

What is NLD?

NLD is a neurological disorder which originates in the right hemisphere of the brain. Reception of nonverbal or performance-based information governed by this hemisphere is impaired in varying degrees, causing problems with visual-spatial, intuitive, organizational, evaluative, and holistic processing functions.

The syndrome of Nonverbal Learning Disorders (NLD) consists of specific assets and deficits.

The assets include:

- Early speech and vocabulary development
- Remarkable rote memory skills
- Attention to detail
- Early development of reading skills and excellent spelling skills
- Eloquent verbal ability
- Strong auditory retention

The three categories of deficits are:

- **Motoric:** lack of coordination, problems with balance and graphomotor skills
- **Visual-spatial-organizational:** lack of image, poor visual recall, faulty spatial perception, and difficulty with spatial relations
- **Social:** inability to comprehend nonverbal communication, difficulty adjusting to transitions and novel situations, and deficits in social judgment

People with NLD can be affected in varied levels of severity in each of the categories, so that each person with NLD presents a unique clinical, behavioral, and educational picture. People with NLD can be helped by many forms of therapy, but their world is filled with confusing sensory stimuli. For some, their physical endurance is challenged by generally low muscle tone. Some need support throughout life with cognitive and organizational skills, motor skill development, pragmatics and social skills.

Children with NLD have advanced verbal and auditory memory. Some are precocious readers with advanced vocabularies. Nevertheless, NLD is a problem of language. People with NLD have rote language skills but when it comes to functional daily use of language, they have difficulties with tone of voice, inference, written expression, facial expression, gestures, and other areas of pragmatic speech.

People with NLD have difficulty understanding patterns and lining up columns of numbers. Spoken instructions can be troublesome due to difficulty picturing consecutive directions and poor visual memory. NLD can also affect coordination, causing clumsiness, poor balance and a tendency to fall. Many people with NLD have poor safety judgment.

We are not sure what causes NLD, but we know that the earlier the intervention, the better the prognosis.

Diagnostic Criteria

The environment is the most important support for people with NLD. When school and home are positive, safe and predictable, children with NLD can thrive and become independent and productive adults.

- Bilateral tactile-perceptual deficits
- Bilateral psychomotor coordination deficits
- Outstanding deficiencies in visual-spatial-organizational abilities
- Deficits in the areas of nonverbal problem solving, concept formation, hypothesis testing
- Difficulty dealing with negative feedback in novel or complex situations
- Difficulties in dealing with cause-effect relationships
- Difficulties in the appreciation of incongruities
- Well-developed rote verbal capacities and rote verbal memory skills
- Over-reliance on prosaic rote, and consequently inappropriate, behaviors in unfamiliar situations
- Relative deficiencies in mechanical arithmetic as compared to proficiencies in reading (word recognition) and spelling
- Rote and repetitive verbosity
- Content disorders of language
- Poor psycholinguistic pragmatics (cocktail party speech)
- Poor speech prosody
- Reliance on language for social relating, information gathering, and relief from anxiety
- Misspelling almost exclusively of the phonetically accurate variety
- Significant deficits in social perception, social judgment, and social interaction skills
- Marked tendency for social withdrawal and isolation as age increases
- High risk for social-emotional disturbance if no appropriate intervention is undertaken

NLD is a syndrome of assets and deficits. In each individual with NLD, the assets and deficits manifest in different combinations and different intensities. Most people with the diagnosis, however, share the basic configuration of relative impairment in social perception, visual-spatial abilities, and mechanical arithmetic, with well developed verbal skills and rote memory.

What is NLD? Nonverbal learning disorders (NLD) is a neurological syndrome consisting of specific assets and deficits. The **assets** include early speech and vocabulary development, remarkable rote memory skills, attention to detail, early reading skills development and excellent spelling skills. In addition, these individuals have the verbal ability to express themselves eloquently. Moreover, persons with NLD have strong auditory retention. **Four major categories** of deficits and dysfunction also present themselves:

•**motoric** (lack of coordination, severe balance problems, and difficulties with graphomotor skills).

•**visual-spatial-organizational** (lack of image, poor visual recall, faulty spatial perceptions, difficulties with executive functioning* and problems with spatial relations).

•**social** (lack of ability to comprehend nonverbal communication, difficulties adjusting to transitions and novel situations, and deficits in social judgment and social interaction).

•**sensory** (sensitivity in any of the sensory modes: visual, auditory, tactile, taste or olfactory)

*definition of executive functioning: Neuropsychological functions including, but perhaps not limited to, decision making, planning, initiative, assigning priority, sequencing, motor control, emotional regulation, inhibition, problem solving, planning, impulse control, establishing goals, monitoring results of action, self-correcting. From <http://www.behavenet.com/>

Positive Interventions

- Clearly Stated Expectations
- Computer Use
- Consistent Scheduling
- Facilitated Group Activity
- Foreign Language Waivers
- Good Role Models
- Language based therapy
- Logical Explanations for Change
- Mentoring
- Methods for Coping with Anxiety
- Methods for Coping with Sensory Defensiveness
- Modified Art and Physical Education
- Modified Grading
- Modified Homework Assignments
- Modified Testing (Time, Content)
- Occupational and Physical Therapy
- Organizational Skills Coaching
- Prompted Writing Assignments
- Psychotherapy, Cognitive Therapy
- Second Set of Textbooks at home
- Social Skills Training
- Speech and Language Therapy which addresses social cognition rather than articulation
- Time Management Coaching
- Trained Advocates
- Verbal Brainstorming
- Verbal Explanation of Visual Material

and especially

- COMPASSION

NLD is different from language-based learning difficulties. Educators and all involved must be specially trained to deal with the cognitive, behavioral and social issues unique to NLD.