

## **A Guide for Understanding Nonverbal Learning Disorder in Children and Adolescents**

### **What is Nonverbal Learning Disorder (NLD)?**

Nonverbal learning disorder is a neurological disorder that can cause impairment in learning, academics, social skills, and emotional functioning. Children with NLD often display distinct strengths in the verbal realm and significant deficits in the visuomotor and sensorimotor realm. NLD is a unique learning disability as it often directly affects a child's social and emotional functioning, unlike traditional learning disabilities.

NLD affects three broad areas of functioning: motoric, visual-spatial-organizational, and social. Children with NLD are much less able to coordinate their movements; they often have difficulty with fine motor coordination (such as tying shoes) as well as gross motor coordination (such as learning to ride a bike). They also experience deficits in visual-spatial integration as well as organization, this means that they are not visual learners; they have difficulty integrating multiple pieces of information from different sources and understanding the whole picture. NLD affects a child's social functioning as they are often unable to understand nonverbal cues, a key to successful social interaction. Due to this social component, NLD is often confused with Asperger's Syndrome or other developmental disorders.

NLD is most often diagnosed in mid to late elementary school when the deficits in motor coordination, visuospatial integration, and social interaction often become acute in the classroom setting. NLD can often go undiagnosed as children with NLD often do very well in reading and are very verbal from a young age, traditional indicators of good school progress and intelligence. In fact, children with NLD often appear to have above-average cognitive skills due to their strengths in the verbal arenas.

Accurate diagnosis and early intervention is imperative, however, as NLD often leads to emotional difficulties. Many of these emotional components arise due to the child's frustration over their difficulty to complete tasks both in and out of the classroom, as well as their often-difficult peer relationships. If left untreated, many children with NLD often develop secondary psychological disorders due to their low self-esteem and pervasive difficulties in every-day life.

### **Prevalence**

Nonverbal learning disorder is much less prevalent than language-based learning disorders such as dyslexia. While language-based learning disorders are estimated to affect 10% of the population, nonverbal learning disability is estimated to impact only .1% (approximately 1 in 1,000) of the general population. NLD affects males and females in approximately equal numbers.

Children with NLD have a cluster of symptoms that include some distinct cognitive strengths and weaknesses, as well as certain social and emotional difficulties.

### **Strengths a Child with NLD might Possess**

- Very good verbal skills and vocabulary
- Good at rote memorization
- Can often remember auditory information very well

### **Weaknesses a Child with NLD might Posses**

- Poor visual memory
- Delays in fine motor coordination
- Lack of motor coordination
- Difficulty with spatial planning
- Balance problems
- Often pay attention to details rather than understanding the whole
- Difficulty integrating and organizing incoming information
- Difficulty understanding abstract concepts or tasks

### **Social Difficulties a Child with NLD might Display**

- Difficulty understanding social cues and other nonverbal methods of communication
- Deficits in social skills and interaction
- Low self-esteem and withdrawal from social situations
- Difficulty adapting to new situations

## **What Can You Do If You Think Your Child Might Have NLD**

### **Seek Professional Help**

- If you suspect your child might have a Nonverbal Learning Disability it is important to obtain information from a professional.
- Many children with NLD have difficulty in school both academically and socially, which often effects self-esteem, seeking treatment as soon as possible with help empower children with tools to help them succeed despite their disability.
- The first step in diagnosing NLD is usually seeking psychological testing services from a licensed psychologist. Talk to your doctor, school counselor, or contact the American Psychological Association ([www.apa.org](http://www.apa.org)) to find a professional in your area.

### **Learn about NLD**

- Research NLD further on the web and become knowledgeable about the resources in your area for children with NLD.
- Talk to your school psychologist or other mental health professional; they can often help address your concerns and provide more detailed information about NLD and your child.
- Join a support group for parents of children with NLD.

### **Support Your Child**

- Offer your child information about NLD.
- Encourage them to participate in activities that highlight their strengths.
- Talk with his/her school to ensure the teacher are aware your child's disabilities.

### **Interventions**

#### **Helpful tools for school and home**

- Verbally instruct the child how to do something rather than showing them how to do something
- Make lists and write down step-by-step instructions, even for simple, every-day tasks
- Some children perform better if allowed to work on computers and type their notes or tests on a keyboard rather than handwrite.
- Provide the child with graph paper to help organize their work during math
- Provide the child with instructions about appropriate social interactions
- Allow the child extra time on examinations
- Provide a routine and schedule at home and school, and inform the child well in advance of any changes to the schedule (i.e. a vacation, or doctors appointment)

#### **Occupational Therapy**

Occupational Therapy is also and often recommended intervention as it can help a child improve his or her sensorimotor integration skills as well as improve their gross motor coordination, balance, and fine motor skills.

#### **Social Skills Training**

Many children with NLD benefit from participation in a social skills group where they can practice interacting in social situations in a safe environment. Relationship Development Intervention is one example. (For further information please visit [www.rdicconnect.com](http://www.rdicconnect.com).)

\* Your mental health care professional will help you determine the best intervention strategies for your child.

#### **Causes of NLD**

There is no one cause for Nonverbal Learning Disorder, however that the right hemisphere of the brain is known to play a significant role in this disorder. The right hemisphere of the brain is crucial in the integration of multiple pieces of information from different sources (sensory, auditory, visual), a skill that is necessary in order to understand social interactions, perform spatial planning, and coordinate movement. This deficit in right hemisphere functioning is most likely the root of many of the symptoms seen in children with NLD. It is unknown how exactly the deficit in the right hemisphere of the brain develops or arises; however, some possible causes are

early interruption in the development of the central nervous system or direct damage to the right side of the brain due to trauma, tumor, stroke, or seizure. The exact source and cause of NLD, however, is rarely identified

### **What Does a Child with NLD Look Like in Every Day Situations?**

- May begin talking and reading at an early age
- May spill things when eating and have difficulty dressing themselves
- Difficulty playing team sports
- Teachers and parents may complain that the child “misses the big picture”
- Often have difficulty with transitions and changes in routine
- May often become lost, even in familiar situations
- Often can’t remember their place in line
- Have always had difficulty making friends or interacting with their peers
- May not understand “personal space”
- May have difficulty learning to ride a bike or play catch
- Handwriting may be poor and difficult for them
- The child does not understand sarcasm, for example he is unable to differentiate the meaning between a peer saying “nice going” after he gets an A on a test from a peer saying “nice going” when he misses the ball during a basketball game
- May also have difficulty understanding humor and jokes
- May have particular difficulty with coordination on the left side of their body

### **References and Resources**

#### **Suggested Readings**

Thompson, Sue (1997). *The sourcebook for nonverbal learning disorders*. Moline, IL: LinguiSystems, Inc.

#### **Organizations**

Nonverbal Learning Disorders Association  
[www.nlda.org](http://www.nlda.org)

NLD On The Web  
[www.nldontheweb.org](http://www.nldontheweb.org)

LD Online  
[www.ldonline.org](http://www.ldonline.org)

National Center for Learning Disabilities  
[www.nclld.org](http://www.nclld.org)

NLDline  
[www.nldline.com](http://www.nldline.com)

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If you are concerned that your child may have Nonverbal learning disorder, you should first seek out a mental health professional so your child can receive a thorough diagnostic evaluation. The treatments listed below are offered to serve as a brief outline of possible options, but are not intended to replace the advice of your child's physician or mental health professional.

For more information, please contact:

Jewish Child & Family Services  
Department of Psychological Services  
255 Revere Drive, Suite 200  
Northbrook, IL 60062  
*Elaine Kersten Children's Center*  
T 847.412.4366  
F 847.412.4360  
[www.jcfs.org](http://www.jcfs.org)

*Jewish Child and Family Services is a partner in serving our community, supported by the Jewish United Fund/Jewish Federation of Metropolitan Chicago.*