

Hyperlexia: *Overview*

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.

The child with Hyperlexia presents with the following characteristics...

- Strong visual memory, especially for the written word,
- Gestalt processing of language, stories and retrieves chunks of phrases or 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 tone 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 the language
- 3) Creating concrete, specific activities that use this unusual learning style as a way to fill up those holes, in other words, using the child strengths to remedy the weaknesses.

ALL PURPOSE STRATEGIES

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It is our responsibility to modify our communication style and expectations to meet the child's communication needs and abilities. The first step is finding the INTENT behind the child's language or physical response, even if the response seems unrelated or unusual at first glance.

The following strategies have worked successfully for children with hyperlexia:

- Providing calendars, timetables, time lines, agendas and schedules.
- Writing notes to remind, encourage or support at the table-setting, in school lunch-box, on bedroom pillow.
- Using charts or graphs
- Providing photos, pictures, PEC symbols
- Pairing the verbal output with the visual input
- Labelling items, installing close caption T.V.
- Going from the concrete to the abstract, fading prompts, eg. "Canada Dry Ginger Ale" to "GA" to "yellow pop"
- Manipulating the child's environment, to provide choices the child must respond to verbally(i.e. create a need and purpose for child to speak.
- Teach all concepts in different contexts for transference and generalization.
- Singing speech message to communicate
- Using "cloze" statements eg. instead of asking, "Where is the dog?", saying, "The dog is ____?" and allowing the child to complete the statement
- Classifying and categorizing: matching, sorting, and alphabetizing
- Associating to show relationships, i.e. Bread and ____
- Formatting organizational sequences: i.e. first-then; if-then
- Specifically teaching cause and effect inferencing and prediction, rather than assuming the child sees the connections naturally
- Teaching humour using cartoons and bubbles or patterned jokes (eg."knock-knock")
- Using absurdities to prompt verbal responses to "who" questions.
- Personalizing social stories (with roles phrased positively eg.John will go downstairs... etc.)
- Back-chaining: Allowing child to complete the last stage of a complete task and then back the sequence up one step at a time. eg. were is milk kept?

"SAY WHAT YOU WRITE, AND WRITE WHAT YOU SAY"

Teach all concepts in different contexts for transference and generalization.

MINIMISE LARGE BLOCKS OF UNSTRUCTURED TIME

RECREATIONAL STRATEGIES

Many parents have found the following successful in enhances self esteem and skills in language, communication, socialization, sensory awareness, and integration, and multi tasking.

- | | |
|---|----------------------------|
| Horseback riding | Arts and craft |
| Structured camps setting | Mini golf |
| Scouts, Girl guides | Bowling |
| Swimming | Computer programming |
| Martial arts | Drama with scripts |
| Gymnastics | Score-keeping and umpiring |
| Music (instruments, choir) | Play groups |
| Parent and tot music and movement lessons | Soccer/baseball etc. |
| | Partnered video games |
| | Sing-a-longs |
| | Chess club |

**Consult:
Play Therapists
Social Skills Programs
Associations, municipal recreation programs and private organizations**

PERSONAL SAFETY STRATEGIES

Parents, teachers and caregivers help children with hyperlexia stay safe by:

- Erecting physical barriers
- Providing maps
- Ensuring doors and windows are properly secured (eg. locks out of child's reach)
- Installing "alert signal/beeper" on doors and windows that signal when is opened
- Providing child with personal identification, name, phone number etc.on back of clothes or in child's pocket
- Teaching the meaning of "safe" and "dangerous".

Some children may require extra preparation, support, modification and/or practice in this area.

COMMUNICATION STRATEGIES

Children with hyperlexia do not intuitively understand or develop either oral language or non-verbal communication (body language, facial expressions, personal space, voice volume, tone intonation, etc.).

They need to be taught the specific meanings of:

- **BODY LANGUAGE** - eye contact, facial expressions, gestures
- **VOICE** - volume, tone, intonation
- **SPACE** - position, movement

By:

- Engaging the child by positioning oneself at the child's level and seating the child at close proximity
- Using first names to gain attention
- Using visual cues to gain attention
- Bringing objects or labels up to speaker's eyes to establish eye contact
- Using positive language not negative; statements not questions
- Expanding on what the child says
- Using the child's heightened interests constructively
- Using music and singing "Live life as an Opera!"
- Using exaggeration and emphasis
- Videotaping the child and sharing the tape with the child and/or other professionals as a teaching and communication tool
- Using mirrors for imitation and modeling;
- Using social stories with patterned language and scripts
- Using STOP - GO signals for turn-taking
- Using drama, role playing and mime games

The 5 R's of COMMUNICATION:

**RECORD
REPHRASE
REPEAT
REHEARSE
REINFORCE**

**Consult:
Speech-Language Pathologist
Audiologist
Occupational Therapist**

CHILD'S INTERPRETATION
does not necessarily equal
MESSAGE GIVEN

Acknowledge and address the child's difficulties with pronouns and "WH" questions, etc.

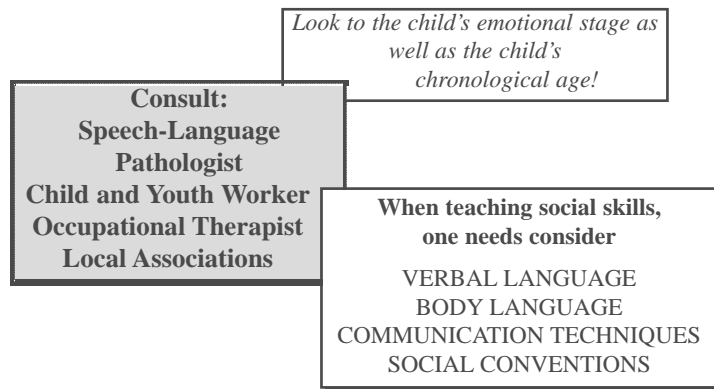
ANIMATE AND DRAMATIZE YOUR COMMUNICATION

SOCIAL SKILLS

Children with hyperlexia have unusual or different responses and have difficulty developing the essential skills for interacting quickly and appropriately with peers and adults.

The acquisition of social skills may be enhanced by:

- Rehearsing scripted exchanges, e.g. "Hi, I'm Freddy. Let's play!"
- Rehearsing dialogue using cartooned balloons
- Writing a journal which encourages awareness of peers by including their names in a journal e.g. I sat beside Sam on Thursday, September 12. Sally ate 3 chocolate cookies for snack etc.
- Labelling Polaroid snapshots of teammates, classmates, cabin mates, neighbours
- Using drama and role-playing to rehearse social situations
- Using cartoons, pictures, comic strips, video tapes, etc. to teach predicting, inferring and drawing conclusions
- Video taping, then slowing and/or pausing tape and discussing
- Using supervised email or "pen pal" programs
- Providing games that promote turn-taking or joint interaction eg. barrier games such as "Guess Who" or board games
- Making "Name Labels" or table place cards for party guests (eg. birthdays, family dinners), made in advance with child's help, allowing child to hand these out upon guest arrival
- Teaching "kid culture" (acclimatizing child to popular trends, games and interests)

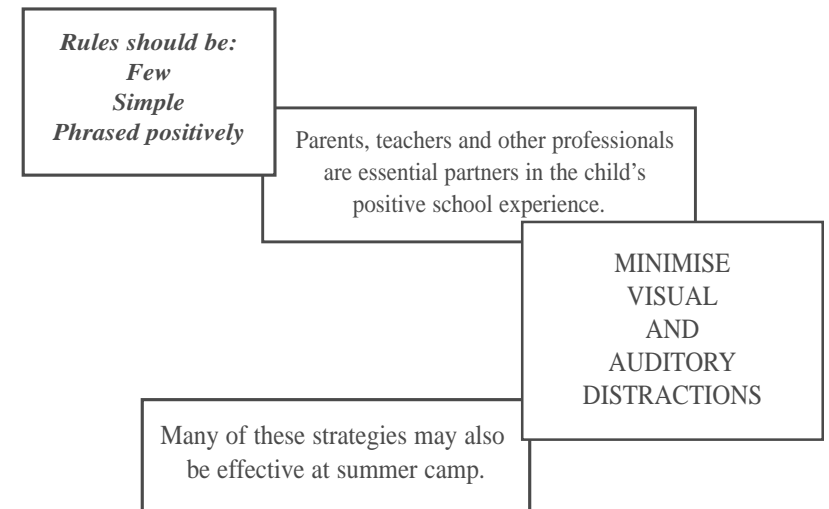


STRATEGIES FOR CLASSROOM AND SCHOOL

Appropriate and ongoing supports, plus preparation and reinforcement, help the child with hyperlexia achieve succeed not only academically, but cognitively, physically, emotionally and socially.

Teachers and parents may try providing the child with:

- Photo and names of room number and teacher, labeled map or floor-plan of school and grounds (before school begins, if possible)
- Class list with photos of classmates at the beginning of the school year
- Explicit written instructions on how and when to begin and complete tasks
- Repeated, meaningful practice
- Preferential seating (eg. close to teacher, away from distractions, heating/cooling units etc.)
- Labels (including name labelling all belongings from lunchbox to pencils to desk)
- Specific checklists
- Carefully sequenced, detailed calendars and timetables of class schedules (keep copies at home and school, update/alter with child to explain changes)
- Lists, formats and rules specific to the activity or the class
- Shortened assignments, with focus on accuracy, not quantity
- Free access to scrap paper.



Teachers and parents may try using:

- Manipulative and props for math word problems
- Games of imitation, matching and sorting
- Video / audio tapes / "Books on Tape" with book alongside
- Visual cues with verbal statements
- Copy of the "reading circle" book given to child to support the child's attentiveness to the story and to the teacher while in circle
- Chucking: breaking the whole into simple steps, and numbering the steps in order
- Simpler language, repetition and rephrasing
- Exaggeration, emphasis and expansion of verbal instructions.
- Written examples
- Presenting math word problems "backward" (i.e. working from number sentence and answer to matching questions)
- Mnemonics (codes or silly sentences to aid memory) eg. HOMES for names of Great Lakes
- Graph paper to encourage legibility in writing and mathematics work
- Fill-in-the-blank or multiple-choice as alternative formats for exercises or tests
- Music for communication ("sing" the lesson)
- Social stories, scripts and role playing to enhance social interaction with peers
- Semantic or phonological jokes and puns
- The teacher or parents may try explicitly teaching:
 - the same concept in different contexts to assist with transference and generalizations
 - the child how to use the school washroom and toilet (reviewing written rules before going, reviewing private vs. public behavior)
 - popular playground games (specific for school). Write down rules, script and role-play in class in small group, then support the child on the playground, assign specific "play days", and provide the child with a recess journal.

Consult:
Educational Consultant
Speech-Language Pathologist
Audiologist
Occupational Therapist
Psychologist
Developmental Pediatrician

STRATEGIES FOR INTERACTIVE PLAY

For children with hyperlexia, early language and social skills are stimulated and accelerated by loving, and interactive play with close family members and friends.

Many parents find these have helped them connect with their child in play:

MUSIC (tapes, records, CD's, simple instruments, especially percussion)
 "MAGNADOODLE"
 TYPEWRITER / COMPUTER
 CHALK BOARD / PAINTING
 BINGO DABBERS / MARKERS
 DRIVEWAY CHALK (hopscotch, writing messages, maps, tracing body/object outlines, etc.)
 SOAP CRAYONS
 CRAYONS / SCENTED MARKERS
 MAGNETIZED ALPHABETS/NUMBERS INTEREST BASED stickers (eg. trains, musical instruments, letters & numbers)
 COOKIE CUTTERS SHAPED LIKE LETTERS / NUMBERS
 ALPHABET BLOCKS / SPONGES
 FELT BOARDS
 BUILDING BLOCKS
 CHOPSTICKS / TOOTHPICKS / POPSI-CLE STICKS / "PICK-UP STICKS" / "STICKY-WICKIES" to make letters/words or use for rhythm
 SOAP BUBBLES (using different types of blow sticks)

GARBAGE TWIST TIES / PIPE CLEANERS
 STENCILS / INSERTS
 PHOTOGRAPHS/PICTURES
 SAND / RICE / CORN / WATER / "PUDDING" FINGER PAINTS
 JOURNALS / DIARIES / CALENDARS
 MAPS (route planning)
 BARRIER GAMES ("Guess Who?", "Battleship")

Consult:
Play Therapist
Therapy Therapist
Speech-Language Pathologist
Occupational Therapist

STAMPS, COINS
 PLAY DOE / SILLY PUTTY/PLASTICINE
 PUZZLES (letter/number puzzles, body/face puzzles, taking turns adding pieces)
 BAKING/COOKING (focus on writing down or following recipes, measuring etc.)

BALL / BEAN BAG ACTIVITIES (with a partner, saying person's name, counting, quoting lines from T.V. shows, etc.)
 SHOPPING (with checklist)
 CAUSE AND EFFECT TOYS (eg. Marble Maze, Push & Pop-Ups, toys, which move/make noise on command)
 TRIVIA / "EDUCATIONAL" (eg. GES Safari, Trivial Pursuit Junior etc.)

Frequently, children with hyperlexia have difficulties and delays around toileting. Schools are able to accommodate children with special toileting needs. Consult an Occupational Therapist, especially before beginning intrusive medical testing

POPULAR INTERACTIVE BOARD GAMES
 Snakes and Ladders
 Scrabble
 Bingo
 Kids on Stage
 Memory Games
 Chess / Checkers, Rummoli
 Card Game, Monopoly

STRATEGIES FOR BEDTIME AND SLEEPING

Bedtime can be used gently reinforce language and communication skills and deepen loving, empathic relationships.

Parents and caregivers have found it helpful to post a written schedule of the bedtime routine, sometimes starting/finishing times

For example:

1. Snack
2. Brush teeth
3. Free choice (book or toy activity)
4. Journal (review past day and tomorrow's plan)
5. Toilet
6. Lights out
7. Cuddle
8. Goodnight kiss
9. Sleep
10. Wake up in the morning

Sleep disorders may be neurological, not behavioral.
Consult a Doctor

**Consult:
Developmental Pediatrician
Behavioral Therapist**

STRATEGIES FOR DRESSING AND HYGIENE

Parents and caregivers have helped children with hyperlexia gain independence by:

- Helping the child check the newspaper for daily weather forecast to choose outdoor appropriate
- Providing the child with lists of weather-appropriate clothing eg. Snow: Boots. Hot: Sun Hat, Shorts, Sunblock...
- Reviewing what is appropriate to wear for the time, e.g. seasons, temperature, occasion, style
- Repeating the same phrases to help the child choose clothing independently (patterned language) eg. "All colours match blue jeans"
- Labelling drawers and closets with their contents
- Labelling clothing with "front" and "back", shoes with "left" and "right"
- Posting hygiene schedules / routines where they are seen and used (on bathroom mirror, inside closet door, on front door),
- Elaborating with more specific written steps if required.
- Timing activities with a timer e.g. brush teeth for 2 minutes
- Keeping favourite books, magnetic letters, etc. near the toilet to help child stay seated.

STRATEGIES FOR EATING AND MEALTIME

Children with hyperlexia frequently demonstrate food sensitivities. Taste, texture, size, colour, temperature, and odder, may affect how the child responds to a particular food. A calmer environment can facilitate better eating as the child may feel more relaxed, and less pressured.

Parents and caregivers may help children increase diet variety and learn social conversation around eating by:

Posting lists and charts:

- Foods child eats readily
- Foods child had tried
- Rating for foods tried (yummy, so-so, yucky)

Encouraging new foods in non-threatening ways:

- Presenting small amounts (one noodle at a time)
- Counting the number of pieces eaten
- Keeping a "score" card
- Serving new food to favourite doll or a sibling
- Cutting food into shapes of the letters and numbers
- Serving alphabet-shaped food e.g. pretzels and macaroni;
- Creating food "pictures"; doing other art activities with the food
- Using squeeze bottle condiments ie: writing messages with ketchup.
- Reading books about food types, or ingredients on package label
- Writing social stories together to introduce new foods

Offering the child more control in the process by:

- Shopping with you for the food
- Preparing the written menu
- Preparing the food and/or setting the table
- Preparing place cards for family members

Providing a written menu including:

- a "must eat food" (accepted food)
- a "choice food" (treat), A or B
- a "new food" (chosen from a list)

Working on skills like blowing, sucking, chewing, swallowing and spitting out.

Safety is a concern with a child who has decreased feedback from the mouth. An overstuffed mouth can lead to choking. Sensitivity to heat/cold or certain tastes/textures can lead to burns or gagging reflex.

Using language activities:

- "May I please have more _____." (food choice)
- "More, please."
- "I am finished, thank you!"
- "No, thank you"

Using place mats with personalized writing:

- Labeled map of place setting (fork, plate etc.)
- Riddles/jokes about food
- Pictures of favourite foods or toys

Role-playing "restaurant"

- Using scripts, social stories and menus,
- Practicing giving orders verbally
- Writing names on place cards

Packing the child's lunch box

- Inserting menus
- Labelling wrapped food with names of each item
- Numbering food items in eating order

In kitchen

- Posting signs e.g. "Open/Closed"
- "Kitchen will reopen at 8:00am"
- Signs on fridge and cupboard of food contents.
- Special accessible area (labeled) for "HELP YOURSELF" snacks.

**Consult:
Occupational Therapist
Nutritionist
Developmental Pediatrician
Speech-Language
Pathologist**

RESOURCES

READING TOO SOON, How to Understand and Help the Hyperlexia child,
by Susan Martins Miller, Center for Speech and Language Disorders, Elmhurst, IL, 1993

HYPERLEXIA HANDBOOK, A Guide to Intervention Strategies and Resources,
American Hyperlexia Association, Center for Speech and Language Disorders,
Elmhurst, IL, 1998

The above publications are available in Canada through:

PARENTBOOKS 201 Harbord Street
Toronto, ON, M5S 1H6
1-800-209-9182
416-537-8334
www.parentbookstore.com

The American Hyperlexia Association
630-415-2212
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This book was originally published by the Canadian Hyperlexia Association
which has now ceased operations.

This information is for:

Families
Speech & Language Pathologists
Occupational Therapists
Educators
Psychologists
Pediatricians
Family Doctors
Pediatric Neurologists
Caregivers