

What is Pediatric Neuropsychology?

Pediatric neuropsychology is a professional specialty concerned with learning and behavior in relationship to a child's brain. A pediatric neuropsychologist is a licensed psychologist with expertise in how learning and behavior are associated with the development of brain structures and systems. Formal testing of abilities such as memory and language skills assesses brain functioning. The pediatric neuropsychologist conducts the evaluation, interprets the test results, and makes recommendations. The neuropsychologist may work in many different settings and may have different roles in the care of your child. Sometimes, the pediatric neuropsychologist is a case manager who follows the child over time to adjust recommendations to the child's changing needs. He or she may also provide treatment, such as cognitive rehabilitation, behavior management, or psychotherapy. Often, the neuropsychologist will work closely with a physician to manage the child's problems. Some pediatric neuropsychologists work closely with schools to help them provide appropriate educational programs for the child.

How Does a Neuropsychological Evaluation Differ From a School Psychological Assessment?

School assessments are usually performed to determine whether a child qualifies for special education programs or therapies to enhance school performance. They focus on achievement and skills needed for academic success. Generally, they do not diagnose learning or behavior disorders caused by altered brain function or development.

Why Are Children Referred for Neuropsychological Assessment?

Children are referred by a doctor, teacher, school psychologist, or other professional because of one or more problems, such as:

- Difficulty in learning, attention, behavior, socialization, or emotional control;

- A disease or inborn developmental problem that affects the brain in some way; or
- A brain injury from an accident, birth trauma, or other physical stress.

A neuropsychological evaluation assists in better understanding your child's functioning in areas such as memory, attention, perception, coordination, language, and personality. This information will help you and your child's teacher, therapists, and physician provide treatments and interventions for your child that will meet his or her unique needs.

What is Assessed?

A typical neuropsychological evaluation of a school-age child may assess these areas:

- General intellect
- Achievement skills, such as reading and math
- Executive skills, such as organization, planning, inhibition, and flexibility
- Attention
- Learning and memory
- Language
- Visual-spatial skills
- Motor coordination
- Behavioral and emotional functioning
- Social skills

Some abilities may be measured in more detail than others, depending on the child's needs. A detailed developmental history and data from the child's teacher may also be obtained. Observing your child to understand his or her motivation, cooperation, and behavior is a very important part of the evaluation.

Emerging skills can be assessed in very young children. However, the evaluation of infants and preschool children is usually shorter in duration, because the child has not yet developed many skills.

What Will the Results Tell Me About My Child?

By comparing your child's test scores to scores of children of similar ages, the neuropsychologist can create a profile of your child's strengths and weaknesses. The results help those involved in your child's care in a number of ways.

- Testing can explain why your child is having school problems. For example, a child may have difficulty reading because of an attention problem, a language disorder, an auditory processing problem, or a reading disability. Testing also guides the pediatric neuropsychologist's design of interventions to draw upon your child's strengths. The results identify what skills to work on, as well as which strategies to use to help your child.
- Testing can help detect the effects of developmental, neurological, and medical problems, such as epilepsy, autism, attention deficit hyperactivity disorder (ADHD), dyslexia, or a genetic disorder. Testing may be done to obtain a baseline against which to measure the outcome of treatment or the child's development over time.
- Different childhood disorders result in specific patterns of strengths and weaknesses. These profiles of abilities can help identify a child's disorder and the brain areas that are involved. For example, testing can help differentiate between an attention deficit and depression or determine whether a language delay is due to a problem in producing speech, understanding or expressing language, social shyness, autism, or cognitive delay. Your neuropsychologist may work with your physician to combine results from medical tests, such as brain imaging or blood tests, to diagnose your child's problem.
- Most importantly, testing provides a better understanding of the child's behavior and learning in school, at home, and in the community. The evaluation can guide teachers, therapists, and you to better help your child achieve his or her potential.

What Should I Expect?

A neuropsychological evaluation usually includes an interview with parents about the child's history, observation of and interview with the child, and testing. Testing involves paper and pencil and hands-on activities, answering questions, and sometimes using a computer. Parents may be asked to fill out questionnaires about their child's development and behavior. Many neuropsychologists employ trained examiners, or technicians, to assist with the administration and scoring of tests, so your child may see more than one person during the evaluation. Parents are usually not in the room during testing, although they may be present with very young children. The time required depends on the child's age and problem. Make sure your child has a good night's sleep before the testing. If your child wears glasses or a hearing aid or any other device, make sure to bring it. If your child has special language needs, please alert the neuropsychologist to these. If your child is on stimulant medication, such as Ritalin, or other medication, check with the neuropsychologist beforehand about coordinating dosage time with testing. If your child has had previous school testing, an individual educational plan, or has related medical records, please bring or send this information and records to the neuropsychologist for review.

What you tell your child about this evaluation depends on how much he or she can understand. Be simple and brief and relate your explanation to a problem that your child knows about such as "trouble with spelling," "problems following directions," or "feeling upset." Reassure a worried child that testing involves no "shots." Tell your child that you are trying to understand his or her problem to make things better. You may also tell the child that "nobody gets every question right," and that the important thing is to "try your best." Your child will probably find the neuropsychological evaluation interesting, and the detailed information that is gathered will contribute to your child's care.

About Dr. Karen L. Kane



Dr. Kane is a licensed clinical psychologist who specializes in developmental and neuropsychological assessment. She has been providing services to children and families for over fifteen years. Dr. Kane obtained her doctoral degree in Clinical Psychology with a minor in Developmental Psychology at The Pennsylvania State University in 2002. She completed both a pre-doctoral

internship and a post-doctoral fellowship in Clinical Child/Pediatric Psychology at Children's Memorial Hospital in Chicago. Since completing her training, she has worked within the Department of Psychiatry and Behavioral Sciences at Northshore University Healthsystem Medical Group (formerly Evanston Northwestern Healthcare) and within the Autism and Other Developmental Disabilities Clinic at the Waisman Center, University of Wisconsin-Madison.

Dr. Kane joined Madison Psychiatric Associates in 2012, where she offers consultation and comprehensive evaluations to children, adolescents, and young adults for concerns related to developmental, cognitive, behavioral, social-emotional, and psychological functioning, with particular specialty in assessment of neurodevelopmental disorders, autism spectrum disorders, learning disabilities, and psychiatric disorders. Specific issues may include developmental delay, memory problems, attention problems, learning difficulties, academic underachievement, social difficulties, behavior problems, and anxiety/mood disorders.

Dr. Kane is pleased to answer any questions about her practice. She may be reached at (608) 274-0355.



MADISON PSYCHIATRIC ASSOCIATES

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