

# Hyperlexia

## **Hyperlexia is a syndrome observed in children who demonstrate the following cluster of characteristics:**

A precocious, self-taught ability to read words which appears before age 5, and/or an intense fascination with letters, numbers, logos, maps or visual patterns.

Significant difficulty in understanding and developing oral language (i.e. language is first delayed, then “different” once it emerges).

“Unusual” or “different” social skills; difficulty interacting appropriately with peers and adults.

## **What is Hyperlexia?**

Hyperlexia is a syndrome, which interferes with speech, language and social interaction. It may be accompanied by unusual or “different” behaviours. Children exhibit an intense fascination with letters, numbers, patterns, and logos, and a very precocious ability to read, spell, write and/or compute usually before the age of five.

These children may show the following behaviours:

- Form close relationships with chosen family members and/or friends.
- Demonstrate the intent to communicate.
- Learn to speak in a peculiar way; echo or memorize the same sentence structure; echo speech of others; reverse pronouns.
- Listen selectively; may be suspected of being deaf or seem “tuned out”.
- Have difficulty understanding and/or answering questions beginning with: who? why? what? when? where? and how?
- Rarely initiate social conversation.
- Think in concrete, literal terms; have difficulty with abstract concepts.
- Possess very strong auditory and /or visual memories.
- Have an intense need to develop or keep to routines in daily life; sometimes showing ritualistic and/or obsessive behaviours.
- Have difficulty understanding and/or accepting changes and transitions.
- Develop specific or unusual fears.
- Display unusual sensitivities to sounds, odours, tastes or textures.
- Exhibit self-stimulatory behaviours.

# How to Identify Hyperlexia

Hyperlexia can be identified in children with a wide range of language delays/disorders. hyperlexia is not a diagnosis in of itself. At this time, it is not listed in manuals used for psychiatric or psychological diagnosis.

## Hyperlexia can be identified in children with:

Pervasive Developmental Disorder, Autism Disorder, Asperger's Syndrome, Semantic/Pragmatic Disorder, Mixed Receptive-Expressive Language Disorder, Specific Language Impairment/LLD, Expressive Language Disorder, and in children with neurological signs such as seizure disorders, agenesis of the corpus callosom and Tourett's syndrome.

Research has shown that children with an identification of Hyperlexia have a better prognosis than most other children with any of the above diagnoses and no Hyperlexia.

The identification of Hyperlexia is a practical label. If the parents, therapists and teachers understand how the child learns, they can develop strategies to help the child succeed.

Children with Hyperlexia have a unique learning style. Effective techniques that have been developed for hyperlexic children include the use of the printed word and the specific teaching of language and social skills.

Testing is a static process. Assessment is a dynamic process, and interpretation is very important. The assessment process usually involves and interview with parents and observation of the child, using standardized tests when appropriate. The following is a list of what a clinician would look for and implement in an assessment and identification of the syndrome of hyperlexia in a child.

**If parents, therapists and teachers understand how the child learns, they can develop strategies to help the child succeed.**

# Assessing the Child With Hyperlexia

- Note an intense fascination with letters and numbers in child's history.
- Observe use of reading ability in assessment using magnetic letters, allowing the child to print words with crayons, and administering a basic reading test for children that can read beyond a Grade One level.
- Test letter and number knowledge, assessing decoding, spelling, comprehension, noting discrepancies and to what extent the discrepancies are a problem.

**Allowing the child to manipulate letters, and provide opportunities for success by posing questions in a multiple choice or closure format, will also be modifications that can assist the child in showing what they know.**

The clinician would also make modifications to the test protocol such as writing answers for a child who spells at a high level but cannot print letters at that level. Allowing the child to manipulate letters, and provide opportunities for success by posing questions in a multiple choice or closure format will also be modifications that can assist the child in showing what they know.

# Language Development in Hyperlexia

## Additional methods of assessment:

- Note unusual use of language such as “chunk” quotations from videos.
- Note unusual development of language such as: learning language from music and videos, good auditory memory, poor receptive knowledge and poor language processing.
- Assess visual memory strengths and visual conceptualization using a standardized test such as the **Leiter International Performance Scale** and the visual portion of the **Wide Range Assessment of Memory and Learning**.
- Identify behavioural idiosyncrasies such as perseveration and resistance to change. Identify which perseveration and obsessions are helpful, and explore ways to reduce anxiety.
- Evaluate social differences, noting relationship with peers versus relationship with (and affection toward) family members.

**The goal of an assessment is to determine the strengths and needs of the whole child.**

Strengths can be used to support learning at school, and to help develop recreational skills. By identifying weak areas, school curricula can be examined and remedial techniques can be implemented. Also, one can identify weak areas that should be bypassed to reduce frustration.

Language development may be best viewed within a framework of communication. Children may find it easier to attend to, and grasp language information that they see, better than that which they listen to, and meaning is often difficult to attach to words. Common areas where language problems occur:

## Understanding and using language functionally:

Difficulties are exhibited in the following areas:

- **Processing:** auditory, visual, and/or other sensory stimuli. Children may, for example, find it easier to attend to, and grasp language information that they see, better than that which they listen to, and meaning is often difficult to attach to words.
- **Formulating:** organizing thoughts into meaningful and accurate language structures.
- **Expressing oneself:** through spoken, printed and/or gestural modes. Motor planning issues may be compounding language difficulties.

## Comprehending the intentions of others:

- Through their words and language.
- Through emotions and expressions.

## Being able to convey one's own intentions:

- Through understanding oneself.
- Having the ability to attach labels to thoughts.
- Having the neuro-motor functioning and planning; ability to program the words/language into speech.
- Doing this in an emotionally and behaviourally appropriate and social way.

# Developing an Effective Communication Program

Some factors to consider in developing a communication program:

- Develop the intent to communicate.
- A lot of communication is preverbal and nonverbal.
- Recognize that many of these children have difficulty connecting their thoughts and feelings to means of expression.
- Processing difficulties often hinder understanding.  
**Cognitive factors:** be aware of those that are specific to the child.  
**Sensory issues:** sensory reactivity within different modalities can affect learning and lead to misinterpretation.  
**Emotional component:** sensitivity, reactivity, etc, can affect processing, especially when in low or heightened states.
- Communication involves interaction.
- Weave social language development into many levels and spheres of the child's program as early as possible.
- Communication will tend to develop its own inherent rewards if it is purposeful and enjoyable.
- Use an integrated approach.
- Development is constantly changing.
- Try to obtain the support that you need (physical, emotional, educational, financial, professional).

# The Hyperlexic Learning Style

The hyperlexic child presents the following Characteristics:

- Strong visual memory, especially for the written word.
- Gestalt processing of language, stores and retrieves chunks or phrases of language.
- Processing system breaks down when these chunks must be dissected and rearranged to form original thoughts.
- Echoes language without modifying it appropriately.
- Constantly looks for and finds patterns in the environment.
- Children with hyperlexia will not 'pick up' language from the culture around them, so they must be taught very specifically.
- The child will pay more attention to your note than to your voice.

**Developing Language is the key to unlocking the child with hyperlexia.**

Strategies are built on a three-step process:

- 1) Understanding the hyperlexic learning style.
- 2) Observing and listening to the child to find the holes in language development.
- 3) Creating concrete, specific activities that use this unusual learning style as a way of filling up the holes.

# Selected Strategies for Helping Children with Hyperlexia

## LABEL EVERYTHING:

- Make signs, label people, things, places, actions, emotions, and pictures thereof.

## KEEP LISTS, CALENDARS, JOURNALS:

- Write schedules/routines (morning preparation for school).
- Post household rules on location (take off your shoes, wash your hands)
- List behavioural expectations and strategies.
- No hitting. Use words. Say "I feel...when...", "When I feel angry, I stop and take a deep breath".
- Anticipate stressful situations such as changes, specific fears and aversions, and use the above strategies to prepare your child.

## USE PATTERNED LANGUAGE:

- Use patterned language to teach specific language concepts. For example:  
"If \_\_\_\_\_, then \_\_\_\_\_."  
"Why? Because \_\_\_\_\_".

## USE OPEN-ENDED SENTENCES:

- Have your child fill in the blank:
- "The remote control is in the \_\_\_\_\_."  
Instead of: "Where is the remote control?"

## OFFER CHOICES AND MODEL ANSWERS:

- "Would you like chips or cookies?"
- "I would like \_\_\_\_\_, please."

## WRITE IT DOWN:

- Write down and practice appropriate things to say in common social situations, such as:  
"How are you?" " Fine thanks, and how are you?"
- Write down and practice rules of conversation, such as:  
"Make eye contact."  
"Take turns when speaking."

## ACTIVITIES:

Generally, any activity utilizing letters, numbers or words will gain attention more consistently. Many parents have found that the following tools lead to helpful, fun and interactive play activities:

- Magnetic letters/numbers
- Letter/number stickers
- Alphabets noodle crafts
- Play dough letters
- Alphabet blocks/puzzles
- Early reader computer programs
- Magnadoodle
- Electronic "speaking" toys

**The rule of thumb for many parents of children with hyperlexia is:  
WHEN IN DOUBT, WRITE IT OUT!  
(If it isn't written, it may not exist).**

# Parents and Teachers Working Together

## How can I help my child's teacher?

### Provide copies of CHA materials such as:

- *What is Hyperlexia?*
- *The Hyperlexic Learning Style*
- *Selected Strategies*
- *The Reader*
- *Reading To Soon* and *The Hyperlexia Handbook* can also be excellent resources, but remember that a teacher may not have the time to read books initially. Perhaps copies can be provided to the teacher so that he/she may keep them as references throughout the school year.

### Provide information specific to your child:

We have found that the most effective way to present information on a child's specific characteristics is to categorize them, as follows:

- **Sensitivities/Fears:** List them with the types of behaviours to expect and how to accommodate for them.
- **Transitions/Changes:** Note what type of changes are of concern, the behaviours to expect and effective coping strategies.
- **Structure/Organization:** State your child's system of organization that provides him/her the most comfort.
- **Language:** Give information on expressive and receptive levels, speech-language therapy and the techniques the therapist uses, if applicable.
- **Cognitive Abilities:** Discuss attention span, distractibility, impulsivity, perseverance, memory, organization and problem-solving.
- **Academic state:** Reading level (word recognition vs. comprehension), verbal language, written language, math concepts and general knowledge.

- **Social:** Note the developmental level and describe type of play, conversation skill, and what helps your child socialize.
- **Emotional:** Describe your child's confidence level, self-esteem, coping strategies, and what relaxation techniques are helpful.
- **Physical:** Provide information on fine/gross motor skills, body awareness, sensory integration, information on occupational therapy and techniques the therapist uses, if applicable.

## How Can The Teacher Help Your Child?

Every child is unique and exhibits different strengths and needs. Along with the general characteristics demonstrated by children with hyperlexia, which may be addressed via various environmental adaptations and teaching and specific instructional strategies that are of import for your particular child. Through sharing information with your child's teacher, early in September, you empower the teacher to act more decisively and rapidly in providing the necessary conditions to maximize opportunities for growth. The ideal situation is continual and active consultation between parents and teachers regarding observations and analysis of what provides the optimal situations for the child, how the child is capable of performing in the optimal situation, and what strategies are required for optimal intervention. A proactive and collaborative approach enables all parties to anticipate and prepare for the child's responses to a new school year with the numerous changes, and to attempt to circumvent possible difficulties.

**Sharing information with your child's teachers will help them in providing the necessary conditions for growth.**