



# **ECHO IDAHO:** **Autism**

## **The Role of Occupational Therapy in Autism for Kids under 5**

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# Learning Objectives

- Identify concerns OT can address in ASD/neurodevelopmental disorders.
- Describe an OT evaluation
- Outline OT intervention
- Define when a child should be referred for OT services

# ASD can result in difficulties with:

- Communication
- Social skills
- Restricted interests/repetitive behaviors
- Sensory processing
- Motor skills
- Adaptive behavior

# What does OT address?

- “In young children with ASD, occupational therapists often focus on **enhancing children’s sensory processing, sensorimotor performance, social-behavioral performance, self-care and participation in play**. In older children and adolescents, occupational therapy goals may focus on **social and behavioral performance, transition to work, and independence in community**.” [From American Occupational Therapy Association (AOTA)]

# Where can they get OT?

- NICU
- Infant Toddler Program- 0-3 yrs old (Free)
- Developmental Preschool- 3-5 yrs old (Free)
- Outpatient Clinic

# Motor Development and ASD

“For overall gross motor quotient scores, about 81% of children with ASD were below 79 and classified as poor and about 76% children scored below 70 and received very poor rating....**91% of children with ASD in the current study were considered developmental delayed for their gross motor skill performance and in need of early supportive interventions.**” ( Liu, Ting, et al 2014)

21 Participants ages 5-10

Assessment used: Test of Gross Motor Development-2 (TGMD-2)

# Motor Development continued



- Motor imitation
  - Children with autism perform more poorly on motor imitation tasks than children without autism
  - Motor imitation is a specific deficit
  - Motor imitation is related to other social and communicative behaviors (eye contact, verbalizations) (Stone, Ousley & Littleford)
- Use of tools (classroom, household, community)
- Performance in Activities of Daily Living
- Performance in Instrumental Activities of Daily Living

# Adaptive Behavior

- Deficits in adaptive behavior clearly demonstrated in the ASD population
- OT is trained to address:
  - Toileting
  - Meal time behaviors
  - Other aspects of self care
  - Household chores
  - Participation in leisure activities
  - Handwriting/assistive technology
  - And many others





# What does an OT evaluation look like?

- Length – 1 hour
- Parent Interview
- Assessment
  - Fine Motor and Gross Motor Assessment (e.g. PDMS-2, MFUN)
- Sensory Questionnaire
- Observations



# What does OT individual therapy look like?

- Weekly 45-60 min treatment session with focus on:
  - In home supports & adaptations
  - Parent education/training
  - Task performance/intervention (use of modeling, chaining, dexterity tasks, etc).
- Case example:
  - 4 y/o with ASD with adaptive, fine motor skill delays, increased behaviors
  - OT goals: tooth brushing, pre-writing, sustained attention to play task, participation in non-preferred tasks, self-regulation

# OT Interventions

- **Developmental skill-based programs**
  - Play-based approach emphasizing positive affect, nonverbal communication play, social relationships and classroom structure using visual cueing and visual learning.
- **Relationship-based interactive interventions**
  - Promote social interaction and engagement with adult imitation of child's actions with structured play activities with cueing, prompting and reinforcement.
- **Social-cognitive skills training**
  - Social-emotional skills are modeled and practiced
  - Social stories – teach appropriate behaviors
- **Parent directed or parent mediated approaches**
  - Home implementation of visual aids, chaining, etc.
- **Sensory integration and sensory-based interventions**



# Sensory differences in autism

- Variable between subtypes of autism
- One study found:
  - 39% of children with ASD under responsive
  - 20% of children with ASD hypersensitive
  - 36% of children show a mixed pattern of responses

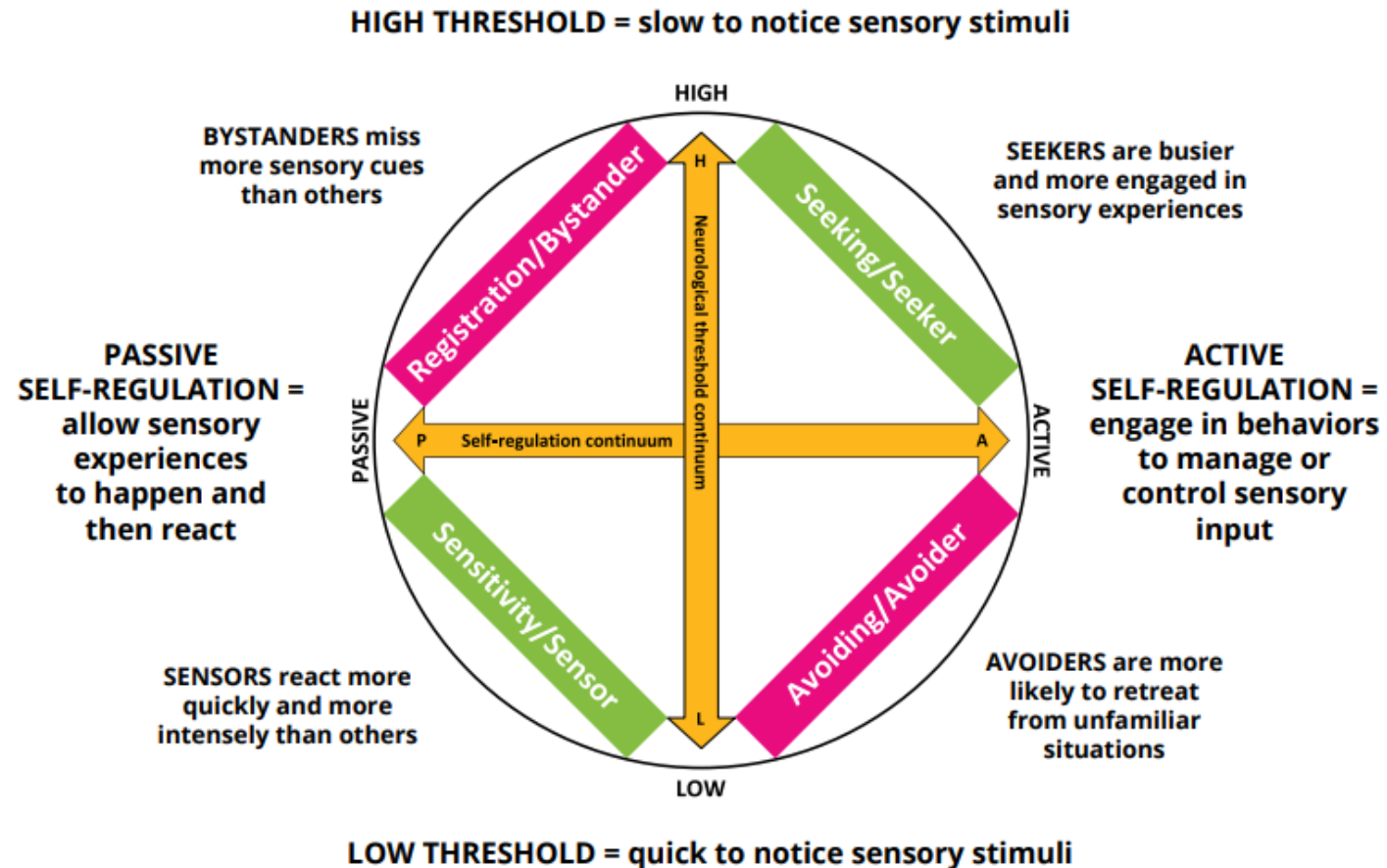


# How do OTs assess sensory differences?

- Parent/teacher report
- Sensory questionnaires
- Observation of daily functional activities



# What do we learn from sensory questionnaires?



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# How do OTs address sensory differences?

- Environmental changes
- Predictability
- Start slow and build
- Teach appropriate escape from non-preferred activities
- Sensory based intervention:
  - “Sensory integration intervention appears to enhance the child’s ability to modulate behavior and participate in social interaction; however, findings are inconclusive at this time.” (Baranek, 2002).
  - “Although some positive benefits from sensory-based treatment have been documented, it is not clear how these interventions promote the child’s overall functional and educational outcomes.” (Baranek, 2002)
  - Children can benefit from OT interventions other than SI (Polatajko & Cantin, 2010).

# Regarding the use of Sensory Processing Disorder as a diagnosis:

- “we chose to describe the problem (i.e., children and adolescents with difficulty processing and integrating sensory information), rather than name a disorder (sensory integrative dysfunction or sensory processing disorder)”  
From the 2010 American Journal of Occupational Therapy ( AJOT), SI issue:
- It’s not in the DSM-V. Many people advocating for this to be considered a “disorder”.
- OTs cannot diagnose it



# What is Sensory Integration?

- “Ayres Sensory Integration” (SI) is considered a “specialty” of occupational therapy, it’s not part of curriculum or a qualification to be certified as an entry-level pediatric therapist.
- Fidelity not established in SI studies (Parham, et. al. 2007)
- Latest systematic review from AJOT (Bodison & Parham, 2018)
  - Strong evidence for Qigong massage
  - Moderate evidence for modifying sensory environment
  - Limited evidence for weighted vest
  - Insufficient evidence for swinging and multisensory activities.

# When to refer to OT:

- Concerns regarding:
  - Fine/Visual motor skills
  - Adaptive Skills
  - Sensory differences
  - School participation/handwriting
  - Feeding/oral motor concerns
  - Behaviors/Self-Regulation Concerns



# Key Points

- Occupational Therapists are skilled at assessing and treating children's sensory processing, sensorimotor performance, social-behavioral performance, self-care, fine motor skills, executive functioning and participation in play
- Don't hesitate to recommend OT evaluation if there are any concerns in a child's development or if they have regressed in any area

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# Session Resources

- CDC- Learn the Signs Act Early-  
[https://www.cdc.gov/ncbddd/actearly/index.html?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.cdc.gov%2Factearly%2Findex.html](https://www.cdc.gov/ncbddd/actearly/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Factearly%2Findex.html)
- Healthcare Social Stories-  
<https://bmcautismfriendly.github.io/socialstories/>
- Grand Sensory Survey Results- Compares common sensory differences between those Autistic and Neurotypical Individuals-  
[https://www.autisticempire.com/survey/?fbclid=IwAR2poWMZ1qUuWESS3bvDG9wtP53oZ\\_drh8eeMmUebShvk8o8wp-GWGvRVqs](https://www.autisticempire.com/survey/?fbclid=IwAR2poWMZ1qUuWESS3bvDG9wtP53oZ_drh8eeMmUebShvk8o8wp-GWGvRVqs)
- Idaho Infant Toddler Program <https://healthandwelfare.idaho.gov/services-programs/children-families/about-infant-toddler-program>