**What is a Neuropsychological Evaluation?**

The neuropsychology service in the Department of Neurology provides neuropsychological assessments to children and adults with acquired and developmental disorders. The neuropsychological evaluation is performed to help understand how the different areas and systems of the brain are working. Examinations are usually recommended when there are symptoms or complaints involving memory or other areas of thinking. Common among adult patients are those with the progressive cognitive changes associated with disorders such as Alzheimer’s disease, Parkinson’s disease, and Multiple Sclerosis, or following an acute event such as traumatic brain injury or stroke.

A neuropsychological evaluation typically consists of an extensive clinical interview and formal examination, which takes multiple hours and requires intense data analysis. During the examination, the patient will perform various cognitive tasks and may involve both pencil/paper tests and/or computerized measures. A feedback session is usually held at the conclusion of the assessment, and a written report is provided to the referring doctor.

A typical neuropsychological evaluation involves the assessment of attention and concentration, higher level executive abilities (e.g., reasoning, problem solving), memory, language, visual-spatial abilities (e.g., perception), motor and sensory abilities, and mood. Some abilities may be measured in more detail than others, depending on what information is needed to define the problems and areas of strength, in order to answer the referral question.

The evaluation can be used to understand a patient’s situation in a number of ways:

* Identification of cognitive difficulties. The examination can be utilized to identify weaknesses in specific areas of cognition. It is very sensitive to mild memory and thinking problems that might not be obvious in other ways.
* Differential diagnosis. Different illnesses result in different patterns of strengths and weaknesses. Therefore, the examination can also be used to help differentiate among illnesses. This is important since appropriate treatment depends on accurate diagnosis.
* Establishment of a baseline. Sometimes the examination is used to establish a “baseline” or document a person’s skills at the onset or before cognitive problems arise. In this way, later changes can be measured very objectively.
* Documentation of change. Following the establishment of a baseline, successive examination can be utilized to document change over the progression of a disorder, as well as the effects of surgical, medical, and behavioral treatments on the patient’s neurocognitive status.
* Treatment planning. The examination can be used to identify target problems in order to plan for the most efficacious treatments that use a patient’s cognitive strengths to compensate for weaknesses.