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**Center for Neurologic Study-Lability Scale (CNS-LS) for Pseudobulbar Affect (PBA)**

<b>Availability:</b>	Please visit this website for more information about the instrument: <a href="https://www.nuedexta.com/do-i-have-pba">https://www.nuedexta.com/do-i-have-pba</a>
<b>Classification:</b>	Supplemental
<b>Short Description of Instrument:</b>	<p><b>Construct measured:</b> The CNS-LS measures affective lability in patients with ALS.</p> <p><b>Generic vs. disease specific:</b> ALS-specific.</p> <p><b>Means of administration:</b> Self-completion.</p> <p><b>Intended respondent:</b> Patient.</p> <p><b># of items:</b> 7 items.</p> <p><b># of subscales and names of sub-scales:</b> 2- Labile laughter and labile tearfulness.</p> <p><b># of items per sub-scale:</b> Labile laughter (4 items), labile tearfulness (3 items).</p> <p><b>Background:</b> Pathological affect may occur in 27-49% of people with bulbar ALS. Devised to provide a short, self- report measure of affective lability in patients with ALS, to cover both labile tearfulness and laughter. Items were initially generated from interviews with patients identified as having affective lability and their caregivers.</p> <p><b>Strengths:</b> Subscales derived from principal components analysis.</p> <p><b>Weaknesses:</b> No proxy measure; only asks about the previous week; brief screen- no detailed information.</p> <p><b>Purpose of Tool:</b> Screening, diagnostic, research.</p> <p><b>Used in:</b> Clinical trial, observational study; also used in MS studies.</p> <p><b>Administration time:</b> 5 minutes.</p>
<b>Scoring:</b>	<b>Scoring:</b> Each item is scored using a 5-point Likert scale, from 1 (applies never) 5 (applies most of the time).
<b>Psychometric Properties</b>	<p><b>Feasibility:</b> Easy to administer and score.</p> <p><b>Reliability:</b> Internal consistency: Cronbach’s alpha laughter subscale = 0.91; Tearfulness subscale = 0.89 and Entire scale = 0.87 Test-retest reliability 0.88.</p> <p><b>Validity:</b> CNS-LS total and subscale scores higher in patients identified by clinicians as showing meaningful symptoms of affective lability than in those with few or no symptoms. Using a cut-off score of 11 for clinical purposes in predicting clinicians’ diagnoses resulted in a sensitivity of 0.91 and specificity of 0.71. using a more stringent cut-off of 13 for research purposes gave a sensitivity of 0.84 and a specificity of 0.81 Smith et al 1997).</p> <p>Change in CNS-LS scores correlated with decrease in episodes of laughing or crying (Brooks et al 2004).</p> <p><b>Sensitivity to Change:</b> Change in scores demonstrated in RCT comparing dextromethorphan hydrobromide/quinidine sulphate vs. dextromethorphan or quinidine (Brooks et al 2004).</p> <p><b>Relationships to other variables:</b> Total scores and Tearfulness subscale scores correlated with Beck Depression Inventory scores (p&lt;0.05 and p&lt;0.01 respectively) while Laughter scores did not.</p>

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<b>References:</b>	<p><b>Key Reference:</b> Moore SR, Gresham L, Bromberg MB, Kasarkis E, Smith RA (1997). A self report measure of affective lability. <i>J. Neurol Neurosurg Psychiatry</i> 1997; 63:89-93.</p> <p><b>Other References:</b> Brooks BR, Thisted RA, Appel SH, Bradley WG, Olney RK, Berg JE, Pope LE, and Smith RA (2004) Treatment of pseudobulbar affect in ALS with dextromethorphan/quinidine. A randomized trial. <i>Neurology</i>, 2004; 63:1364-1370.</p>
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