

I. Defense Tactics Unique to Traumatic Brain Injury Cases

1:00 - 1:45, Thomas J. Wagner

INTRODUCTION/BACKGROUND TO TRAUMATIC BRAIN INJURIES (“TBI”)

The Congressional Brain Injury Taskforce estimates that approximately 1.4 million Americans experience a TBI each year and an estimated 3.2 million Americans are living with long-term, severe disabilities as a result of brain injury. The Taskforce notes that the national cost of TBI is estimated to be \$60 billion annually. According to the Center for Disease Control (“CDC”), 20% of all TBIs result from motor vehicle accidents, mostly males between 15 and 25 years of age. Alcohol intoxication appears to be a contributing factor in both rate of occurrence and severity of injury.

However, available research seems to indicate that despite the large number of reported occurrences, most brain injuries are mild in nature and do not have a significant effect or impact upon an individual's continued functioning. CDC notes that about 75% of TBIs reported each year are concussions or other forms of mild TBI, commonly referred to as “post-concussion syndrome”. These “mild” brain injuries – a clear misnomer – make up most of the TBI claims in litigation. We are focused on these “mild” brain injury claims today.

Even though the injuries are often statistically mild in nature, a review of typical TBI claims reveals that Defendants are presented with **descriptions** of severe and debilitating effects resulting from what seem to be low-energy accidents. Recent verdict research reveals reports of large settlements and jury verdicts in accidents that ended with no complaints of any loss of consciousness or claim of head injury. Later, the claims are presented with complaints of lost memory (pre- and post- accident), cognitive complaints/slowed responses, headaches, depression, anxiety, mood, personality and relationship changes, overall confusion and resulting disability based on a claimed

TBI. Often, these complaints – in some manner – pre-date the accident, and the plaintiff argues that the pre-existing condition had no effect, or was not as disabling, prior to the accident. These types of claims are difficult to objectively evaluate and expensive to defend. They rarely have positive objective test results, like positive CT or MRI scans. Instead, Neuropsychological testing appears to be the standard supporting evidence. That testing is offered as an evaluation of brain function to offer a picture of the pre-accident level of function.

In mild TBI claims, your neuropsychologist offers evidence to show the presence or absence of a neuropsychological disorder or injury/deficit and provides the causal link, or lack thereof, between the accident and the claimed injury.

At the outset, if you can retain a neuropsychologist to assist your investigation, do it. Neuropsychologists can offer guidance, focus and can direct your discovery efforts throughout the course of the litigation, including a review of the plaintiff's medical, employment, school and insurance claim materials along with any others acquired in discovery; can provide a valuable critique of the plaintiff's neuropsychological expert's report and raw data; and can and should assist with deposing the plaintiff and their experts.

As for the materials that you can rely on: EVERYTHING. The key point in your defense efforts is to acquire EVERYTHING related to this TBI claimant. EVERYTHING means EVERYTHING. So think on exactly what might be out there and expend the efforts to get it. The most powerful tool that we have as lawyers is the subpoena power. Use it to the fullest.

A. Finding Holes in Past and Present Medical/Emotional History;

1. **Is it something else?** Post-concussion syndrome symptoms include:

- a. Temporary loss of consciousness.
- b. Confusion.
- c. Headaches.
- d. Dizziness.
- e. Fatigue.
- f. Sleep problems.
- g. Lack of energy.
- h. Vomiting.
- i. Nausea.
- j. Delayed responsiveness.
- k. Amnesia regarding the injury.
- l. Slurred speech.
- m. Looking dazed.

2. Major depressive episode symptoms include:

- a. Feeling sad.
- b. Loss of interest or pleasure in usual activities.
- c. Feeling worthless.
- d. Changes in sleep or appetite.
- e. Difficulty concentrating.
- f. Lack of energy.
- g. Slowed speech.
- h. Headaches.

3. While the symptoms are not exactly the same, they are similar – and even more so with the average historian - particularly with concentration, speech articulation and

fatigue/lack of energy. In a 2005 study, nine out of 10 patients with depression met the “liberal” criteria for post-concussion syndrome even though they did not have a concussion. Five out of 10 met what was considered a “conservative” standard.

4. Counsel can effectively argue for a misdiagnosis of a permanent brain injury when the plaintiff is depressed – a treatable condition – unrelated to the accident.
 - a. With young Plaintiff, this can significantly reduce the future damages. The key is to convince the jury that the continued medical issues of the plaintiff are treatable and not permanent. A diagnosis of depression can help diminish the value of concussion claims.

B. The Plaintiff’s deposition: THIS IS YOUR TRIAL, ASK THE QUESTION!

1. Primarily there to establish who this person is – on video – and how they respond to hours of questioning. Typically, the Claimant will relax and you may be able to show dramatic differences between the claimed disabilities and the actual abilities:
 - a. Partially for facts, but mainly for who the Plaintiff actually is:
 1. It shows:
 - a. Memory;
 - b. Diction;
 - c. Physical abilities;
 - i. Ask to show what can be done in, e.g., range of motion, etc.
 - d. Endurance;
 - e. Cognitive function;
 - f. Credibility:

- i. Reactions to topics; and Inconsistencies in areas of dispute;
- ii. Of course, that will be explained by Claimant's counsel as the TBI talking – you can live with that. Let the adverse counsel do their job. More than likely, an overly aggressive counsel will create evidence that supports your claim by interrupting and suggesting. This often unnerves lay witnesses and may show adverse counsel's unwillingness to prepare or maybe Claimant just can't be prepared. These each have an effect on value as well

g. Social History:

- i. Close relationships v. essentially estranged from everyone:
 - 1. Parents;
 - 2. Siblings;
 - 3. Cousins;
 - 4. Spouses/ex-spouses;
 - 5. Children;
 - 6. Friends;
 - 7. Co-workers.;

2. **Videotape the depositions.** That baseline examination – which could be 10 hours of testimony – is invaluable to show a jury what this case is, and is not, about. Neuropsychological expert – along with any other expert - may rely on it that video to supplement their own exam – or in

cases where the local courts will limit the number of your exam, can be used to offset any cross-exam questions like:

a. Q: And you have never even met or examined my client? A: No, you objected to my exam, but I did review more than 10 hours of his/her sworn videotaped testimony where he/she described his/her life, history, symptoms and treatment.

b. Defense experts can also use it to show that the presentation made by this claimant was significantly different from the presentation given in his testimony. Other Experts may include:

1. Psychiatrists;
2. Psychologists;
3. Cognitive, Speech and Occupational therapists;
4. Physiatrists;
5. Audiologists;
6. Neuro-radiologists to evaluate the MRI, CT's and other diagnostic studies;
7. Vocational and employability experts; and
8. Bio-mechanical reconstructions of the event to demonstrate that the accident did not contain enough energy to cause a TBI.

C. Who else to depose, and why?

1. Family members;
2. Co-workers;
3. Any victims of this person's personality/psychologic issues.

D. Secondary Gain: The neuropsychologist is particularly important in civil litigation claims to discuss the obvious underlying issue of secondary gain. Secondary gain is the social, occupational or interpersonal advantages that a patient derives from their symptoms. For example, secondary gain would exist where the plaintiffs claimed impairments are contributed to by an external motivator such as the desire for financial incentive arising from litigation. Often, the mere occurrence of the accident combined with Claimant's complaints are used to establish the accident as the cause of the cognitive deficits. Remember that the Claimant – who has experienced the asserted trauma of an accident and claimed injury that typically causes worry and anxiety, albeit short-lived - also has a financial incentive to appear impaired. It is your and your neuropsychologist's responsibility to determine whether there are deficits and whether those are the result of brain impairment from this accident, as opposed to psychological trauma, physical (peripheral) injury, malingering, a preexisting condition, or some combination of these causes.

E. The Evolution of the Claim:

1. The way the TBI symptoms develop is another fruitful area to incorporate into your defense story. Often, the symptoms are not asserted/recognized right away. Rather, those attributions of the claimed symptoms to the accident almost always develop weeks or months later to support the TBI diagnosis. Claimants have several arguments to explain this delay in diagnosis. The following comparisons/examples

show simple factual areas that fit into the defense story and explain the reason for the delayed symptoms:

- a. Injuries reported at scene, if any;
- b. Injuries reported in EMT/ambulance records;
- c. Emergency Room records;
- d. Acute phase treatment, if any;
- e. Days lost from employment, if any;
- f. Eventual attorney involvement, and when, compared with the timing of the first articulation of the TBI symptoms or diagnosis;
- g. Practice Fields of initial providers v those involved afterwards;
- h. Doctor's networks. Dr. Joe owns the PT facility and the MRI and always refers his patients to Dr. Ruth, etc., who also owns the EEG location and employs the physicians there.

1. Defense counsel is not doing their job if they didn't evaluate the parties involved aside from the injured claimant. Certain doctors and lawyers have histories that should not be ignored and these factors can affect your case evaluation, as well as the type of defense that you may elect. Consider the:

- a. Reputations of treating doctors;
- b. Reputations of involved attorneys;
- c. Connections between those doctors and lawyers – are they business partners;

F. Begin in the beginning:

1. What was the nature of the accident? Rear-ender, T-bone, sideswipe

- a. Amount of damage
 - b. Photos
 - c. Speeds involved; Change of velocity
 - d. Witness statements and observations of claimants functioning
 - e. Claimant's self-report at scene
 - f. EMT reports and observations
 - g. Accompanying physical injuries
2. And do not forget pre-accident life events.;
 3. Balance your focus on a perceived weak link, i.e., what needs more/less involvement and therefore more or less focus. Is it the:
 - a. Claimant or Claimant's life/environment;
 - b. Primary Doctor;
 - c. Attorney;
 - d. The Test Results;
 - e. The Actual Testing;
 1. Validity;
 2. Over-interpreted; or
 3. Just plain wrong?
 - f. Evolution of the Claimant's and their experts versions/Inconsistent History or claimed symptoms, timing and effect;
 - g. Prior History, experience and conduct.

G. Initial exam;

1. Is there a delay?
2. What exactly was complained of:

3. Glasgow coma scale

- a. Accepted by the general community to determine the patients level of consciousness;
- b. GCS of 13-15 indicates a high probability for complete recovery. Most candid health professionals will conclude that there is almost always a complete;
- c. When not complete, there is almost always some underlying problem that pre-dates the accident.

H. Cumulative results of all studies organized for maximum impact:

1. EMS;

- a. EMT records history, usually thorough – indicates that the mind is working
- b. Any witnesses, police officers, Fire personnel, independent witnesses or the Defendant – what did they see?

2. First/scene history:

- a. NEXT – Same history given to the ER admission nurses and physicians?
- b. This often conflicts with the later history given to the Plaintiff's retained medical experts;
- c. Contrariwise, the later testimony that the Patient doesn't remember anything is not indicative of a TBI. That's something else;

3. Document the Evolution of the story:

- a. EMT record;
- b. ER records admissions;
- c. MRI, CT, X-ray date and results;

- d. Not including a later brain bleed – or something else supported by objective testing like and MRI or CT scan;

I. The Timeline for the development of the claim for Litigation:

1. Next treatment after Lawyer retentions;
2. Directions to use particular physicians from counsel;
3. Work notes and treatment history to continue to document the Evolution of the claim.

J. **A Wide variety of treating physicians works to your benefit.** Family doctors; work doctors; multiple treaters – all will have conflicting histories – not indicative of a TBI.

Especially since the Plaintiff's version is going to change – and his or her own physicians will be witness to that for you.

K. **What to Look for in Employer, Military, Internet and School Records;**

1. Attendance;
2. Discipline;
3. Grades;
 - a. All reveal relatively accurate level of intellectual function; and
 - b. Affects credibility - Plaintiff says he or she did well, but the grades are D's and F's?
4. Standardized tests;
5. Teacher remarks;
6. Life Stressors;
 - a. Financial problems – significant for exaggerations and malingering;
 - b. Criminal issues;
 - c. Family, financial or marital problems – or some combination of all - typically are indicative of someone who has tremendous issues and stresses in life that

are part of their make-up. And can be evidence of pre-existing depression, anxiety and personality disorders. This case may seek, essentially, to remove the human stress of personal support by its result. That must be considered;

7. Alcohol and substance issues, including opioids/Fentanyl use?
8. Supportive of the claim for secondary gain;
9. Evidence of Significant problems with functioning;
 - a. May even have their own neuro-psych testing, psychological exams and conclusions;
 - b. Often used in hiring decision, especially with executive level employees, municipal and police/fire hires;
10. Health insurance records;
11. Special Education Records/IEPs;
12. Internet:
 - a. Instagram;
 - b. Facebook;
 1. Trips;
 2. Vacations;
 3. Comments on current events;
 - c. Posted pictures and videos performing actions in places that were claimed to have been removed from their life due to this disability; E-mail addresses;
 - d. Postings – pre- and post;
 1. Worldview hasn't changed
 2. This is just like surveillance – but the claimants has done it for you and doesn't realize it;

13. Pre- and Post- accident claims and trauma:

- a. It's odd that most of the TBI's have prior claims – and some subsequent – but that's typical too.
- b. Do they have any impact on the injuries claimed in the subject accident;
 1. Do they impact the claimant's credibility ability as a witness;
 - a. Prior claims may contradict this one;
 2. Prior trauma and claims may provide support for the cause of the alleged disability and the pre-existence of any disability; Discovery developed in other suits/claims (new witnesses, doctors, IME's)
 3. Treatments and medications,
 4. Court records, especially on permanent injury claims;

14. Co-workers identities:

- a. Liked him, didn't like him; had functional [problems at the job – personal life; school life and work life – the critical triumvirate] problems all along;

15. Universal Summary;

- a. Broken down by;
 1. Employment issues;
 2. Educational issues;
 3. Functional complaints;
 4. Physical injuries symptoms and complaints;
 - a. Insignificant issues may become significant in the context of the constellation of facts;
 - b. Organize the materials for reference – there will be a lot of data to use;

L. Using IMEs to Prove the Injury is Not Permanent – **TELL YOUR STORY!**

1. First – do you need one;
 - a. Often described as a strategic decision – get one anyway. You will need that person listed as a witness to use him or her at trial. The last thing you want to face is your regret at not doing so.
2. Look at Plaintiff's neuro opinions:
 - a. Thorough history?
 - b. Fair interpretation and timing of reporting?
 - c. Reputation for honesty and integrity?
 - d. All of that is rare – because you will acquire information in discovery that was not available to Plaintiff's experts, so arrange it and tailor the report;
 - e. Fully document your exam and use that to call the validity and accuracy of the Plaintiff's experts interpretations into question.
3. Use the IME to show:
 - a. Admissions by Claimants' experts that fit defendant's theory
 - b. Admissions by the Claimants of exaggeration, concealment, or misrepresentation;
 1. Even if denied, explain the difference and point it out specifically;
 2. Use the exam, history, analysis and opinions to support the impression that Claimant's expert analysis is not scientific; AND Attribute that

bias in the medical opinions and testing that claimed to find a TBI when the actual facts, history and normal human variances would explain the test results;

c. Even if there are some measurable deficits, they have no impact on Claimants normal functioning;

1. Keep the specter of secondary gain in play.

M. Tips for Defending the IME;

1. First – use it to bolster your own credibility

These experts are my eyes and ears – I am not a doctor and we are presented with these claims – which seem out of proportion to the energy in this accident. Why is this happening?

So we asked Dr. _____ to let us know. Here's what she found;

2. Use ALL of the evidence. Nothing beats a well prepared expert, especially in comparison to the alternative;

3. Raw data – Get it – it's the basis for the neuro-psych interpretations;

4. This is apparently the proof that will be called the objective evidence proving the disability

a. Over-interpretation:

1. What's normal for this claimants;

2. Average?

N. Diagnosing Physician Deposition Strategies;

1. CV's and seminars taken/given;

2. Use the Internet:

O. What to Look for in Surveillance and Photographs;

1. Their admissibility!
2. The timing;
3. Intelligence on the Claimant and his or her lifestyle and location;

P. Spotting Inconsistencies/Exaggerated Severity in Symptoms;

1. Malingering:

- a. In an article called "A Comparison of Complaints by Mild Brain Injury Claimants and Other Claimants Describing Subjective Experiences Immediately Following their Injury," researchers saw that those involved in motor vehicle accidents experienced an altered mental state with no evidence of a TBI. In fact, individuals may describe the same altered mental state, consistent with being startled, upset, or agitated by the accident or potential accident even where no injury occurred. For this reason, plaintiffs and perhaps their medical providers may be associating symptoms such as being dazed and confused with a potential TBI, where it could just be the result of shock or distress from the accident. Additionally, the article also noted that the symptomology associated with a TBI could be the result of other factors. For example, attention or memory problems or depression, all symptoms associated with TBI, have actually been found to also be common symptoms of chronic pain associated with orthopedic injury. It also noted that some symptoms, such as headaches, fatigue, irritability, and concentration problems have been found common in the general population at large.

The same article also conducted their own study of symptoms associated with TBIs, comparing personal injury claimants whose loss of consciousness and

Glasgow Coma scale immediately after the accident indicated a potential MTBI (the MTBI group) with that of other personal injury claimants who did not fit that profile (the other claimants group).

That study noted a higher rate of reported anxiety, irritability, and depression among the other claimants group than the MTBI group. Reports of headaches, concentration issues, dizziness and confusion were comparable between both groups. Thus, it looks like many of the symptoms associated with TBI were also present in non-TBI claimants. The authors caution against confusing symptoms of a TBI with "general stress symptoms," which they indicate may lead to misleading and erroneous diagnoses where no TBI actually exists. This possibility of misdiagnosis may cause the increased diagnosis of psychological claims or claims of TBI among plaintiffs.

If the symptoms seem genuine and associated with a TBI, and not general stress, recovery can be expected when compared to other TBI patients. That recovery rate can be used to determine whether or not the patient is displaying evidence of symptom magnification and/or malingering. A malingering patient might exaggerate or falsify an injury. So, while we know that there is a recovery rate; we can also generalize that you don't get worse; and developed new acute symptoms.

Malingering also involves not putting forth maximum effort during the testing process in an attempt to obtain results indicating a more severe impairment than there actually is or to show injury where no injury exists.

As Clinical Neuropsychology noted in its article on detecting neuropsychological malingering, accurate assessment during neuropsychological testing is "dependent upon the patient putting forth his or her best possible effort!" That effort may be intentionally altered simply by being involved in the litigation process. by the defendants' expert. The plaintiff may attempt to exaggerate symptoms in an attempt to present a more severe impairment, hoping to increase the value of their case.

Q. Presenting Other Options for Plaintiff's Injuries – **WHAT ELSE COULD IT BE?**

1. **Generalized anxiety disorder** involves persistent and excessive worry that interferes with daily activities. This ongoing worry and tension may be accompanied by physical symptoms, such as restlessness, feeling on edge or easily fatigued, difficulty concentrating, muscle tension or problems sleeping. Often the worries focus on everyday things such as job responsibilities, family health or minor matters such as chores, car repairs, or appointments.

The DSM-5, describes a **personality disorder** ("PD") as significant impairments in self and interpersonal functioning together with one or more pathological personality traits. In addition, these features must be (1) relatively stable across time and consistent across situations, (2) not better understood as normative for the individual's developmental stage or socio-cultural environment, and (3) not solely due to the direct effects of a substance or general medical condition. All of these PD's have features in common with symptoms complained of by TBI Claimants.

- a. Paranoid personality disorder:** Characterized by a pervasive distrust of others, including even friends, family, and partner. As a result, the person is guarded and suspicious, and constantly on the lookout for clues or suggestions to validate his fears. He also has a strong sense of personal rights: he is overly sensitive to setbacks and rebuffs, easily feels shame and humiliation, and persistently bears grudges. Unsurprisingly, he tends to withdraw from others and to struggle with building close relationships.
- b. Schizoid personality disorder:** The term ‘schizoid’ designates a natural tendency to direct attention toward one’s inner life and away from the external world. A person with schizoid PD is detached and aloof and prone to introspection and fantasy with little interest in social or sexual relationships, is indifferent to others and to social norms and conventions, and lacks emotional response.
- c. Schizotypal disorder:** Schizotypal PD is characterized by oddities of appearance, behavior, and speech, unusual perceptual experiences, and anomalies of thinking similar to those seen in schizophrenia. People with schizotypal PD often fear social interaction and think of others as harmful. They may develop so-called ideas of reference, that is, beliefs or intuitions that events and happenings are somehow related to them.
- d. Antisocial personality disorder:** Antisocial PD is much more common in men than in women, and is characterized by a callous unconcern for the feelings of others. The person disregards social

rules and obligations, is irritable and aggressive, acts impulsively, lacks guilt, and fails to learn from experience. In many cases, he has no difficulty finding relationships but they turn out to be dramatic and short. Lots of crime here too.

- e. **Borderline personality disorder:** In borderline PD, the person essentially lacks a sense of self, and, as a result, experiences feelings of emptiness and fears of abandonment with intense but unstable relationships, emotional instability, outbursts of anger and violence (especially in response to criticism), and impulsive behavior. Suicidal threats and acts of self-harm are common, for which reason many people with borderline PD frequently come to medical attention.
- f. **Histrionic personality disorder:** Characterized by a missing sense of self-worth, and reliance on attracting the attention and approval of others. They often seem to be dramatizing or ‘playing a part’ in a bid to be heard and seen. People with histrionic PD may take great care of their appearance and behave in a manner that is overly charming or inappropriately seductive. Dealings with others looks superficial, and, combined with sensitivity to criticism and loss, leads to the more rejected they feel, the more histrionic they become; and the more histrionic they become, the more rejected they feel.
- g. **Narcissistic personality disorder:** Characterized by an extreme feeling of self-importance, a sense of entitlement, and a need to be admired. He lacks empathy and readily lies and exploits others to achieve his aims. To others, he may seem self-absorbed, controlling,

intolerant, selfish, or insensitive. If he feels obstructed or ridiculed, he can fly into a fit of destructive anger and revenge.

h. Avoidant personality disorder: Characterized by a belief of believe that they are socially ineptitude or inferiority, and constant fear of embarrassment, criticism, and rejection. They avoid meeting others unless they are certain of being liked, and are restrained even in their intimate relationships. Strongly associated with anxiety disorders, and may also be associated with actual or felt rejection by parents or peers in childhood.

i. Dependent personality disorder: Characterized by a lack of self-confidence and an excessive need to be looked after, requiring lots of help in making everyday decisions and passing on important life decisions to others.

j. Anankastic personality disorder: Characterized by excessive preoccupation with details, rules, lists, order, organization, or schedules; extreme perfectionism; and devotion to work and productivity at the expense of leisure and relationships. Typically doubting and cautious, rigid and controlling and dour. The apparent anxiety is caused by a perceived lack of control. Relationships with colleagues, friends, and family are often strained by unreasonable and inflexible demands.

R. Evidence Needed to Prove Full Recovery of Mild Brain Injury (No Fracture);

1. Functional:

a. I get lost in strange places and I lose my keys”

- b. Ask about these – what are your problems;
 - c. The direct you focus in discovery to resolving them;
 - d. Don't forget to ask "Why?".
2. Clear objective results:
- a. No fracture;
 - b. Clean MRI;
 - 1. Always look at Alzheimer's and the like in older claimants;
 - 2. Get the prescription history – look for that medication

NEUROPSYCHOLOGIC TESTING AND THUMBNAILS OF THEIR PURPOSE

Test Name	Purpose of Test
Ammons Quick Test	This test has been used for many years to help assess premorbid intelligence. It is a passive response picture-vocabulary test.
Aphasia Tests (various)	Several aphasia and language tests examine level of competency in receptive and expressive language skills. (e.g., Reitan-Indiana Aphasia Screening Test)

Beck Depression or Anxiety Scales	These scales provide quick assessment of subjective experience of symptoms related to depression or anxiety.
Bender Visual Motor Gestalt Test	This test evaluates visual-perceptual and visual-motor functioning, yielding possible signs of brain dysfunction, emotional problems, and developmental maturity.
Boston Diagnostic Aphasia Examination	Broad diagnosis of language impairment in adults.
Boston Naming Test	Assessing the ability to name pictures of objects through spontaneous responses and need for various types of cueing. Inferences can be drawn regarding language facility and possible localization of cerebral damage.
California Verbal Learning Test	This procedure examines several aspects of verbal learning, organization, and memory. Forms for adults and children.
Cognitive Symptom Checklists	Self-evaluation of areas of cognitive impairment for adolescents and adults.
Continuous Performance Test	Tests that require intense attention to a visual-motor task are used in assessing sustained attention and freedom from distractibility. (e.g., Vigil; Connors Continuous Performance Test)
Controlled Oral Word Association Test	Different forms of this procedure exist. Most frequently used for assessing verbal fluency and the ease with which a person can think of words that begin with a specific letter.
Cognistat (The Neurobehavioral Cognitive Status Examination)	This screening test examines language, memory, arithmetic, attention, judgment, and reasoning. It is typically used in screening individuals who cannot tolerate more complicated or lengthier neuropsychological tests.
d2 Test of Attention	This procedure measures selective attention and mental concentration.
Delis-Kaplan Executive Function System	Assesses key areas of executive function (problem-solving, thinking flexibility, fluency, planning, deductive reasoning) in both spatial and verbal modalities, normed for ages 8-89.
Dementia Rating Scale	Provides measurement of attention, initiation, construction, conceptualization, and memory to assess cognitive status in older adults with cortical impairment.
Digit Vigilance Test	A commonly used test of attention, alertness, and mental processing capacity using a rapid visual tracking task.

Figural Fluency Test	Different forms of this procedure exist, evaluating nonverbal mental flexibility. Often compared with tests of verbal fluency.
Finger Tapping (Oscillation) Test	This procedure measures motor speed. By examining performance on both sides of the body, inferences may be drawn regarding possible lateral brain damage.
Grooved Pegboard	This procedure measures performance speed in a fine motor task. By examining both sides of the body, inferences may be drawn regarding possible lateral brain damage.
Halstead Category Test	This test measures concept learning. It examines flexibility of thinking and openness to learning. It is considered a good measure of overall brain function. Various forms of this test exist.
Halstead-Reitan Neuropsychological Battery	A set of tests that examines language, attention, motor speed, abstract thinking, memory, and spatial reasoning is often used to produce an overall assessment of brain function. Some neuropsychologists use some or all of the original set of tests in this battery.
Hooper Visual Organization Test	This procedure examines ability to visually integrate information into whole perceptions. It is a sensitive measure of moderate to severe brain injury.
Kaplan Baycrest Neurocognitive Assessment	Assesses cognitive abilities in adults, including attention, memory, verbal fluency, spatial processing, and reasoning/conceptual shifting.
Kaufman Functional Academic Skills Test	A brief, individually administered test designed to determine performance in reading and mathematics as applied to daily life situations.
Kaufman Short Neuropsychological Assessment	Measures broad cognitive functions in adolescents and adults with mental retardation or dementia.
Luria-Nebraska Neuropsychological Battery	This is a set of several tests designed to cover a broad range of functional domains and to provide a pattern analyses of strengths and weakness across areas of brain function. The tests reflect a quantitative model of A. R. Luria's qualitative assessment scheme.
MMPI-2 (Minnesota Multiphasic Personality Inventory)	This well-known and well-respected personality assessment is often used to accompany neuropsychological tests to assess personality and emotional status that might lend understanding to reactions to neurofunctional impairment.

Memory Assessment Scales	This is a comprehensive battery of tests assessing short-term, verbal, and visual memory.
MicroCog	This computerized assessment measures nine functional cognitive areas sensitive to brain injury
Millon Clinical Multiaxial Inventory	A self-report assessment of personality disorders and clinical syndromes. This is sometimes used as an adjunct instrument in comprehensive neuropsychological assessment.
Mooney Problem Checklist	This instrument helps individuals express their personal problems. It covers health and physical development; home and family; morals and religion; courtship, sex, and marriage.
Multilingual Aphasia Examination	This set of subtests provides comprehensive assessment of a wide range of language disorders.
North American Reading Test	This reading test is often used to help assess premorbid intelligence, for comparison with current intelligence as measured by more comprehensive tests.
Quick Neurological Screening Test	This is a rapid assessment to identify possible neurological signs, primarily in motor, sensory, and perceptual areas.
Paced Auditory Serial Attention Test	Tests for attention deficits including concentration, speed of processing, mental calculation, and mental tracking. Sensitive for diagnosing cognitive impairment in individuals 16 and up.
Paulhus Deception Scales	This instrument measures the tendency to give socially desirable responses, useful for identifying individuals who distort their responses.
Personality Adjective Checklist	This self-report measure evaluate several personality patterns, primarily focusing on personality disorders
Rey Auditory Verbal Learning Test	This procedure evaluates the ability to learn word lists. It is the forerunner of other tests of verbal learning using lists of words.
Rey Complex Figure Test	This drawing and visual memory test examines ability to construct a complex figure and remember it for later recall. It measures memory as well as visual-motor organization.
Rey 15-item Memory Test	This test is used to evaluate potential for malingering in memory.
Rey-Osterrieth Complex Figure Test	Analyzes aspects of visuospatial ability and memory in all ages.

Rivermead Behavioural Memory Test	Evaluates impairments in everyday memory related to real life situations.
Rogers Criminal Responsibility Scale	This instrument is designed to assess the impairment of an individual at the time a crime was committed.
Rorschach Projective Technique	This familiar inkblot test is used to evaluate complex psychological dynamics. Persons with brain injury have been shown to produce certain kinds of responses that can complement other tests and help to understand personality changes associated with brain injury.
Ruff Figural Fluency Test	This visual procedure complements verbal fluency tests in assessing ability to think flexibly but using visual stimuli rather than words.
Sensory Screening Test	Various procedures include the assessment of tactile sensitivity to various objects, the ability to recognize objects by touch, and the ability to detect numbers written on the hands by touch alone. By examining both sides of the body, inferences may be drawn regarding possible lateral brain damage.
SCL-90 (Symptom Checklist 90)	This checklist evaluates the individual's subjective complaints.
Shipley Institute of Living Scale	Comparison of vocabulary knowledge and ability to figure out abstract sequential patterns has been established as a sensitive measure of general brain functioning.
Stroop Test	This brief procedure examines attention, mental speed, and mental control.
Symbol Digit Modalities Test	Screening test for children and adults to detect cognitive impairment.
Tactual Performance Test	Assesses speed of motor performance, tactile perception, spatial problem-solving, and spatial memory in all ages.
Test of Memory Malingering	This test is used to evaluate potential for malingering in memory.
Test of Memory and Learning (TOMAL)	This test for children and adolescents measures numerous aspects of memory, assessing learning, attention, and recall.
Test of Memory Malingering	For ages 16-84, this visual recognition test helps discriminate malingered from true memory impairments.

Thematic Apperception Test	This projective test is most commonly used to examine personality characteristics that may aid in understanding psychological or emotional adjustment to brain injury.
Tower of London	A test for all ages, assessing higher-level problem-solving, valuable for examining executive functions and strategy planning.
Trail Making Tests A and B	These tests measure attention, visual searching, mental processing speed, and the ability to mentally control simultaneous stimulus patterns. These tests are sensitive to global brain status but are not too sensitive to minor brain injuries.
Verbal (Word) Fluency Tests (various)	There are a variety of verbal fluency tests in use. Each is designed to measure the speed and flexibility of verbal thought processes. (e.g., Controlled Oral Word Association Test; Thurstone Verbal Fluency)
Wechsler Adult Intelligence ScaleIII	This set of 13 separate "subtests" produces measures of memory, knowledge, problem solving, calculation, abstract thinking, spatial orientation, planning, and speed of mental processing. In addition to summary measures of intelligence, performance on each subtest yields implications for different neurofunctional domains. The set of tests takes about an hour or more to administer. The WAIS-III is often the foundation for a comprehensive neuropsychological assessment.
Wechsler Intelligence Scale for ChildrenIII	Comparable to the Wechsler Adult Intelligence Scale, this procedure contains subtests that measure similar domains in children.
Wechsler Memory ScaleIII	This set of 18 separate "subtests" yields information about various kinds of memory and learning processes. Summary memory indices are provided in addition to the individual scores of the subtests. The whole set of tests takes about an hour to administer. The WMS-III provides a comprehensive assessment of memory. It is co-normed with the WAIS-III and is usually used in conjunction with it.
Wechsler Test of Adult Reading	Provides estimate of pre-morbid intellectual functioning in persons 18-89, normed with the WAIS-III and WMS-III.
Wide Range Achievement Test	Provides level of performance in reading, spelling, and written arithmetic. The reading and spelling tests are often used in estimating premorbid intellectual functioning.
Wisconsin Card Sort Test	Similar in concept to the Category Test, this procedure also measures the ability to learn concepts. It is considered a good measure of frontal lobe functioning.

Wonderlic
Personnel Test

This personnel test is not a neuropsychological instrument per se, but is used to help evaluate vocational abilities and potential for comparison with other neuropsychological tests in making practical prognostic decisions.