

# Neuropsychological Assessment or Why Do I Need Six Hours of Torture?

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## What is a Neuropsychological Assessment?

- **A method to sort out injury related changes in the individual, so he/she can better understand changes in cognitive functioning.**
- **Not a *Neurological examination*.**
- **Treatment vs. Independent Medical Exam vs. Forensic.**

## Timing:

- **Some level of assessment is needed during recovery to monitor status and recovery.**
- **Usually within six months of discharge from the hospital/post sub acute program**
- **Usually one year from the date of the last exam and then approximately two years out.**
- **More or less depending upon recovery and issues.**

## Why?

- **“If you don’t know where you're going you’ll probably end up somewhere else.”**
- **Road map**
- **Is what you know about yourself still valid?**
- **New default, changes in autopilot**
- **Injury itself could impair understanding of changes (right hemisphere injuries)**
- **Could be fun!**
- **Need functional and verifiable knowledge of strengths**
- **Need functional and verifiable knowledge of weaknesses**

## Types of Tests:

- **Fixed versus flexible battery**
- **Both are good, but focus today will be on the flexible battery approach.**
- **Why? My own basis and training.**

## Examination Process:

- **Length can be relatively short or very long; depends upon the questions and reason the assessment is being done.**
- **Our exams normally run 4-6 hours, but have gone up to 13+ hours depending upon many factors. Can also be brief examinations.**
- **Exams are usually done in one sitting but can be broken up if needed. Remember, what happens to cognitive processing when one is tired is also part of the measure.**
- ***Everything the Neuropsychologist does is neuropsychological assessment.***
- **Besides measuring we observe.**

## Examination:

- **History:**
  - **Very complete - this interview is a major part of examination**
  - **Other injuries?**
  - **School**
  - **Work**
  - **Recreation**
  - **Alcohol, drugs, other medication use**
  - **Family history**
  - **Mental health history**
  - **Etc.**
- **Collateral interviews/history - may involve:**
  - **Medical records**
  - **Family**
  - **School**
  - **Work**
  - **Friends**

## Orientation, Attention, and Concentration:

- **Attention and concentration**
  - **Focused**
  - **Sustained**
  - **Selective**
  - **Alternating**
  - **Divided**
- **Speed of mental and motor processing**

## Orientation, Attention, and Concentration Tests (just a few examples and not exclusive):

- **Trails A & B**
- **Stroop Color-Word Test**
- **Continuous Performance Test**
- **Wechsler Adult Intelligence Scale (WAIS)-**
  - **Digit Span**
  - **Digit Symbol**
  - **Letter-Number Sequencing**

## Memory:

- **Verbal**
- **Visual**
- **Learning**
- **Contextual memory versus isolated learning**
- **Delayed**
- **Cue exposed memory**
- **Retrograde amnesia**

## Memory Tests:

- **Wechsler Memory Scale**
- **Rey Auditory Verbal Learning Test (RAVLT)**
- **California Verbal Learning Test(CVLT)**
- **Sentence Repetition From Multilingual Aphasia Examination (MAE)**

### Language-Verbal Skills:

- **General verbal ability and use of language**
- **Aphasia measures**
- **Receptive language abilities**
- **Expressive language abilities**

### Language-Verbal Skills Tests:

- **WAIS Verbal Scales**
- **MAE**
- **Wide Range Achievement Test (WRAT)**
- **North American Adult Reading Test (NAART)**

### Visual, Spatial, Perceptual Skills:

- **General visual skills**
- **Complex problem solving using visual skills**
- **Speed of visual processing**
- **Speed of visual operations using motor skills**

### Visual, Spatial, Perceptual Skills Tests:

- **WAIS Performance Scales**
- **Benton Tests**

### Motor Skills:

- **Hand dominance**
- **Speed with simple and more complex tasks using motor skills**
- **Grip strength**

### Motor Skills Tests:

- **Finger Oscillation Test (Finger Tap)**
- **Purdue Peg Board**
- **Grooved Peg Board**
- **Grip Strength**
- **WAIS-III Digit Symbol & Symbol Search**

## Intellectual Abilities and Executive Functioning:

- **General intellectual abilities -**
  - *Why I don't report IQ's*
  - **General verbal skills**
  - **General performance skills**
- **Cognitive flexibility/problem solving**
- **Adaptive behavior = executive functioning**
  - **Difficulty in planning a course of action**
  - **Planning, organizing, and following through on any goal orientated task**

## Intellectual Abilities and Executive Functioning Tests:

- **WAIS Verbal Scales and Performance Scales**
- **WRAT**
- **Wisconsin Card Sorting Test**
- **Tower of London**
- **Stroop Test**

## Motivation:

- **Effort testing to measure response bias**
- **Observation of inconsistencies**

## Motivation Tests:

- **Word Memory Test (WMT)**
- **21 Item Test**
- **15 Item Test**
- **Validity Indicator Profile (VIP)**
- **Test of Memory and Malingering (TOMM)**

## Personality-Mental Health Issues:

- **Changes from the injury**
- **Coping skills**
- **Past mental health issues**

## Personality-Mental Health Issues Tests:

- **Minnesota Multilingual Aphasia Examination –II (MMPI-II)**
- **Personality Assessment Inventory (PAI)**
- **Beck’s Depression Inventory**
- **Others**

## Summary:

- **Reviews and highlights major findings from the examination**

## Recommendations:

- **Ideas in relation to how changes may affect the individual**
- **Ideas for work, training, and school in relation to the injury related deficits**
- **Impact for the future**
- **Concerns relating to substance use**
- **Mental health or psychological concerns**
- **Ideas for compensation**

## Who Should Be Involved in the Review Process:

- **Family?**
- **Support providers?**
- **Psychologist or therapist?**

## Why This Process is Needed:

- **The road to *recovery* for an individual with traumatic brain injury is not smooth. It is a constant struggle with accepting and dealing with changes. This is a tool to aide with the process.**

## Questions That Can Be addressed to The Neuropsychologist:

- **What vocational/functional limitations are evident? If there is a vocational goal in sight, ask them to address limits in relation to the goal.**
- **Is a training or educational program reasonable for this individual?**

If so, please address the nature, intensity, and length of programs that would seem appropriate.

- Please address any individual and/or family psychodynamics which may interface with neuropsychological deficits to further impair employment?
- Please address the individual's current level of insight into their neuropsychological deficits and willingness to compensate for these on the job.
- Given past experience and training, what difficulties will this individual encounter in attempting to utilize their abilities in prior employment?
- What level of supervision or structure will be required for this individual to function competently?
- Please address the individual's stamina and endurance level as these relate to their ability to engage in full time employment.
- How is this individual likely to respond to job stresses (such as time pressure) and off the job stresses (such as domestic life).
- Please comment on this individual's current level of motivation for work and any disincentives which may be evident.
- Given adequate motivation for employment, does this individual possess the cognitive ability to initiate and remain focused on job tasks?
- Please comment on this individual's ability to perform even simple tasks consistently well (i.e. will this person's error rate due to distraction, confusion, etc., be too great for them to be competent?)
- What difficulties, if any, may this individual encounter in social and interpersonal interactions on the job?
- Is this individual able to identify their own errors when they are made?
- If an error is made and it is identified or pointed out to them, is this individual able to correct the error?
- Are there other cognitive problems that would impede this individual's ability to work?