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Maximum Voluntary Isometric Contraction Testing (MVICT)

Availability:	<p>The instrument is freely available here:</p> <p>Maximum Voluntary Isometric Contraction Testing Website</p>
Classification:	<p>Supplemental-Highly Recommended: Facioscapulohumeral Muscular Dystrophy (FSHD)</p> <p>Supplemental: Amyotrophic Lateral Sclerosis, (ALS), Cerebral Palsy (CP), Congenital Muscular Dystrophy (CMD), Duchenne Muscular Dystrophy (DMD), Mitochondrial Disease (Mito), Myotonic Dystrophy (DM), Neuromuscular Disease (NMD), Spinal Muscular Atrophy (SMA)</p>
Short Description of Instrument:	<p>The Maximum Voluntary Isometric Contraction Testing (MVICT) uses a digital force transducer to test isometric force utilizing standardized positions to isolate individual muscles. An inelastic strap is attached to the patient's arm or leg and connected to a force transducer, and fixed metal frame. The quality of testing is greatly dependent on training of the evaluators who follow a detailed, standardized written testing protocol as well as photographs that illustrate patient position, strap placement, examiner fixation, and common substitutions will be used by the evaluators to ensure standardization of testing.</p>
Scoring:	<p>Each muscle is tested twice while the patient is encouraged by the evaluator to exert maximal effort. The maximum force generated by the patient is recorded for each trial, and the maximum over the two trials is used as the final measurement for each muscle.</p> <p>MVICT testing can be measured in Newtons, kilogram-force or pounds-force.</p>

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MVICT Observational Study in FSHD:

FSH-DY Group. A prospective, quantitative study of the natural history of facioscapulohumeral muscular dystrophy (FSHD): implications for therapeutic trials. The FSH-DY Group. *Neurol.* 1997;48(1):38–46.

MVICT in Clinical Trials

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