

COMMON NEUROPSYCHOLOGICAL CONDITIONS

MEDICAL CONDITIONS

Moderate to severe brain injury: traumatic brain injury can lead to chronic and significant cognitive difficulties. Depending on the brain region affected, impairments can occur in nearly any domain including attention, executive function, language, motor skills, processing speed, visual skills, or memory.

Concussion is the result of some type of significant impact to the head from a fall, a severe impact that occurred during a sports game, or something that caused one's head to move suddenly and rapidly (e.g., a whiplash). Medical research has shown that concussions do not commonly result in long-term cognitive symptoms. The outdated idea of extensive "cognitive rest" can actually be harmful to the healing brain, and can lead to increased post-concussive symptoms and slower symptom resolution <http://pediatrics.aappublications.org/content/pediatrics/early/2015/01/01/peds.2014-0966.full.pdf>. Comprehensive assessment can help you understand other reasons why symptoms might persist.

Stroke often leads to weakness/paralysis, neglect, vision difficulties, speech/language impairments, cognitive changes (memory, judgment, problem-solving), behavior, personality or emotional changes. In children, stroke can occur at the time of birth or may go undetected because it occurred during fetal development. Although this type of condition is rare, during their childhood, children can present with significant learning disorders, motor problems, or muscle tone issues. A neuropsychological evaluation is helpful to more fully understand a child's difficulties and to provide information about prognosis.

Cerebral Palsy (CP) is a brain-based motor disorder that typically results from a stroke or hypoxic event that occurred during the peri-natal period. Many individuals with CP have neurocognitive difficulties.

Spina Bifida is a failure of adequate closure of the neural tube during embryonic development. Children with spina bifida can develop mild to severe neurological and cognitive impairments.

Brain Tumors can occur at any age. A tumor is an abnormal growth within the central nervous system. Aside from the effects of the brain tumor itself, treatments for tumors (radiation, chemotherapy) can affect a variety of brain-based skills.

Epilepsy can result in wide variability with respect to the severity of symptoms. Although many children with seizures do not develop severe cognitive difficulties, some experience deficits in attention, memory, processing speed, language, and other skills. Neuropsychological assessment helps identify these types of deficits.

Genetic Disorders may cause a variety of cognitive difficulties for children. Certain genetic disorders have specific signs and symptoms. Concerns regarding whether a child has a genetic disorder usually begins with a discussion with a pediatrician who may refer a child and family for genetic counseling and order a genetic workup. Neuropsychological assessment may be recommended particularly if a child demonstrates school-related problems or is struggling with various cognitive tasks.

MENTAL HEALTH

Attention Deficit/Hyperactivity Disorder (ADHD) typically results in attention difficulties and/or hyperactivity and impulsivity. Individuals with ADHD typically experience impaired executive functions (i.e., organizational problems, inhibition, initiation difficulties, problem solving, working memory) processing speed problems, and fine motor difficulties.

Anxiety is defined as persistent worry or rumination that has a significant, negative affect on daily function. Anxiety can result in deficits of attention and processing speed. Appropriate diagnosis is essential as symptoms may inappropriately be diagnosed as ADHD.

Depression is typically observed as significant sadness or hopelessness most days. In children, the mood may be irritable rather than sad. Other symptoms include social withdrawal, increased sensitivity, and physical complaints that do not have a medical basis. Depression can negatively impact a child's thinking and learning skills. Symptoms can include slowed processing speed, attention problems, and executive dysfunction.

Obsessive/Compulsive Disorder (OCD) is a disorder that can severely affect and impair an individual's ability to process information, recall details, and remain focused and organized.

DEVELOPMENTAL & LEARNING DISABILITIES

Intellectual Disability (ID) refers to impaired cognitive and adaptive abilities, the cause of which is typically unknown. ID commonly occurs in many genetic and medical conditions. While individuals with ID can learn, function, and make life progress, abilities are significantly lower than those of same-aged peers.

Autism Spectrum Disorder (ASD) is a disorder with persistent deficits in social communication and social interaction across multiple settings. Children typically have deficits in social-emotional reciprocity, significant difficulty understanding nonverbal communication, and developing and maintaining relationships. Restrictive, repetitive patterns of behavior, interests, or activities is also a primary difficulty. These difficulties include repetitive motor movements, inflexible routines, fixated interests, and sensory issues. Symptoms of ASD may be confused with anxiety, ADHD, and language impairments. There is no single test for ASD. Diagnosis is made based on many sources of information including extensive interview, family/teacher report, observations, and formal test results.

Specific Learning Disorder (SLD) may manifest as one or more disorders in the following skills: reading, math, or written language. When learning disorders are persistent and severe, a child may be diagnosed with dyslexia (severe reading disorder), dyscalculia (severe math disorder) and dysgraphia (severe deficits in handwriting). Learning disorders are identified by evaluating cognitive skills and academic achievement skills. Although historically SLD has been thought of as a severe discrepancy between intellectual ability and academic achievement, now SLD is defined as a persistent difficulty in learning academic skills that fall well below average for a child's age when formally evaluated. Although the field of SLD has evolved, controversy about diagnosis still exists among professionals. A comprehensive evaluation can help clearly delineate skills and determine if diagnosis of an SLD is appropriate.