

**Research Summary – Sollerman Hand Function Test – Upper Limb**

<b>Author Year Research Design Setting (country)</b>	<b>Demographics and Injury Characteristics of Sample</b>	<b>Validity</b>	<b>Reliability</b>	<b>Responsiveness Interpretability</b>
<p><a href="#">Fattal 2004</a></p> <p>Metrological investigation of the Sollerman Hand Function Test.</p> <p>Bouffard-Vercelli Centre, Cerbere</p> <p>France</p> <p>Open study aimed at studying the feasibility and acceptability; Intermediate study aimed to assess inter-rater reproducibility; Prefinal study</p>	<p>Open Study: N = 33 (23 had undergone surgery)</p> <p>Intermediate Study: N = 30 (23M, 7F) (10 had undergone surgery)</p> <p>Age: 32±13.3, range 17-72 years</p> <p>Mean time since injury = 6.3 years</p> <p>Prefinal Study: N=52 (41M, 11F)</p> <p>Age: 38.32±12.76, range 18-72 years</p> <p>Mean time since injury = 11.54 years</p>	<p>Sollerman test &amp; Motor Capacities Scale: <math>\rho=0.959</math>, <math>P&lt;.0001</math></p> <p>Prefinal study Modified Barthel Index = 0.044</p>	<p><b>Test-retest:</b> ICC for dominant hand = 0.963</p> <p><b>Inter rater:</b> ICC for dominant hand = 0.993</p>	<p><b>Mean (SD) Sollerman score:</b> 70.94 (38.28)</p> <p>Prefinal study</p>

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focused on construct validity.	Adults, complete motor tetraplegia, C5-C7 level, AIS A or B, at least 3 months post spinal cord injury, at least 3 months post surgery.			
<p> <a href="#">Sollerman &amp; Ejeskär 1995</a>                       Methodological                       Sahlgrenska University hospital, Göteborg, Sweden                 </p>	<p>                     N=59 (73 hands tested)                       Tetraplegic patients                      Patients were graded on the International classification for surgery of the hand in tetraplegia (Edinburgh, Scotland 1978 – modified in Giens, France 1984).                      O= ocular, OCu=oculocutaneous                      Sensibility O or OCu ranges from 1-9 – based on motor characteristics of muscles.                 </p>	<p>                     When comparing the test scores of the comparable groups of arms with (OCu:1-3) and without (O:1-3) tactile gnosis the latter groups showed much lower values and the difference was highly significant. (P&lt;.001)                      Comparing the test score for each corresponding group of arms there as a significant difference in two groups (O:1 &amp; OCu:1, P&gt;.01; O:3 &amp; OCu:3, P&lt;.01).                 </p>	<p> <b>Test-retest, Inter-rater, Intra-rater</b>                      18 pairs of test results were obtained and concordance between 2 different observers and of 2 consecutive testing procedures is high (r=0.98)                 </p>	

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	<p>74% belong to groups O:0-3 or OCu:1-4 26 hands lacked tactile gnosis and were classified in O:0-3.</p>	<p>In OCu:1-9 there was a significant positive correlation between the group of classification of the arm and mean score in the Sollerman test (<math>r=0.76</math>, <math>P&lt;.001</math>).</p> <p>Only among high level tetraplegic patients, especially without sensation (Groups O:0-3) where the correlation is absent.</p> <p>International classification for surgery of the hand in tetraplegia &amp; Sollerman Hand Test results. <math>r=0.88</math></p>		