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Test-Retest Reliability and Interrater Reliability of Pinch and Grip Strength

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Test-Retest Reliability and Interrater Reliability of Pinch and Grip Strength Using Jamar, GripAble, JTECH and B&L Engineering

This thesis aims to compare standard and latest devices per intervention (pinch and grip strength) to explore their test-retest reliability. Hand rehabilitation is crucial when standard handheld devices test grip and pinch strength to help patients recover their muscle strength and range of motion. However, the comparability and reliability of test results with newer devices to existing devices is unclear. The newly released devices, GripAble and JTECH will be compared to “gold standard” devices Jamar and B&L Engineering grip and pinch devices, respectively. Participants will be allocated into a control (healthy) or patient group (suffering from any upper limb impairment/injury) and will undergo two trials. In each trial, participants will use a pinch and grip device exerting three maximal pinch and grip efforts on both hands. Findings will provide insight into the capability of therapists to use data interchangeably between various devices to provide effective and synergetic treatment.