

**NINDS CDE Notice of Copyright
Irritability Scale**

Availability:	Please email the authors for information about obtaining the instrument: aac2009@columbia.edu
Classification:	Supplemental – Highly Recommended: Huntington’s Disease (HD) Supplemental: Mitochondrial Disease (Mito)
Short Description of Instrument:	<p>Summary/ Overview of Instrument: The Irritability Scale consists of 14 items regarding different dimensions of apathetic behavior. The score for each item ranges from 0 to 3. Rating of each item is based on a semi-structured interview.</p> <p>Construct measured: Irritability</p> <p>Generic vs. disease specific: Generic</p> <p>Intended use of instrument/ purpose of tool: Assessment of severity of irritability</p> <p>Means of administration: Paper and Pencil</p> <p>Location of administration: Clinic or Home</p> <p>Intended respondent: Patient and Caregiver/Informant</p> <p># of items: 14</p> <p># of subscales and names of sub-scales: None</p> <p>Special Requirements for administration: None</p> <p>Administration Time: Likely 15-30 minutes</p> <p>Translations available: Available in English, Dutch</p>
Psychometric Properties:	<p>Reliability: Test-retest or intra-interview (within rater) reliability (as applicable): Not available.</p> <p>Inter-interview (between-rater) reliability (as applicable): Inter-rater agreement for the presence of irritability above a median score in a HD population ranged from poor for the most cognitively impaired subjects to good for the less cognitively impaired subjects.</p> <p>Agreement between IS-self and IS-inf scores was assessed using one-way random, single measure intraclass correlation coefficients (ICCs). The overall ICC for IS-self and IS-inf scores was 0.61 (95% CI = 0.50 – 0.72, $p < 0.001$) (Reedeker, submitted).</p> <p>Internal consistency: The Cronbach’s alphas were 0.90 for the IS-self and 0.93 for the IS-inf (Reedeker, submitted).</p> <p>Statistical methods used to assess reliability: Kruskal-Wallis tests were conducted to compare IS-self and IS-inf scores (Reedeker, submitted).</p> <p>Validity: Content validity: Not available. Construct validity: Not available.</p> <p>Sensitivity to Change/ Ability to Detect Change (over time or in response to an intervention): The IS cut-off score of ≥ 14 points yielded an acceptable sensitivity and high specificity for all three cut-off points.</p> <p>Known Relationships to Other Variables: Use of medication.</p> <p>Diagnostic Sensitivity and Specificity, if applicable (in general population, HD population-premanifest/ manifest, other disease groups): Not available.</p> <p>Strengths: Self report and Informant report.</p> <p>Weaknesses: Presence and severity are roughly scored on a 5-points likert-scale. The cut-off score is not validated (no external validity).</p>

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Scoring:	<p>Scoring: Ratings should be based on both verbal and non-verbal information of the past 4 weeks. For each item ratings should be judged: 4 possible responses for each question: ‘not at all’, ‘slightly’, ‘somewhat’, ‘a lot’.</p> <p>Standardization of scores to a reference population (z scores, T scores, etc): Using ROC analysis, a score of ≥ 14 points on the IS-self was identified as a robust indicator for irritability (Reedeker, submitted). The IS cut-off score of ≥ 14 points yielded an acceptable sensitivity and high specificity for all three cut-off points.</p> <p>If scores have been standardized to a reference population, indicate frame of reference for scoring: First-degree non-carriers.</p>
References:	<p>Key Reference: Chatterjee A, Anderson KE, Moskowitz CB, Hauser WA, Marder KS: A comparison of self-report and caregiver assessment of depression, apathy, and irritability in Huntington’s disease. J Neuropsychiatry Clin Neurosci 2005; 17: 378-383 [scoring of the IS in this article is incorrect].</p> <p>Other References: Klöppel S, Stonnington CM, Petrovic P, Mobbs D, Tüscher O, Craufurd D, Tabrizi SJ, Frackowiak RSJ: Irritability in pre-clinical Huntington’s disease. Neuropsychologia 2010; 48: 549-557.</p> <p>Reedeker W, Bouwens JA, Giltay EJ, Le Mair SE, Roos RAC, van der Mast RC, van Duijn E: Irritability in Huntington’s disease. Submitted.</p>