

## The Body's Senses 1. Vision 2. Taste 3. Smell 4. Touch 5. Hearing

6. Proprioception (body awareness)

7. Vestibular (balance and motion)

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#### **Proprioceptive Processing**

"Body Awareness"

- The body's position in space
  - We know where are body parts are with out looking!
  - Processed through joint receptors
- Important part of coordinated movements (kicking a ball, holding a pencil)
  - Difficulty Manifests as: appearing clumsy, playing too rough, always moving, etc.
  - Nose to fingertip activity

#### **Vestibular Processing**

"Balance and Motion"

- Our body's ability to sense speed and direction of movement with respect to gravity
  - Detected through the inner ear
- Difficulty manifests as:
  - Uncoordinated movements, appears weak or clumsy, fear of feet off the ground, rocks back and forth, avoids movement

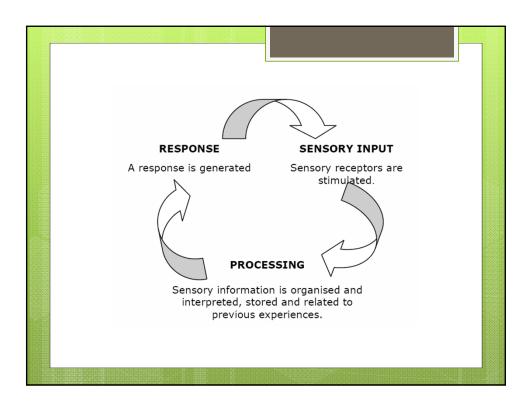


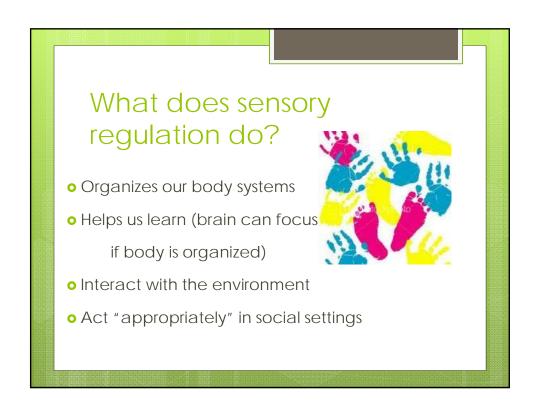
#### **VIDEO**

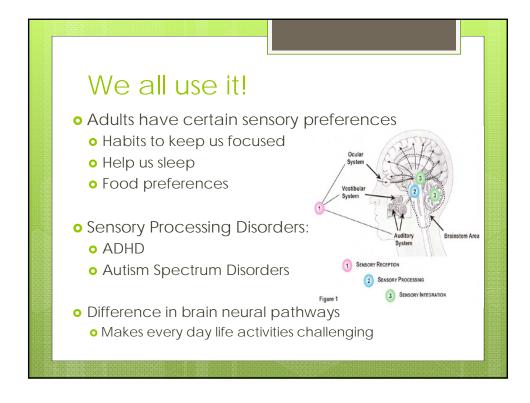
http://www.youtube.com/watch?v=D1G5ssZIVU
 w&feature=plcp

#### **Sensory Integration**

- "Refers broadly to the central nervous system processes by which <u>incoming sensory data</u> <u>are organized</u> within each sensory system, as well as across different sensory systems (Ayers, 1972, 2005).
- Sensory Integration is thus a key aspect of sensory processing, defined as the complex ways in which the nervous system imports and organizes sensory information (Miller & Lane, 2000)."







# Common Characteristics of Autism and ADHD Short attention span Difficulty maintaining focus Difficulty following directions Impulsivity Poor Social Skills Impaired Communication Stereotypical Behaviors

#### **Sensory Modulation Problems**

- Under- responsiveness (Sensory Seekers): not noticing or not using sensory information
  - Manifests as a lack of an expected response, or indifference to a sensory experience
  - Manifests as searching for more sensory input









• (SPM; Parham, Ecker, Miller Kuhaneck, Henry & Glennon, 2007)

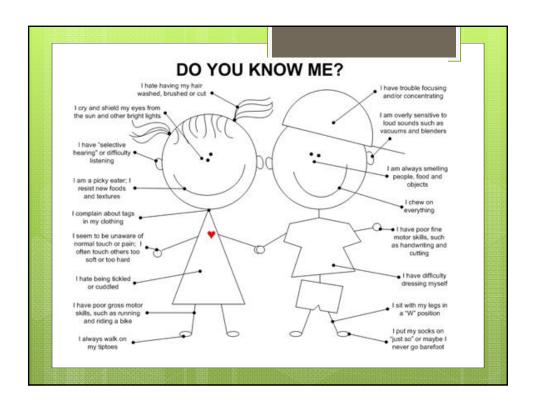
#### **Sensory Modulation Problems**

- Over-responsiveness (Sensory avoiders): being overwhelmed or overstimulated by sensory input
  - Manifests as fearful or aggressive behavior, or avoidance of certain sensory experiences.





O (SPM; Parham, Ecker, Miller Kuhaneck, Henry & Glennon, 2007)



### When and How to use Sensory strategies in the classroom

- 1. Reinforcer
- 2. Preparation
- 3. Task Support
- 4. Prevention
- NOT as a reward or punishment



#### Strategies for Sensory Seekers

- Vision
  - o bright colors, bright lights and designs
- Taste & Smell (chemical senses)
  - Oral motor input (sucking on, blowing, chewing)
    - Frozen starbursts, gum, cold water, straw, tubing on end of pencil
  - Alerting smells ( air freshners, candles, lotions)
- Hearing
  - Upbeat music
- Touch
  - Fidgets
  - Velcro stips
  - Pencil grip
  - Vibration: wiggle toys, wiggle pens, massagers



#### Strategies for Sensory Seekers

- Proprioceptive input
  - Heavy work (carrying things, pushing, pulling, jumping, crawling)
  - Deep pressure
    - Weighted object (vest, stuffed animal, lap pad, blanket)
    - Joint compressions
    - Hand massage
- Vestibular
  - Allow movement
    - Stand at desk
    - Work on the floor in prone on elbows position
    - Kick band around front legs of chair
    - Seat cushions
    - o ball chair





#### **Strategies for Sensory Avoiders**

- Vision
  - Soft colors, soft lights
  - Watch calming things like a lava lamp, or fishtank
- Taste & Smell (chemical senses)
  - Oral motor input (sucking on, blowing, chewing)
    - Chewy tubes
    - Comfort foods
  - Calming smells
    - o air freshners, candles, lotions



#### Strategies for Sensory Avoiders

- Hearing
  - Calming music
  - Soft tone of voice
  - Forewarn them of any loud noises (bells, alarms)
  - Reduce noise level
    - Provide white noise or ear phones
- Touch- tactile defensiveness
  - Warn them when you are going to touch them
  - Wear gloves
  - Stand at the end of the line
  - Arrange classroom seating to decrease amount they are bumped by others
  - Use tools during art activities so they don't have to touch the materiels.

#### **Strategies for Sensory Avoiders**

- Proprioceptive input
  - Heavy work (carrying things, pushing, pulling, jumping, crawling)
  - Provide quiet safe place
  - Deep pressure
    - Weighted object (vest, stuffed animal, lap pad, blanket)
    - Joint compressions
    - Hand massage



- Movement (trampoline, dizzy disc, swing)
  - Rotary = Alerting
  - Linear = Calming
  - Linear vertical = organizing



#### Equipment: classroom or home

- Introducing something new- let everyone try it.
  - Those who need it will keep using it and those who don't will loose interest
- DO NOT use equipment for more than 20 minutes at a time because the child will get use to it and it will no longer be effective!
  - Ex: when you first put on a tight watch you notice it and then your body adjusts to it and you get use to it.



#### Sensory Diet

- Individualized
  - Determined by sensory preferences
    - Can be sensory avoiding in some areas and sensory seeking in others
- Needs to happen at regular intervals through out day
- If unsure of what to try:
  - Go through senses and pick which one you think it might be and then use an activity that correlates
  - Use proprioceptive input!
  - o It is a trial and error process!

#### Sensory Breaks

- Have whole class or family do it
- Full body learning

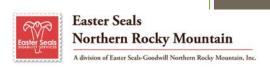


• Have a list of creative "Warm-up Activities"

#### Self Regulation is the Goal

- Process of recognizing and filling needs
  - Unable to truly self regulate until age 8
- We can provide opportunities and ideas that are acceptable
- Different ways to teach it (Alert program, social stories, break books, etc.)





#### OCCUPATIONAL THERAPY

- Work in many settings
- •Help people return to daily life "occupations" (activities)
- o Kids occupations:
  - Play, self care, social interaction, school

#### What we offer

- Individualized occupational therapy services to the child addressing specific needs
- Parent Education- Parent attends therapy session to learn how to implement techniques at home
- Scholarships- All families can apply for scholarships through Easter Seals in order to assist with the cost for needed services

#### **Contact Information**

• Contact us with any questions or referrals!

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Easter Seals Northern Rocky Mountain

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#### References

Ayres, A. J. (2005). *Sensory integration and the child, 25<sup>th</sup> anniversary edition.* Los Angeles, CA: Western Psychological Services.

Miller, L.J., & Lane, S. J. (2000). Toward a consensus in terminology in sensory integration theory and practice: Part 1: Taxonomy of nerophysiological processes. *Sensory Integration Special Interest Section Quarterly*, 23(1), 1-4.

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