Clear distinctions between weak and strong muscle classifications both in the absence or presence of therapy localization were shown by both electrogoniometry and vibromyography. The presence of neck pain was associated with a significantly greater presence of therapy localization. **Conclusions:** In manual muscle tests of the middle deltoid performed by applied kinesiologists, both the reliability and validity were supported by concurrence among examiners and correlations with the results shown with clench transducers, electrogoniometry, and vibromyography.

Keywords: applied kinesiology, manual muscle testing, therapy localization; reliability, validity, electrogoniometry, vibromyography

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