

Slide  
1

# Making Sense of Sensory Issues

How to manage heightened senses at home and in the classroom

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Slide  
2

## What does it mean to have sensory issues?

- ▶ Sensory abilities– our mind processing stimuli in the surrounding environment
- ▶ No official disorder recognized in medicine or psychology
- ▶ Dr. Jean Ayres (OT in the 50's–80's) – developed the term, “Sensory Integration Dysfunction”



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Slide  
3

## Dr. Lucy Jane Miller's Theory

### Sensory Processing Disorder (SPD)

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graph TD; SPD[Sensory Processing Disorder (SPD)] --- SMD[Sensory Modulation Disorder (SMD)]; SPD --- SBMD[Sensory-Based Motor Disorder (SBMD)]; SPD --- SDD[Sensory Discrimination Disorder (SDD)]; SMD --- SOR[SOR]; SMD --- SUR[SUR]; SMD --- SC[SC]; SBMD --- Dyspraxia[Dyspraxia]; SBMD --- Postural[Postural Disorder]; SDD --- Visual[Visual]; SDD --- Auditory[Auditory]; SDD --- Tactile[Tactile]; SDD --- TasteSmell[Taste/Smell]; SDD --- PositionMvmt[Position/Mvmt]; SDD --- Interception[Interception];
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SOR = Sensory Over-Responsivity  
SUR = Sensory Under-Responsivity  
SC = Sensory Craving



© 2011 Miller, LJ et al., 2007

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Slide  
4

## Types of sensory problems



- ▶ **Sensory Modulation Disorder (SMD)** (one form of sensory processing disorder) the response to stimulation is the issue
- ▶ **Over-sensitivity/hypersensitivity/ sensory defensiveness** – take in too much sensory stimulation – can trigger fear or threat response. Respond with aggression, fear, avoidance, withdrawal, irritability, or moodiness.
- ▶ **Under-sensitivity/hyposensitivity** – don't take in or recognize sensory stimulation, may be apathetic
- ▶ **Sensory seekers**– crave sensory stimulation

Can have combination of over and under sensitivity

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Slide  
5

## Dr. Winnie Dunn's Theory



Neurological thresholds	Self-regulation strategies/behavioral responses	
	Passive	Active
High threshold	Low Registration	Sensation Seeking
Low threshold	Sensory Sensitivity	Sensation Avoiding

Dunn, 2007

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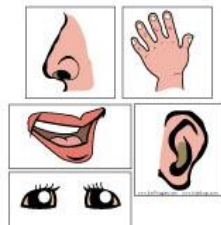
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Slide  
6

- ▶ Can be experienced with any of the five senses, as well as vestibular or proprioceptive

- ▶ Range of presentations

- ▶ Common sensory issues reported by parents: sounds of alarms, tags on clothing, cutting nails, wearing socks, hair brushing, wet clothes, seams in clothing, people standing too close, and sirens



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Slide  
7

## Vestibular Sensory Problems

- ▶ Refers to body orientation, relation to the ground, movement, balance.
- ▶ Oversensitive– don't like fast movements, uneven ground (sand and grass), or moving surfaces. May be prone to motion sickness. Low muscle tone, tire easily, may give up easily
- ▶ Undersensitive– limited awareness of danger and heights
- ▶ Sensory Seeking– active, likes roller coasters and similar thrills, communicate more with gestures



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Slide  
8

## Proprioceptive Sensory Problems

- ▶ Proprioceptive– body awareness and motor control.
- ▶ Sensory seeking– may bang parts of body against object or bang objects, jump around, squeeze things
- ▶ Oversensitivity– distress from deep pressure touches, avoids and/or dislikes jumping, running, and gymnastics



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Slide  
9

## Visual and Auditory Problems

- ▶ Oversensitive– may avoid light, too much visual stimuli in an image
- ▶ Difficulty with seeing the big picture, poor depth perception
- ▶ Oversensitive can cause fear (ex. vacuum flushes, television, clapping, loud voices)



Undersensitive– may not respond to name

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Slide  
10

## Tactile Sensory Problems

- ▶ Sensory seeking- touches too often or too hard, frequently touches things or puts them in their mouth
- ▶ Oversensitive- aggressive response to touch, withdraws from touch or avoids activities where touching may occur



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Slide  
11

## Taste/Smell Sensory Problems

- ▶ Avoidance of certain foods, liquids, consistencies, textures, flavors, temperatures.
- ▶ Picky eating, can lead to conflict with parents around meals and stress.
- ▶ Anticipation anxiety can lead to avoidance of novel foods.
- ▶ May be less likely to eat fruits and vegetables
- ▶ Case Example: 5-year-old girl



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Slide  
12

## What we know...

- ▶ Many limitations in research
- ▶ Somewhere between 5-16.5% of children have a sensory processing disorder, significantly higher number if you look only at children with disabilities
- ▶ Many parents notice these issues in their children around early childhood
- ▶ Evidence of genetic link - sensory issues more common between identical than fraternal twins

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Slide  
13

## Comorbid Conditions

- ▶ OCD, Anxiety, ADHD, Tourette's Disorder, disruptive behavioral disorders, Autism, intellectual disabilities, Fragile X Syndrome, Cerebral Palsy, and Schizophrenia
- ▶ Children with ADHD and comorbid sensory over-responsivity had higher anxiety and more aggressive behaviors
- ▶ Unclear whether children with more hyperactive vs. more inattentive problems differ in sensory processing issues.
- ▶ Evidence of a relationship between children's anxiety and picky eating (this association may be linked through sensory problems)

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Slide  
14

## How Do Sensory Problems Affect Children?

- ▶ Self-esteem, social skills, skill development (recreational and academic)
- ▶ Children may be perceived as lazy, oppositional, or stubborn because of their behavioral reactions
- ▶ Children miss opportunities for development through avoidance or distress related to sensory problems
- ▶ Children with sensory issues have shown fewer adaptive social skills, including problem solving, consideration, affiliation, and flexibility
- ▶ It is unclear how sensory processing problems change over the course of human development



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Slide  
15

## Sensory Problems and Adults

- ▶ Some evidence sensory problems are more common in children than adults
- ▶ Adults may use avoidance, predictability, mental preparation, talking through, counteracting, and confrontation to deal with sensory issues, but these strategies do not help with the underlying problem
- ▶ Self-esteem, relationships, work, daily routines are affected by sensory problems
- ▶ Benefits from a sensory diet



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Slide  
16

## Occupational Therapy (OT)

- ▶ Children and adults with sensory issues should be referred to an OT.
- ▶ They can conduct a detailed for sensory processing difficulties
- ▶ OT involves exposure to sensory stimulation and an individualized plan (**Sensory Diet**)
- ▶ Very few studies on interventions, many of them vary in protocols and populations,
- ▶ Find referrals through SPD Foundation and other websites



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Slide  
17

## Psychotherapy and Sensory Problems

- ▶ Can address the emotional, behavioral, and interpersonal problems associated with sensory processing issues
- ▶ Treat resulting anxiety, depression, aggression, and low self-esteem
- ▶ Provide psychoeducation to parents and children.
- ▶ Assist parents in advocating for their children
- ▶ Help organize changes in the environment at home and school
- ▶ Teach children range of emotional expression
- ▶ Support gradual entrance into avoided situations through play... will build child's confidence



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Slide  
18

## Psychotherapy Case Example

- ▶ 6-year-old female, overstimulated by loud sounds



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19

## Providing Support At Home

- ▶ Parents can join online support group (<http://spdfoundation.net/families.html>)
- ▶ Provide structure and feedback around social situations, including letting children know ahead of time what will be expected in a social situation.
- ▶ Young children who are sensory seeking for tactile stimulation should be taught appropriate physical touches with others.
- ▶ Create a structured and consistent routine, use detailed schedules in the home.
- ▶ Try to make things as predictable as possible, give warnings for sensory events (ex. going to a playground with a sandbox).



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20

## Sensory Growth at Home

- ▶ Observe your child's reactions to different sensory stimuli and take note
- ▶ Do not push children to the point of distress or argue with them
- ▶ Use these strategies only after consulting with a professional
- ▶ Slowly introduce sensory stimulation, primarily through fun activities and games



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Slide  
21

## Sensory Exposure for Children

- ▶ During bath time, try different materials for scrubbing and varieties of soaps and shampoos. Provide bath toys of different textures.
- ▶ When cooking, encourage children to interact with ingredients of different textures, carry cooking utensils (ex. pots and pans), and help out with cleaning cooking materials.
- ▶ Provide a range of different foods and liquids for children to try. Gently encourage children to try novel foods and offer fun rewards
- ▶ Encourage children to help with chores that involve sensory stimulation, such as vacuuming, gardening, raking leaves, or lifting objects.



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Slide  
22

- ▶ Create an safe obstacle course in the house or yard with sensory seeking children
- ▶ Play soft music if oversensitive, give the opportunity to learn to play an instrument if sensory seeking, play brief loud music in undersensitive
- ▶  Add extra spices to food of undersensitive children
- ▶ Play "the sandwich game" with over or under sensitive children
- ▶ Have your child pull a wagon or carriage around the neighborhood
- ▶ Put toys in Play-Doh or rice for them to dig out- oversensitive
- ▶ Activities such as swimming, bowling, horseback riding, playing in a sandbox, and gymnastics provide a variety of sensory stimulation
- ▶ Movement games like "Ring Around the Rosies"
- ▶ Use smaller spaces to control movement in sensory seeking children
- ▶ Allow children to walk barefoot on increasingly more textured surfaces if oversensitive

Finger painting with foam if oversensitive 

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23

## Sensory Support at School

- ▶ Children can get OT through school if they qualify for special education, but there is no requirement about how often they get it and what methods are used. An OT evaluation can provide evidence for support in the school
- ▶ Observe and support children with sensory issues in social situations
- ▶ Provide child with clear expectations and daily schedule
- ▶ Learn as much as possible about child's needs from parents and OT
- ▶ Set aside a space the child to calm down with limited sensory stimulation if the child is prone to oversensitivity
- ▶ Report concerns when noticing evidence of a sensory issue, as well as things that you find helpful
- ▶ Catch them being good and offer specific praise



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24

## Top 9 Things to Remember

1. You are not alone, there are many adults and children who struggle with this every day.
2. Learn as much as you can about you or your child's individual sensory needs.
3. There are many resources for support, including parent groups, occupational therapists, psychotherapists with training in treating this population, and options in school for assistance.
4. Children should be provided with a sensory rich environment, as well as a place to go that is calming for them if they become distressed.
5. Make things predictable and use organizational tools.
6. Advocate for the needs of your child.
7. Leisure activities that promote sensory mastery should be a part of your child's daily life.
8. Recognize the strengths in your child and help them see them too.
9. Children with common comorbid conditions, such as ADHD, Anxiety, OCD, and Tourette's Disorder, should be assessed for sensory difficulties.



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25

## Online Resources

- ▶ Sensory Processing Disorder Foundation ([www.spdfoundation.net](http://www.spdfoundation.net))
- ▶ Sensory Integration Education and Research Foundation ([www.sierf.org](http://www.sierf.org))
- ▶ Sensory Integration Network ([www.sinetwork.org](http://www.sinetwork.org))
- ▶ Sensory Resources ([www.sensoryresources.com](http://www.sensoryresources.com))

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26

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