Hyperinsulinism and Child Development

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Who is at Risk for Concerns

- Children with family history of delays and learning differences
- Genetic Syndromes
- Complex medical conditions. Research supports that children with HI are at risk.

Message of the day

- Early detection leads to early intervention and improved out comes
- Trust your own inner voice if you have concerns about your child's development

How do I asses if my child is meeting developmental goals

- Development is often viewed in terms of language, gross motor, fine motor and cognitive skills
- There is a range of when these skills will be attained

Milestones

Newborn

Gross Motor:

- Lifts head from parent's shoulder

Visual Motor:

- Blinks in reaction to bright light
- Follows object to midline by 2-4 wks

Social/Communication:

- Eye contact
- Responds to sound

* Social smile– 2-6 weeks

1- 2 months

Gross Motor:

- Prone- chin up→ chest up
- Can hold it erect for brief period of time

Fine Motor

- Grasps objects

Social/Communication

- Social smile
- Vocalization, coos
- Different cries for different needs

Problem Solving

- Visual preference for human face

3-4 months

Gross Motor

- Raises body up on hands with head up
- Rolls: prone- supine

Social/Communication

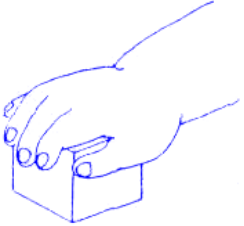
- Laugh out loud
- Squeals
- Looks for sound; orients to a voice

Fine Motor

- Unfisted > 50%
- Hands to midline

Problem Solving

- Reach, bat for objects



5- 6 months

Gross Motor
- Roll: supine to prone
- Parachute
- Sit propped

Fine Motor
- Transfers objects between hands
- Unfisted 100%
- Radial rake

Social/Communication
- Makes “raspberry sounds”
- Closer to 6 months, babble
- Responds to human voices by turning head and eyes

Problem Solving
- Grasp one block
- Smile and touch mirror

By 6 months

Key Social/Communication Points

- Personality develops!
- Very social
- Babbles, laughs, squeals
- Separation anxiety

7 months

Gross Motor

- Sits unsupported
- Lateral protection
- Belly crawl

Problem Solving

- Obtains 2 blocks
- Pegboard- 2 out

Social/Communication:

- Echolalia

  (7-30 months)
- Shy with strangers, prefers parent
- Separation anxiety

  (6-10 months)

8-9 months

Gross Motor

- Crawl (on all fours)
- Pull to stand→ cruise
- Sits well

Fine Motor

- Obtain pellet
- Immature pincer
- Finger feed

Social/Communication

- Babble
- Sound imitation
- Gesture games
- Waves “bye-bye”

Problem Solving:

- Inspect bell→ at 9 months, ring bell
- Pulls string to get ring
- Bangs objects

10-11 months

Gross Motor

- Walk w/ 2 hand help→ 1 hand

Fine Motor

- Mature pincer

http://www.youtube.com/watch?v=OfT0___O0hQ&feature=related

Social/Communication

- Recognizes name when called
- Connects “dada” or “mama” with person
- First word ~ 11 months

Problem Solving

- Object permanence (searches)
- Uncover toy

12 months

Gross Motor

- Walk independently
- Posterior protective reaction

  (12-18 mo)

Fine Motor

- Release a cube in a cup
- May be appropriate to have preferred hand

Communication

- Follows a command with a gesture
- Will look at 2 pictures

Problem Solving

- Cooperates with dressing

14-15 months

Gross Motor

- Stand without pulling up
- Climb furniture
- Crawl upstairs

Fine Motor

- Solitary play
- Spoon feeding
- Cup drinking

Social/Communication

- Follow command without gesture
- Knows 4-6 words
- Knows at least 1 body part
- Throws objects in play
- Points to pictures in a book

Problem Solving

- Marks with crayon
- Tower 2 cubes

18 months

Gross Motor

- Running
- Walk up stairs with held hand
- Push/pull large object
- Throws ball while standing
- Sits in small chair

Fine Motor

- Spontaneous scribble

Communication

- 10-25 words
- Mature jargon
- Knows 3 body parts
- *Pretend* play!

Problem Solving

- Likes to be with other children
- Hides and finds objects

24 months

Gross Motor

- Kicks ball
- Walks up and down stairs

Fine Motor

- Spoon and fork use
- Toilet training may be appropriate

Social

- PRETEND play!
- Parallel play
- Imitates other children
- Listens to stories

Communication

- 2- word phrases
- Follow 2 step command
- Knows more than 50 words

Play is critical

- By 12-24 months, may use placeholders
- 2 year olds initiate play
- Basic pretend play– feed baby, etc.

3 year olds

Gross Motor
- Up stairs, alternate feet
- Heel and toe walk
- Pedal tricycle

Fine Motor
- Independently eat
- Cut with scissors
- String small beads
- Buttons

Social/Communication
- Know age
- Boy/girl
- First and last name
- 3 word sentences
- Concepts emerge- big/small, long/short
- Group play!

Visual Motor
- Draw circle
- Draw cross (3.5 years)
- Cube bridge

4 year olds

Gross Motor

- Descend stairs alternating feet
- Hop 1 foot
- Skip (4.5 yrs)

Adaptive

- Wash face and hands
- Zippers
- Use straw
- Dresses self

Language

- Know 4 colors
- Count
- At least 3 prepositions
- Parents understand their speech

Visual Motor

- Draw square
- Block designs

Questions?

Where Do I Turn :

- Early Intervention referral
- Talk with your PCP
- Developmental pediatrician
- Neurologist
- Speech evaluation
- Occupational therapy evaluation
- Physical therapy evaluation

What Services Might My Child Need

- Speech therapy : expressive, receptive and feeding skills
- OT : fine motor, motor planning , core strengthening
- Physical therapy : gross motor skills
- Special instructor : cognitive and all other skills
- When my child turns 3 years old these services may be moved to a preschool setting

How do I know asses if this is the right level of intervention

- Slow and steady progress is being made
- My child is meeting the goals set by the team
- New goals are being set periodically
- If progress is not being made you can request re assessment and to change the level and type of intervention
- We want preschoolers to be ready for challenges of Kindergarten

School Age Concerns

- Evaluations for school readiness are made in preschool before moving to Kindergarten
- The team should do a comprehensive evaluation of the areas of concern
- Services can continue in K and beyond if indicated
- The focus moves at this time to cognitive development and the possibility of learning style differences

Who is at risk for learning differences

- Family history of learning differences
- ADD/ADHD (maybe 20 to 30 %)
- Syndrome: Williams,22Q, Autism Spectrum Disorders
- Prematurity/LBW
- Insult to the developing brain: Drugs, alcohol, CNS radiation, head trauma, CNS infection, lead poisoning
- Speech and Language Delays
- Fine and Gross Motor delays

Signs of Learning Difficulties

- Increased learning effort: school is boring, school anxiety, class clown behavior , long time to complete assignments, fights over homework
- School distress: failing, absent, detentions, disengagement ,aggression
- School failure: retention, expulsion dropping out
- Having trouble learning letters, poor memory, forgetful, trouble organizing, poor quality work or slow to finish , misses the big picture

More Signs

- Problems expressing themselves or finding the right words
- Learning new words
- Understanding the question
- Following directions
- Reading or comprehending stories
- Learning words to songs
- Learning letters or numbers
- Identify sounds
- Spelling
- Learning times tables
- Telling times
- Writing

Points to Ponder

- Poor performance and behavior is a sign that a problem exist.
- If they could do it they would do it
- 5 to 10 % of the pediatric population has a learning difference. Some studies say 15%
- Defined as : discrepancy between ability and performance. The government defines specific learning disability as : a problem understanding or using the spoken or written language which manifest itself in an impaired ability to think, speak, write ,spell or do math.

Categories of Learning Differences

- Reading disorder: part or all of the reading process , fluency , decoding ,reading rate and reading comprehension. This makes up 70 to 80 % of children with LD
- Writing: includes handwriting , spelling organization of ideas, and composition. Dysgraphia is an over arching term.
- Math: dyscalculia includes math concepts, math facts, organizing numbers and how problems are organized on a page
- Nonverbal learning disorders

What to do if you suspect problems

- Psycho educational testing will be done if parents place a request in writing to the school.
  - District has 60 to 90 days to complete the testing
  - Expensive testing and school may try to defer
  - Should include at a minimum potential (IQ)and current levels of performance
  - Speech and occupational therapy evaluation

Evaluation/Testing

- Testing can also be done outside of the district by a private school psychologist or neuropsychologist .
  - They can be very costly and not all services covered by insurance.
  - Your goal will decide who you choose to do the testing.
  - Neuropsychologist : have more training and focus on cognition or how we learn. They evaluate how we think, remember and learn through a series of standardized tests.

Next step

- Once the difficulties are discovered a plan must be developed by the school and family. Family may need an advocate or attorney to help with the process
- IEP: legal document
- 504
- ST: focus on language development to help with reading, writing
- OT : fine motor skills, writing
- Social skills
- Attention and other behavior concerns

Academic Interventions

- Reading: decoding: **Orton Gillingham Multisensory Phonics Reading Program, Wilson Method , Word Detectives and more**
- Reading Comprehension: Linda Mood Bell, Verbalize and Visualize
- Math : makes sure the program is best suited for the child's difficulty . On size does not fit all
- Question: what is the research which proves this works for my learning style , how and when will we test it's effectiveness for my child and what will you do if progress is not made

Research says best instruction

- In this study the authors defined ***direct instruction*** as including at least 4 of the following components in a lesson:
- breaking down a task into small steps,
- administering probes,
- administering feedback repeatedly,
- providing pictorial or diagram presentations,
- allowing for independent practice and individually paced instruction,
- breaking instruction into simpler phases,
- instructing in a small group,
- modeling of skills by the teacher,
- providing set materials at a rapid pace,
- providing individual child instruction,
- teacher asking questions, and
- teacher presenting new (novel) materials. (pp. 283-284)

Strategies

- *Strategy instruction* was defined to include at least 3 of the following elements:
- elaborate explanations (i.e. systematic explanations, elaborations, and/or plans to direct task performance),
- modeling from teachers (verbal modeling, questioning, demonstration),
- reminders to use certain strategies or procedures (i.e. cues to use taught strategies, tactics, or procedures),
- step-by-step prompts or multiprocess instructions,
- dialogue (between teacher and student),
- questions from teachers, and
- provision by teacher of necessary assistance only. (p. 284)

3 most effective components

- Control task difficulty : the teacher provides assistance, scaffolds as needed and moves the child from easy to difficult tasks
- Small interactive groups of 5 or less
- Structured questions and responses: the teacher or students may direct the questions, students asked to summarize
  - Students with LD perform closer to peers when they are taught strategies to use when approaching a task

Strategies

- Students with LD perform closer to peers when they are taught strategies to use when approaching a task
- They must have cognitive strategies : how I learn
- Must have Meta cognitive strategies: how will I approach this task and what assistance might I need

Interventions: might I need to ask for in the classroom

- How will my child's learning needs be met in all subject areas. Will support occur in the classroom or in a smaller special education setting .
- Homework accommodations: modified assignments
- Testing accommodations
- Use of technology : computers that read text, books on tape, word processors, computers, talking calculators, computer programs, programs that type when you speak , graphic organizers
- Class note takers, scribes, readers , proofreaders

Resources for families

- International Dyslexia Association
- LD Online
- Learning Disabilities Association of America
- National Center for Learning Disabilities
- PA Branch of the International Dyslexia Assoc.
- Learning Ally(formerly Reading for the Blind and Dyslexia)
- Schwab Learning.org
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