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Speeded Tapping Test**

<b>Availability:</b>	Please visit this website for more information about the instrument: <a href="#">Speeded Tapping Test instrument.</a>
<b>Classification:</b>	<b>Supplemental – Highly Recommended for Cognitive Assessment:</b> Huntington’s Disease
<b>Short Description of Instrument:</b>	<p><b>Summary/ Overview of Instrument:</b> The participant is required to tap a key with their index finger as quickly as possible for a 10-second period. The task is repeated five times for each hand, with a brief rest period between trials. Several commercial versions of the task are available, using specialized equipment. In addition, numerous bespoke computerized versions of the task have been developed, using a computer keyboard or external hardware button.</p> <p><b>Construct measured:</b> Psychomotor speed.</p> <p><b>Generic vs. disease specific:</b> Generic.</p> <p><b>Intended use of instrument/ purpose of tool:</b> The speeded tapping test may be used as a longitudinal marker of disease severity in manifest/pre-manifest HD or as a cross-sectional measure of impairment across disease stages or between manifest/pre-manifest HD and healthy controls.</p> <p><b>Means of administration:</b> Mechanical or computerized.</p> <p><b>Location of administration:</b> Clinic.</p> <p><b>Intended respondent :</b> Patient.</p> <p><b># of items:</b> 5 administrations of 10 second trials.</p> <p><b># of subscales and names of sub-scales:</b> N/A.</p> <p><b>Strengths:</b> The task is highly sensitive to cross-sectional and longitudinal change in pre-manifest HD. The speeded finger tapping test is quick, easy to administer and well tolerated amongst patient groups. Education effects are small (Lezak et al., 2004).</p> <p><b>Weaknesses:</b> The task may not be suitable for use in patients with severe motor impairment.</p>
<b>Scoring:</b>	<p>The score is the mean number of taps produced across 5 trials for the dominant and non-dominant hands.</p> <p><b>Standardization of scores to a reference population</b> (z scores, T scores, etc): If the task is conducted using procedures from the Halstead-Reitan Battery (Reitan &amp; Wolfson, 1985), raw score can be converted to t-scores.</p> <p><b>If scores have been standardized to a reference population, indicate frame of reference for scoring</b> (general population, HD subjects, other disease groups, etc). General population.</p>

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<b>Psychometric Properties:</b>	<p><b>Test re-rest reliability:</b></p> <p>Test re-test reliability (assessed by correlational analysis and regression coefficients) varies across studies but is consistently in the high range (Lezak, Hoeison &amp; Loring, 2004).</p> <p>Inter-interview (between-rater) reliability (as applicable): N/A.</p> <p>Internal consistency: N/A.</p> <p>Statistical methods used to assess reliability: Test-retest correlations.</p> <p>Reliability data from the CAB study will be available by end of 2012 for 100 control, 100 pre-manifest, and 50 early HD subjects.</p> <p><b>Validity:</b></p> <p>Content validity: N/A.</p> <p>Construct validity: N/A.</p> <p><b>Sensitivity to Change/ Ability to Detect Change (over time or in response to an intervention):</b> Cross-sectional differences in tapping speed and the within-subject standard deviation of tapping speed were detected between controls and pre-manifest HD (PREDICT-HD and TRACK-HD) and early HD (TRACK-HD). In PREDICT-HD, but not TRACK-HD, these measures were sensitive to longitudinal change in pre-manifest HD, especially in individuals closer to an expected diagnosis.</p> <p><b>Known Relationships to Other Variables:</b> Tapping speed declines with age, particularly from the fifth decade of life. In addition, there is an effect of gender, with males consistently tapping faster than females (Mitrushina et al., 2005).</p> <p><b>Diagnostic Sensitivity and Specificity, if applicable:</b> Reduced tapping speed is seen in a variety of conditions, some not involving brain dysfunction, and ultimate interpretation has to be based upon the context provided by other tests.</p>
<b>References:</b>	<p><b>Key Reference:</b></p> <p>Reitan, R.M. (1979) Manual for administration of neuropsychological test batteries for adults and children. Tucson, AZ: Reitan Neuropsychology Laboratories, Inc.</p> <p><b>Other References:</b></p> <p>Reitan, R.M., &amp; Wolfson, D. (1985) The Halstead-Reitan Neuropsychological Test Battery: Theory and clinical interpretation. Tucson: Neuropsychology Mitrushina, M.M., Boone, K.B., Razani, J., &amp; D'Elia, L.F., (2005). Handbook of normative data for neuropsychological assessment (2nd ed.). New York: Oxford University Press.</p> <p>Lezak, MD, Howieson, D.B., &amp; Loring, D.W. (2004). Neuropsychological Assessment (4th ed.). New York: Oxford University Press.</p>