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## **Overview of Neuropsychological Evaluations**

### *The Goal of Neuropsychological Evaluations*

A neuropsychological exam looks at a wide range of brain functions and skills to see what might be affecting learning or behavior. A clinical neuropsychologist is a licensed psychologist with expertise in how behavior and skills are related to brain structures and systems. In clinical neuropsychology, brain function is evaluated by objectively testing memory and thinking skills. A very detailed assessment of abilities is done, and the pattern of strengths and weaknesses is used in important health care areas, such as diagnosis and treatment planning. The clinical neuropsychologist conducts the evaluation and makes recommendations.

Referrals for neuropsychological consultation are commonly made by family physicians, neurologists, psychiatrists, and other primary care clinicians. The list below outlines some areas of concern that may lead to making a referral for a neuropsychological evaluation:

- Cognitive and memory impairment
- Learning disorders and learning differences
- Inattentiveness, hyperactivity, impulsivity
- Executive-functioning weaknesses, such as difficulty planning and organizing
- Processing-speed deficits
- Language disorders or delays
- Visual-spatial, visual-motor, fine motor deficits
- Intellectual disability
- Autism spectrum disorder
- Anxiety
- Depressed mood
- Behavior difficulties in the home, at school, or at work
- Deficits in learning and functioning secondary to neurological and/or birth conditions (e.g., seizure disorders, epilepsy, traumatic brain injury, brain tumors, acquired or congenital hydrocephalus, premature birth)

Family physicians typically refer clients when there are questions about diagnostic decision making or planning of individualized management strategies for clients with mild cognitive impairment, dementia, traumatic brain injury, and other clinical conditions that affect cognitive functioning. Neuropsychological testing can differentiate Alzheimer dementia from nondementia with nearly 90% accuracy. The addition of neuropsychological testing to injury severity variables (e.g., posttraumatic amnesia) increases predicted accuracy in functional outcomes. A neuropsychological evaluation can be helpful in

establishing baseline cognitive functioning, addressing concerns about functional capacities (e.g., ability to drive or live independently), and in determining a patient's capacity to make decisions about health care or finances.

An evaluation shouldn't be seen as if a clinician is trying to judge you. You should see the process as a means through which mental health issues and symptoms affecting your life can be understood and managed.

It is important to keep in mind that not all evaluations end with a diagnosis. But the findings are still likely to specify which kind of support or accommodation can help clients make progress.

### *What Happens in a Neuropsychological Evaluation?*

Tests and assessments are two separate but related components of a comprehensive neuropsychological evaluation. Clinicians use both types of tools to help them arrive at a diagnosis and a treatment plan that is specific to the client's needs and consistent with evidence-based practice.

The testing takes place in a doctor's office. It is done one on one and is usually very low tech. Clients answer out loud or use a pencil and paper or in some cases a computer.

The evaluation can take up to 9-10 hours total but is usually spread out over a couple of days. It measures a lot of things. Dr. Judy and her psychometrician must first begin with a thorough understanding of the client and this is done through a clinical interview, which may consist of:

Description of the presenting problem

Demographic characteristics and cultural background of the client

Assessment of mental status

Physical and medical condition of the client

Intelligence and executive functioning (e.g., goal setting, planning, organizational ability)

Family background and support

Educational and occupational history

History of prior violent or suicidal behavior

Social history

Legal history

Any other relevant information, history, or experiences

Gathering information on family background is also crucial to making a diagnosis. Inquiries should include parental background, history of education and employment, substance abuse, or other medical or mental health problems in the client's family. Assessments may also include interviewing other people who are close to the client, such as coworkers, family members, or current treatment providers (such interviews, however, would only be performed with written consent from the client).

In addition, a neuropsychological evaluation will typically include assessment of intellectual functioning (IQ) and cognitive ability, academic achievement, attention and executive functioning (like planning and organizing), and emotional and behavioral functioning. The evaluation may also include more in-depth assessment of visual-spatial and visual-perceptual skills, visual-motor and fine motor coordination, verbal and visual memory, aspects of language, and adaptive functioning.

Your test scores will be compared to scores from people who are like you in important ways. By using database scores from large groups of healthy people for comparison, Dr. Judy and her psychometrician can judge whether or not your scores are normal for your age and educational background. The pattern of your own test scores will also be reviewed to estimate whether or not there has been a change in certain abilities. How you go about solving the various problems and answering questions during the examination will also be noted. Using these methods, your cognitive strengths and weaknesses can be identified.

Overall, Dr. Judy and her psychometrician will make use of semi-structured diagnostic interviews, cognitive testing, psychological inventories, and rating scales in the preliminary assessment of client functioning. A semi-structured interview guide for making DSM-5 diagnoses. It is administered by trained individuals that are familiar with the DSM-5 classification and diagnostic criteria to ensure that the major DSM-5 diagnoses are systematically evaluated. Psychological inventories and personality tests are incorporated in the evaluation which helps a clinician evaluate attitudes, emotions, thoughts, and behavioral traits contributing to the client's personality. These tests can help determine a client's strengths and weaknesses, allowing them to make informed life choices based on their personality traits. Also, if someone shows signs of psychopathology, personality testing can help identify these emotional problems and start the treatment process. During a psychological projective test, the client looks at ambiguous stimuli such as pictures, inkblots, or incomplete sentences and shares an interpretation. The client's responses give insight into thoughts, feelings, and themes consciously or unconsciously projected into the material.

Remember, psychological testing and assessment is nothing to fear. It's not something you need to study for. Rather, it's an opportunity for Dr. Judy and her psychometrician to determine the best way to help you. No single instrument fits all situations, and Dr. Judy must determine what best suits their needs, always leaving room, of course, to customize questions to the specific scenario, and leaving a certain amount of flexibility to accommodate the client.

### *Preparing for an Evaluation*

Try to get plenty of rest the night before your evaluation. Be ready to share any medical issues you are experiencing. Know all of the medications and supplements you take, including recreational drugs. This helps Dr. Judy and her staff rule out physical health problems, medication side effects, and issues with drug interactions. Make a list of questions and concerns for Dr. Judy. During an appointment, it's easy to forget questions about the need for the test, its risks, and what the results mean. By writing them ahead of

time, you will remember and have the confidence to ask during the evaluation. It is also helpful to provide Dr. Judy with any previous evaluations or assessments.

The evaluation could cause you a variety of emotions. Depending on the reasons for the evaluation, you may feel resentful, hostile, afraid, or anxious. These are all common reactions to someone evaluating how you think and feel. Remember that clinicians are here to help you work through problems, not to judge you. If you are not willing to work with the clinician or complete the tests honestly, you are sacrificing the first step of receiving help. Properly diagnosing some mental health issues is difficult. Try your best to be patient.

### *Feedback Session*

Results of the evaluation and associated recommendations will be reviewed during the feedback session with the client. The client will receive a detailed report outlining the results, diagnostic impression, and recommendations.

Test results can be used to understand your situation in a number of ways:

1. Testing can identify weaknesses in specific areas. It is very sensitive to mild memory and thinking problems that might not be obvious in other ways. When problems are very mild, testing may be the only way to detect them. For example, testing can help determine whether memory changes are normal, age related changes or if they reflect a neurological disorder. Testing might also be used to identify problems related to medical conditions that can affect memory and thinking, such as diabetes, metabolic or infectious diseases, or alcoholism.
2. Test results can also be used to help differentiate among illnesses, which is important because appropriate treatment depends on accurate diagnosis.
3. Sometimes testing is used to establish a “baseline,” or document a person’s skills before there is any problem. In this way, later changes can be measured very objectively.
4. Test results can be used to plan treatments that use strengths to compensate for weaknesses. The results help to identify what target problems to work on and which strategies to use.

Dr. Judy and her staff will also facilitate referrals and connect the client with specialty providers as appropriate.

### *What is the fee for a neuropsychological evaluation?*

Fees are determined based on the type of neuropsychological evaluation needed and can vary widely depending on the type of clinical practice and the needs of the client.

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