

WHAT TO EXPECT DURING A NEUROPSYCHOLOGICAL ASSESSMENT

The psychologist usually takes a comprehensive history prior to beginning the testing. The psychologist will ask about how injury to the brain occurred and about the course of recovery to date. He/she will also take an extensive pre-injury history, asking about early developmental milestones, educational and vocational achievements, medical problems, and family and social relationships. Some psychologists will ask that a family member be present during this interview in order to get another opinion on how the injury has affected day-to-day abilities. Since brain injury can disrupt family systems, a family member may request to be included in the interview process so that this larger perspective can be taken into account.

Neuropsychological testing is very extensive. One should expect at least eight hours of one-to-one testing. Some psychologists will complete this testing in one day, while others will see individuals over two or three briefer sessions. It would be wise to ask the psychologist how long testing will be and to inform him/her if pain or fatigue would make long sessions difficult. One should also be prepared to inform the psychologist of any medications that are currently being taken.

Neuropsychologists differ in their training and approach to assessment so people may have different experiences depending on whom they see. People typically find some of the tests to be quite interesting and other to be quite stressful. Some individuals feel a little nervous because testing is like being back in school. During testing one will be asked to answer questions, remember stories, words, and pictures, solve puzzles, and copy drawings. There is sensory and perceptual testing; one will be asked to make judgements about various visual, auditory, and tactile stimuli. Some tests are timed. In many cases, tests of academic achievement (e.g., reading, spelling, arithmetic) will be administered. In addition, one should expect to complete personality tests. If pain and/or sleep are problems, questionnaires related to these issues may be administered.

HOW ARE NEUROPSYCHOLOGICAL TESTS INTERPRETED?

Test performances are compared against norms. Therefore, test scores are generally converted into percentile scores to indicate how test performances compare to a normative group. If a test performance falls in the 60th percentile, it means that the score was better than the score obtained by 60 percent of the normative group on that test. This would be an average or expected performance on the test. On the other hand, if an obtained score falls at the 5th percentile, the performance was better than only 5 percent of the normative group. This would likely be interpreted as an area of weakness associated with the injury to the brain. Of course such interpretations can only be made in light of estimated pre-injury functioning. The psychologist will typically predict level of pre-injury functioning based on school records, work history, and areas of strength observed in testing. Psychologists also much interpret the test results in light of the background information they have gathered, including information about the nature, severity, and extent of injury to the brain, and pre-morbid and current level of day-to-day functioning. It is important to remember that interpretation of test results can only be done by a qualified psychologist.

WHAT IS A NEUROPSYCHOLOGICAL ASSESSMENT?

Brain injury can alter physical, cognitive, and emotional functioning, often permanently. How a person is affected by damage to the brain is influenced by a number of factors including the nature, severity, and location of injury, age at the time of injury, and other pre- and post-injury factors. Because the brain operates like a multi-departmental organization, problems which are controlled by damaged areas of the brain will be impaired, but functions controlled by areas of the brain not damaged will be preserved. Neuropsychological testing is designed to provide an objective measure of the status of higher level functions by examining separate, discrete brain processes through performance and paper-and-pencil type tests.

Neuropsychological testing may be ordered by a physician, a lawyer, an insurance company, or rehabilitation case manager. Some psychologists will also take self-referrals. The testing can be completed for many different reasons. At a very basic level, the testing provides a description of cognitive and behavioural strengths and weaknesses. Psychologists can use this information to make or confirm diagnoses. Neuropsychological data is very useful in situations where medical tests may not be sensitive to the alterations in brain functions such as mild traumatic brain injury or early dementia. Testing also identifies other injury-related factors that may magnify the cognitive and behavioural impairments caused by the brain injury (e.g., depression, anxiety, susceptibility to fatigue). The psychologist who completes the testing may also be asked to provide opinions on specific questions such as safety, competency, and work disability.

WHEN SHOULD NEUROPSYCHOLOGICAL TESTING BE COMPLETED?

Immediately following a severe brain injury to the brain there may be a period of extreme confusion, restlessness, and agitation. Over the next few weeks or months there is usually a period of rapid recovery, and abilities can change on a day-by-day or week-by-week basis. Some brief screening tests may be administered at this time, but comprehensive neuropsychological testing is often not appropriate. Once a more stable picture emerges and the person is able to focus attention on activities for a prolonged period of time, comprehensive neuropsychological testing can be completed. This is often six months or more post-injury. Testing at this point in time is very useful for guiding rehabilitation decisions and for providing an objective baseline so that further recovery can be measured. This testing session is often followed up with testing at about eighteen months post-injury. At this point in the recovery process, the psychologist is able to make reliable predictions about the permanent effects of the injury and/or assess long-term rehabilitation needs.

Assessment results are usually communicated via a written report in which the psychologist integrates all of the information gathered and draws conclusions about how the injury has altered brain function and abilities. There are often recommendations on how the person's level of functioning can be improved through treatment, including learning compensatory strategies or altering the physical or social environment. Many psychologists will schedule a feedback session after the report is completed to review results and recommendations. If there is information in the report that is not understood, one should request clarification form

the psychologist. If this is not possible, or such discussions are not satisfactory, one may approach another psychologist for further feedback and/or a second opinion.

HOW TO PREPARE FOR A NEUROPSYCHOLOGICAL ASSESSMENT

If you are going to be completing neuropsychological testing the following advise may be useful:

- Get a good night's sleep.
- Do not expect that you will be able to do all the tests that are administered to you without error.
- Trust that there are good theoretical reasons behind all the tests you are asked to complete, even if some appear simple or even silly.
- Try to stay calm and relaxed during testing.
- Most importantly put forth your best effort on all tests that are administered to you. The psychologist looks for meaningful patterns across all the tests and these patterns will not be apparent unless one puts forth a best effort.

Neuropsychological tests are quite sensitive and if there is evidence that one is not putting forth a best effort, the overall testing may be invalidated, which could lead to speculation about motivation during testing.

Overall, most people find neuropsychological testing to be an interesting and useful procedure. Both the injured individual and his/her family have the opportunity to learn more about how to injury has affected them. Most people also feel that the results of a neuropsychological assessment provide them with concrete directions for the future.

