

OBJECTIVES

- Define and understand arousal regulation in young children
- Identify and explain the three subtypes of Sensory Processing Disorders in children
- Explore multiple sensory-based tools that can be used in-home and in the community to address arousal regulation

REGULATION (SELF REGULATION)

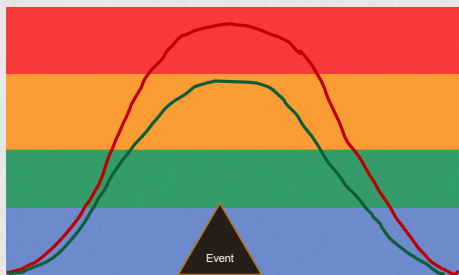
"The ability to manage your own energy states, emotions, behaviors and attention, in ways that are socially acceptable and help achieve positive goals, such as maintaining good relationships, learning and maintaining well being."

-Shanker, 2012





PARENT/CHILD CO-REGULATION



DYSFUNCTION IN REGULATION

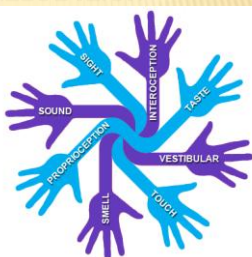
- Sleep
- Self-consoling
- Feeding
- Attention and arousal
- Mood regulation
- Transitions
- Over- or Under-responsivity to sensory input

WHAT IS SENSORY PROCESSING?

The intake of sensations from our bodies or the environment; our perception of these sensations and how we respond to these sensations.

REGULATION & INTEGRATION

Our 8 Senses



VESTIBULAR

LOCATION/ACTION

- RECEPTORS FOUND IN THE INNER EAR
- STIMULATED BY POSITION OF THE HEAD IN RELATION TO GRAVITY
- BODY IN SPACE AWARENESS, USE OF 2 SIDES OF THE BODY

PROBLEMS

- Over-responsive reactions to movement
- Poor ability to tell which way your body is moving
- Poor balance
- Clumsy



PROPRIOCEPTION

LOCATION/ACTION

- Found in the muscles and joints
- Deep pressure perception
- Helps the body feel changes in length of the muscle/position of joints

PROBLEMS

- Difficulty gauging how hard, how fast
- Difficulty with sports
- Poor writing
- Difficulty performing self care routines
- Poor body awareness

INTEROCEPTION

LOCATION/ACTION

- Near the organs, such as stomach, intestines, and bladder.
- Gives information about what is going on internally (bladder, bowel, etc)

PROBLEMS

- Over-sensitivity
- Under-sensitivity
- Aches and pains
- Potty training



SENSORY DEVELOPMENT

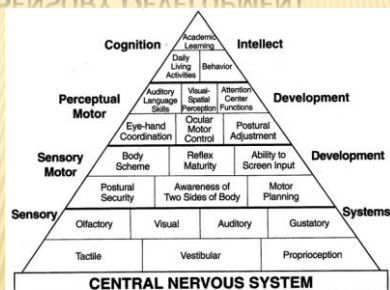


Figure 1-3. Printed with permission. © Taylor/Trott 1991
 1-4 "How does your engine run?"

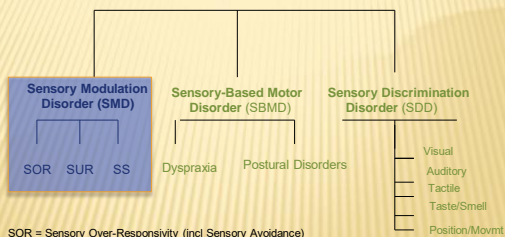
SENSORY PROCESSING DISORDERS

- Difficulty taking in and interpreting sensory information so that an appropriate response can be generated
- Disruption can be in any one of the senses or a combination



SI DYSFUNCTION: CURRENT TAXONOMY

(2007, AJOT - MILLER, CERMAK, LANE, ANZALONE, OSTEN)
 SENSORY PROCESSING DISORDER (SPD)



SOR = Sensory Over-Responsivity (incl Sensory Avoidance)
 SUR= Sensory Under-Responsivity
 SS= Sensory Seeking / Craving

SENSORY MODULATION DISORDER: OVER-RESPONSIVITY

- ✗ Over respond to non-noxious stimuli
- ✗ Flight, flight or freeze
- ✗ Often feel panicked, nervous, anxious
- ✗ Result in meltdowns
- ✗ Look like behavior



SENSORY OVER-RESPONSIVITY

SENSORY MODULATION DISORDER: UNDER-RESPONSIVITY

- Difficult to detect
- Unaware
- Delayed in their responses to input
- Have to get “in their face”
- Often have learning or social problems



UNDER-RESPONSIVITY

SENSORY CRAVING (SENSORY SEEKING)

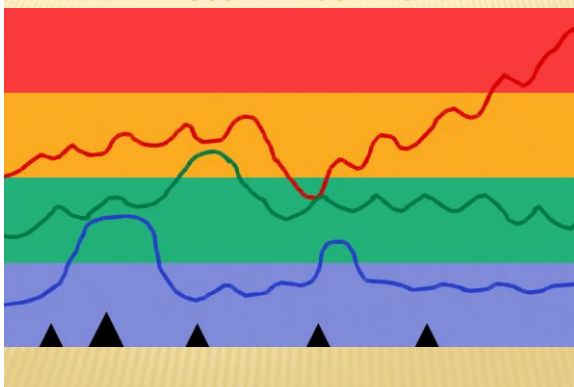
- Sensory seeking is normal
- Trouble getting the input needed to stay calm and alert
- Constantly searching for more input
- Demands seem never ending



SENSORY CRAVING

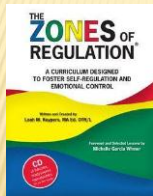


AROUSAL REGULATION



STRATEGIES FOR SELF-REGULATION

There are many programs for educators to use to help children learn about self regulation.



GENERAL SENSORY TOOL RULES

The goal is not to change the child but to interact positively with them and minimal difficult times.

Do not force

Stay positive

When all else fails → HEAVY WORK

GENERAL RULES FOR SENSATIONAL TOOLS

	Calming	Alerting
Proprioception:	Heavy work	Fast blast movement
Vestibular:	Slow linear movement	Rapid, jerky movement
Visual:	Natural light, muted colors	Bright lights, vibrant colors
Auditory:	Calming 60 beats per min	120-140 beats per min
Olfactory:	Vanilla, lavender, rose water	Citrus, flowery, cinnamon, eucalyptus
Oral:	Blowing, sucking, chewing through resistance, warm	Crunchy, sour, frozen
Tactile	Firm, deep pressure, sustained touch, safe	Alerting, alternating, choppy

SPECIAL TOOLS

Tools that need extra training

- ✦ Therapeutic Listening
- ✦ Integrated Listening
- ✦ The Listening program
- ✦ Interactive metronome
- ✦ Wilbarger Protocol

Tools anyone can use

- ✦ Weighted items
 - + Vests, pads, blankets
- ✦ Tactile Tools-brushing
- ✦ Oral tools
- ✦ Olfactory tools
- ✦ Visual tools
- ✦ Movement tools

PRINCIPLES FOR SUCCESS: SENSORY OVER-RESPONSIVITY

Goal: Normalize the child's arousal

- "Heavy work" is calming, especially when self administered
- Predictability is essential
- Avoid over-stimulating situations
- Keep the child busy
- Take care of yourself
- Use a sensory toolbox





PRINCIPLES FOR SUCCESS: SUR

- Use alerting, fast, or intense sensory input to generate arousal
- Use fast blasts of tactile, proprioceptive and vestibular inputs to alert whole body responses
- Taste and smell to increase arousal
- Use activities that are motivating



PRINCIPLES FOR SUCCESS: SENSORY CRAVING CHILDREN

- Create organized movement experiences that are goal directed and purposeful
- Use intermittent, varying, or interrupted vestibular input
- Incorporate "heavy work" naturally
- Use environmental modifications when socializing with peers
- Use enclosed or small spaces to control an activity





WHEN DO I REFER FOR OT?

Referral decision is simple...

If the child or family's daily life is affected, the child may benefit from a referral for OT.



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