<table>
<thead>
<tr>
<th>Outcome Measure</th>
<th>Verbal Fluency</th>
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<tbody>
<tr>
<td>Sensitivity to Change</td>
<td>Yes</td>
</tr>
<tr>
<td>Population</td>
<td>Adult</td>
</tr>
<tr>
<td>Domain</td>
<td>Neuropsychological Impairment</td>
</tr>
<tr>
<td>Type of Measure</td>
<td>Objective test</td>
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<tr>
<td>ICF-Code/s</td>
<td>b1</td>
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**Description**
Verbal fluency tasks evaluate the spontaneous production of words under restricted search conditions. For phonemic fluency, individuals are given 1 min to name as many words as possible beginning with one of the letters F, A, S or C, F, L. For semantic fluency, individuals are given 1 min to name as many items of a category as possible. The most common category is “animals”.

The administration of phonemic and semantic fluency takes approximately 5 minutes. Admissible responses are summed and compared to a normative sample.

**Properties**
- **Internal consistency**: .83 for F,A,S (Tombough et al., 1999) and .83 for C,F,L (Ruff et al., 1996).
- **Test-retest reliability and practice effects**: Test-retest reliabilities are typically over .70 for both phonemic and semantic fluency, measured after an interval of one week to five years (Basso et al., 1999; Dikmen et al., 1999; Harrison et al., 2000; Tombough et al., 1999).
- **Inter-rater reliability**: .99 for scoring 125 CFL protocols of healthy subjects.
- **Construct validity**: Correlations between .44 and .87 have been reported between phonemic fluency and VIQ (Henry & Crawford, 2004). Semantic fluency has a moderate to strong correlation (.57-.68) with performance on the Boston Naming Test (Henry & Crawford, 2004).
- **Concurrent validity**: In a meta-analysis of 30 studies with 1269 participants, TBI patients were impaired compared to healthy controls on tests of phonemic and semantic fluency, to a greater extent than would be predicted based on their premorbid IQ, current VIQ or psychomotor speed (Henry & Crawford, 2004). CFL performance in a sample of 669 individuals with TBI showed the task was sensitive in all groups and performance showed a clear relationship with severity across mild, moderate and severe classifications.

**Advantages**
- Users may design their own materials and use norms available in Strauss, Sherman and Spreen.
- Quick to administer.
- Appears sensitive to TBI and predicts severity.
- Strong psychometric properties.

**Disadvantages**
- Low specificity.
- The abilities underlying performance on the test are varied (attention, working memory, processing speed, episodic memory), thus it is
difficult to attribute impairment to a particular cognitive function.

- Highly influenced by premorbid verbal IQ.

**Reviewers**

Skye McDonald

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**References**


