

## **Pediatric Neuropsychological Evaluation**

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All children and adolescents who are being considered for surgery to treat epilepsy will complete a neuropsychological evaluation as part of their pre surgical work-up. This is a formal assessment of cognition, or thinking abilities like language, memory, attention, and problem-solving. Academic testing may be included, particularly for children who are having difficulty in school. Infants and toddlers will be assessed in an age-appropriate fashion that will seem a bit like fun and games. Parents and older children will meet with a clinical neuropsychologist, who is a licensed psychologist with expertise in how different parts of the brain are related to thinking abilities and behavior. Younger children will be observed by the clinical neuropsychologist. Parents have to work, too, by answering questions and filling out questionnaires.

There are several reasons that doctors have recommended this evaluation. First, it will help to determine if thinking skills and behavior have been affected by epilepsy, medications, or other factors. It may help the epilepsy treatment team determine where the seizures are coming from. Most importantly, it may help determine risk for cognitive changes following surgery. The results can also be used to obtain special education or support services at school.

During the neuropsychological evaluation, the neuropsychologist will meet with family members for 30 minutes to an hour. He or she will ask about thinking skills, mood and behavior, school performance, and medical history to understand how epilepsy may be having a daily effect on functioning.

The majority of the evaluation will include working one-on-one with a technician on tasks that measure all different types of thinking abilities. Parents will be present during evaluations of very young children.

A typical neuropsychological evaluation will involve assessment of:

- General intellect
- Attention and concentration
- Language
- Visual-spatial skills
- Learning and memory
- Higher level executive skills, such as problem-solving, reasoning, and shifting from one idea to another
- Motor abilities, and
- Mood, behavior and adjustment.

Much of the evaluation is like puzzles or brain teasers and some it is like school (reading, writing, math and remembering). We will also ask about any behavior problems and symptoms of depression, anxiety, or other emotional distress, as they have been associated with epilepsy and can affect thinking skills.

Your evaluation will take place in P57 on the main campus, where our front desk staff will greet you when you check in. We work in a private office where it is quiet and there are few distractions.

The day usually starts at 8:30 in the morning, and we take breaks as needed. There will be a longer lunch break at about noon for older children and teens whose evaluations take longer. The testing portion of the evaluation usually takes between 3-5 hours. Most patients finish testing at about 2 or 3:00 in the afternoon, although this varies. Younger children, especially infants and toddlers, will finish much more quickly.

Please bring a copy of any reports from developmental, learning, neuropsychological or educational evaluations done in the past. Also bring eyeglasses and any other assistive devices, such as hearing aids. Snacks and drinks are allowed, so bring some favorites. Security objects (e.g., blankets, stuffed animals) are acceptable as long as they are not distracting. Get a good night's sleep before the appointment, and be sure to take medications as prescribed.

The results of the neuropsychological evaluation will be shared with your neurologist and the other members of the epilepsy treatment team when discussing surgical options. The neurologist will share the results of the evaluation after completion of all pre surgical assessments. Parents usually opt to have neuropsychological evaluation reports mailed to them for their records or for school planning. The neuropsychologist will also be available to answer any questions you may have about results of your neuropsychological evaluation.

Patients who have epilepsy surgery at the Cleveland Clinic will be scheduled for a follow-up neuropsychological evaluation about 6 months following surgery, to monitor any cognitive changes and make further recommendations. Later follow-up evaluations, at 1 1/2 years and 2 1/2 years after surgery, may also be conducted to monitor changes in cognition over time.

We look forward to meeting you during your upcoming visit with one of our two pediatric neuropsychologists.