

Understanding Disabilities: Intellectual and Learning Disabilities

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Case Study

Very early in his life, Diego's parents noticed he was often delayed in many areas of his development. He rolled over later than the average infant his age, started crawling well after 18 months, and by age 3, showed no signs of talking or understanding when given directions. When he entered preschool, his teacher noted his problems with adapting to the classroom environment. He struggled in particular with toileting as a result of his verbal delays in expressing his needs, which often led to accidents and emotional outbursts. Socially, he seemed to be "in his own world," preferring to play by himself instead of with others. When nearing kindergarten, his parents worried that he was not ready. After a checkup with a pediatric specialist, she noted Diego's history of several developmental delays and lower than average IQ test scores. Diego was diagnosed with an intellectual disability.

As a young child, Allison typically learned new skills quickly, so her parents were surprised when telling time correctly was a challenge for her. At first, they thought she simply needed to pay more attention. By the time she was in first grade, though, it was apparent that she often recited numbers out of sequence and made errors in simple calculations. In fact, understanding mathematical concepts was frequently difficult for her. Fortunately, before Allison's frustration at her challenges affected her day-to-day school performance, her math teacher shared with her parents the idea that Allison may have a learning disability.

Introduction and Definitions

While intellectual disabilities and learning disabilities sound alike, the two disability types are different.

An intellectual disability (or ID) is characterized by limitations in cognitive function, and includes three criteria: a score below 75 on an IQ test (the most common measurement of intelligence); significant limitations in two or more adaptive areas (skills needed for successful living, working and playing), such as communication and self-care; and symptoms that occur in people younger than 18.

A learning disability (or LD) is characterized by differences in the way the brain processes information, affecting how a person learns to read, write, speak or do math. Although it lasts for a person's entire life, LDs are typically discovered when the child is in school. LDs are not in themselves indicative of intelligence, so many students who receive appropriate educational supports have the potential for long-term success.

Causes, Prevalence and Types

The causes of IDs and LDs are a combination of genetic and environmental factors. Genetic causes refer to inheriting an altered gene that leads to abnormal brain development. Environmental causes — like birthing injuries, toxic exposure during prenatal development (alcohol or drugs), or other brain injuries — can have negative impacts on early brain development. Regardless of the cause, abnormal brain development affects later life learning, memory and the ability to perform day-to-day tasks.

Intellectual Disabilities: IDs affect 1-3 percent of people globally. Some common IDs include:

- **Down syndrome** is a chromosomal disorder that causes a set of cognitive and physical symptoms, such as delayed language and speech development, decreased muscle tone, and distinct facial features.
- **Fetal alcohol syndrome** describes a set of conditions that manifest in a child whose mother drank alcohol during her pregnancy; symptoms can include a combination of behavior, learning and physical problems.
- **Fragile X syndrome** is a genetic disorder that can affect physical appearance; communication skills; ability to learn; and sensitivity to noise, light or other sensory information.

Learning Disabilities: LDs affect nearly 8 percent of children, with slightly greater incidence among those living in poverty. Typical types are:

- **Dyscalculia** is an impairment in ability to process numbers, mathematical concepts and calculations, and compute numerical or quantitative operations.
- **Dysgraphia** is an impairment in storage, retrieval and writing of letters and numbers; problems with fine motor skills; and often executive functioning, like planning and organizing.
- **Dyslexia** is characterized by an impairment in recognizing, pronouncing and spelling words and poor reading comprehension skills.
- **Nonverbal learning disorder** is an impairment that involves difficulty interpreting nonverbal cues, like facial expressions and body language. While people with this disorder may have a well-developed vocabulary, they may have poor coordination or spatial memory.

Co-Occurring Conditions

IDs and LDs may be present along with other disability types. The most common co-occurring disabilities for intellectual disorder are autism spectrum disorders (ASDs) or cerebral palsy (CP). Autism spectrum disorder impacts how a person behaves, communicates, learns and interacts with others. Some individuals with ASD who have lower than average IQs scores are often diagnosed with an intellectual disability. Cerebral palsy, a physical disability that affects movement and muscle coordination, is caused by abnormal brain development, which also can lead to an intellectual disability. Learning disabilities may also co-occur alongside physical disabilities, such as hearing or vision impairments, particularly if diagnosed later in development, that contribute to learning losses.

Resources

- American Association on Intellectual and Developmental Disabilities — aidd.org
- Learning Disabilities Association of America — ldaamerica.org
- Special Olympics — specialolympics.org

Where can I find more information?

If you are interested in learning more, find additional fact sheets as part of our **Understanding Disabilities** series.

[W 947-A Understanding Disabilities: An Introductory Guide](#)

[W 947-B Understanding Disabilities: Behavioral Health FAQ Sheet](#)

[W 947-D Understanding Disabilities: Screening for Disabilities in Children](#)

[W 947-E Understanding Disabilities: Respectful Etiquette and Language Guidelines](#)

[W 947-F Understanding Disabilities: Responsive Care](#)

[W 947-G Understanding Disabilities: Anxiety in Children and Youth](#)

[W 947-H Understanding Disabilities: Sensory Processing Disorder](#)

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