

AD/HD and Learning Disabilities: What Are They and What Can We Do?

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While the definitions have varied over the years for AD/HD (Attention-Deficit/Hyperactivity Disorder) and LD (Learning Disabilities), they have more recently been moving toward increasingly objective identification and highly effective treatment of these disorders. The two conditions differ considerably but are both due to genetic and/or neurobiological factors which affect one or more processes associated with attention or learning. They can also exist in both children and adults, and are known to be lifelong.

Early diagnostic labels for individuals dealing with various types of school or work problems, hyperactivity, short attention span, impulsivity, and emotional problems included *Minimal Brain Damage* and later *Minimal Brain Dysfunction*. This only served to confuse those trying to assist these individuals (i.e. parents and teaching professionals) as it did not specifically identify how to effectively treat these problems. Current identification, which is still evolving, has developed more specific labels such as *Dyslexia* or *Language-Based Learning Disabilities*, along with *Dysgraphia* or *Dyscalculia*, both forms of *Nonverbal Learning Disabilities (NLD)*. Similar distinctions have been used to identify different forms of AD/HD.

AD/HD (Attention-Deficit/Hyperactivity Disorder) continues to be falsely associated only with individuals who display significant hyperactivity or impulsivity, whether or not they are inattentive. Unfortunately, this is likely due to the confusion that has resulted from frequent misinformation that circulates in the media along with the ever-changing diagnostic labels. AD/HD occurs in approximately 5% of the population or about 1 in 20 individuals, and begins in childhood, whether or not it is diagnosed. Formerly called ADD (Attention Deficit Disorder), the contemporary name (AD/HD) reflects mounting scientific evidence that inattentiveness and impulsivity can share common causes in the brain. The physiological and neurotransmitter differences have been repeatedly confirmed through recent brain-imaging (brain scan) technology. Three basic subtypes (*Predominantly Inattentive*; *Predominantly Hyperactive-Impulsive*; and *Combined Type*) are recognized by the *American Psychiatric Association* and appear in the *Diagnostic and Statistical Manual of Mental Disorders*, with some experts in the field describing up to six distinct subtypes. Inattentive symptoms may often include making careless mistakes, losing things, and distractibility. Hyperactive tendencies are identified by excessive activity or restlessness, talkativeness, or fidgetiness, while impulsive tendencies may include characteristics of interrupting/intruding upon others, blurting out answers, or difficulty waiting one's turn. While many of these core symptoms are typically seen in varying degrees in most individuals from time to time, the severity and pervasiveness in those diagnosed with AD/HD significantly interferes with daily functioning, in spite of their relentless efforts to counteract these problematic symptoms. Accordingly, these symptoms must be present in minimum numbers, duration and severity, in order to be formally diagnosed. As is the case with LD, this ongoing struggle without proper identification or treatment, often results in mounting frustration and emotional distress.

Learning Disabilities, while rather prevalent in *at least* 10% of individuals to the point of requiring intervention, commonly occur with other conditions (i.e. AD/HD, Conduct Disorder, Anxiety or Depression - about one-third of the time). The main component of the currently accepted definition of LD is that it refers to "a number of disorders which may affect the acquisition, organization, retention, understanding or use of verbal or nonverbal information" such as significant problems with listening, speaking, reading, spelling, writing, reasoning or mathematical abilities. Individuals diagnosed with LD must demonstrate *at least average intelligence*. Contrary to common misperceptions, having a LD is not synonymous with being developmentally delayed or being a "slow learner". The difficulties experienced are also *not* due primarily to hearing and/or vision problems, motoric delays, emotional disturbances, lack of motivation or ineffective teaching, cultural or linguistic differences, or economic disadvantage.

The two main types of Learning Disabilities include Language-Based (primarily left-brain) LD and

Nonverbal (right-brain) LD. Language-Based LD are those involving significant oral language (i.e. listening, speaking and understanding), reading (i.e. decoding, phonetic knowledge, word recognition, and comprehension), and written language difficulties (i.e. spelling and written expression). Common challenges, aside from those general areas listed, include short-term memory, understanding what is heard or seen, following directions, and completing word problems. Nonverbal LD are somewhat less common. They frequently include problems with arithmetic (computation and problem-solving), deficits in social awareness/perception, social judgement and interaction, perspective-taking, and organizational skills. Affected individuals may also be poorly coordinated in gross or fine motor skills, have problems with eye-hand coordination (i.e. handwriting or drawing), or with copying from a book or blackboard.

Once unrelated factors have been ruled out through consultation with a medical professional, it is essential to consult with a qualified psychological professional to facilitate early identification and timely treatment. A formal Psychoeducational Assessment (i.e. intellectual, academic, and social-emotional), consisting of interviews, traditional tests of cognitive abilities, computerized performance-testing, and evaluation of achievement levels, is first used to objectively identify an individual's profile of strengths and needs, along with any other related diagnoses. A thorough assessment of this type will help an individual to better understand how information is processed. This will enable them to access stronger areas, while providing assistance for challenging tasks or for their areas of difficulty. Interventions, which then need to be tailored to each individual's specific needs, can be implemented at home, at school, at work, or in the community.

The most obvious and highly effective interventions include the provision of specific skill instruction and academic remediation, school or work accommodations, and compensatory strategies for challenges that have been previously identified. This can, and often should include or be supplemented by highly efficient and individually customized Computerized Cognitive Skills Training. Research has repeatedly demonstrated the efficacy of cognitive training programs in improving attention and memory, inhibitory control, mental processing and reading speed, visual-spatial, auditory, and visual discrimination skills, along with many other skill areas.

The primary treatment goals for AD/HD are to improve functioning at home, in school or work, and with peers, through the modification of an individual's inattention, impulsivity, and/or hyperactivity. In addition, the person should be assisted in maximizing cognitive functioning, social and behavioural skills, and self-esteem. Under most circumstances, encouraging healthy family relationships and cohesiveness is also critical. Learning disabilities have similar treatment goals. The emphasis in dealing with these challenges is typically placed upon improving the person's functioning while maintaining or enhancing their self-concept. Treatment is most effective when all facets of a person's environment are addressed. Treatment is always provided based on a person's specific needs and can include a combination of Medication, Parenting Support, Behaviour Management, Individual Counselling/Coaching, Family Counselling, and/or Therapeutic Skills Training.

Medications, such as stimulants, have traditionally been utilized as a complimentary form of treatment for AD/HD. These medications can partly compensate for the underlying physical basis of the disorder by balancing brain chemistry. Parent training and support are key elements in ensuring effective treatment of AD/HD in children. In order to assist the child in modifying their behaviour, parents must first be provided with strategies and goals to facilitate these behavioural changes. Family counselling can also assist in improving family communication and problem-solving skills.

Individual counselling/coaching provides a set of interventions that help people to reach their goals by introducing strategies aimed at facilitating academic progress and/or occupational success. Group counselling, by way of Therapeutic Skills Development (i.e. Social Skills Enrichment Training, Teen Esteem or Interpersonal Communications Skills Groups), can ensure the development of satisfying interpersonal relationships by enhancing skill proficiency in a variety of areas that can foster social competency.

In order to ensure a successful learning experience for those facing the daily challenges of AD/HD and LD in a school environment, an educational plan is fundamental. To complement such a plan, it is important to access educational resources and professional staff that can assist in the implementation and coordination of necessary accommodations, learning strategies, and the

development of effective (self-)advocacy skills. The same could be applied to other learning environments such as in an elementary, secondary or post-secondary setting, or in a work environment.

The problems associated with untreated AD/HD and Learning Disabilities negatively impact on an individual's thoughts, feelings and behaviours. Such daily struggles typically affect academic success, and can result in reduced productivity and problematic relationships. To ensure that these individuals reach their potential, a caring, supportive, and consistent environment is required. As part of a comprehensive support system, detailed evaluation, followed by the implementation of effective strategies, interventions and accommodations, along with the assistance of a trained professional, can assist the individual in reconceptualizing their symptoms. This will provide opportunities for personal growth in individuals with AD/HD and LD so that they may finally and deservedly achieve a high level of academic and professional success.

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