

ECHO IDAHO K12 EDUCATION: BEHAVIORAL HEALTH

Sensory Processing and How to Support Regulation January 23, 2024

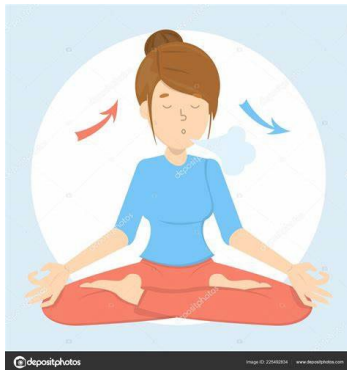
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Learning Objectives

- Recognize the sensory system is made of up 8 senses
- Summarize sensory processing disorder
- Assess and understand different sensory profiles
- Develop support strategies for regulation in the classroom

How Do You Stay Regulated?



Sensory Systems Are Our “Foundation”

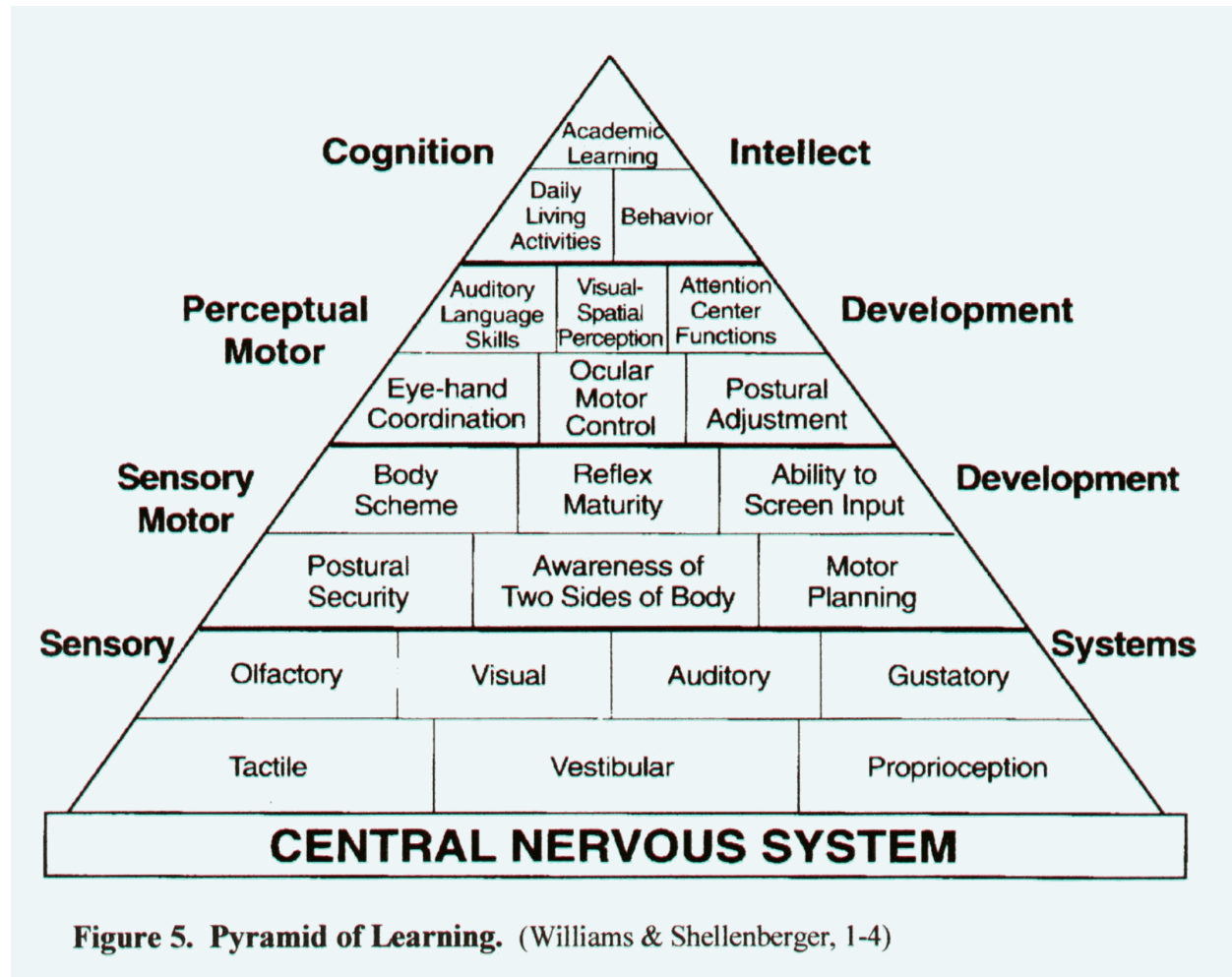


Figure 5. Pyramid of Learning. (Williams & Shellenberger, 1-4)

The Sensory Systems:

Position and Movement (Proprioception)

Movement and Balance (Vestibular)

Internal Body Sense (Interoception)

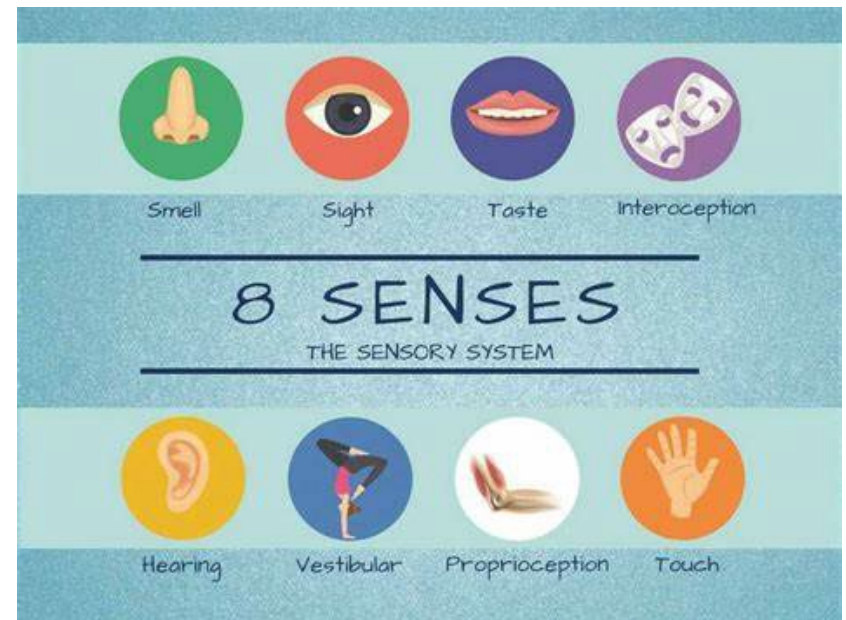
Touch (Tactile Sense)

Hearing (Auditory Sense)

Sight (Vision Sense)

Taste (Gustatory Sense)

Smell (Olfactory Sense)



Position and Movement (Proprioceptive Sense)

Provides important feedback from receptors in the muscle and joints about where our body is in space

- Assists with balance, coordination, and knowing how much force to use
- Difficulties with receiving or processing this information may create poor body awareness or motor planning their body movements.



Strategies: Chewing gum, resistive foods, drinking from a straw, manipulating resistive materials (thera-putty), exercises: push-ups, sit-ups, warm up work outs (running, jumping, climbing, etc.)

Balance and Movement (Vestibular Sense)



- Is the way our body responds to changes in head position and movement
- Coordinates movements of the eyes, head and body
- Allows us to feel the pull of gravity
- Receptors located in the inner ear

Strategies: Jumping on the trampoline, swinging, sliding, rolling, swimming, etc.

Interoception (Internal Body Sense)

- Is our body's ability to feel sensations from our internal organs (stomach, intestines, bladder, lungs)
- Give us important information about hunger, thirst, fatigue, pain, temperature, and bodily functions
- At times children have difficulty interpreting the sensation or the messages from the body



Strategies: Deep breathing, progressive relaxation, mindfulness



Touch (Tactile Sense)

- Our sense of touch
- Information received through the skin / skin receptors
- Includes light touch and deep pressure

Strategies: Slime & putty manipulation, kinetic sand, fidget use, massage, deep pressure: yoga ball rolls, bear hugs, shoulder/head squeezes, therapeutic tapping

Hearing (Auditory Sense)

- Our sense of sound
- Information is received through the ears
- Auditory information can be excitatory, calming and distracting/alerting

Strategies: Calming or Alerting background music, noise reducing headphones or ear buds, white noise (fans, nature sounds, etc.), quiet work area



Sight (Vision Sense)

- Sensory information received from the eyes

Strategies: Natural lighting, dim or bright lighting, organization of environment/reducing visual clutter, preferential seating at school/working at home (away from windows/walkways), visually calming toys: lava lamps, use of sunglasses/hat/hoodie



Taste (Gustatory Sense)



- Our sense of taste

Strategies: textures of foods, categories of foods (increasing protein, reducing sugar), mealtime routines (calendar/time)

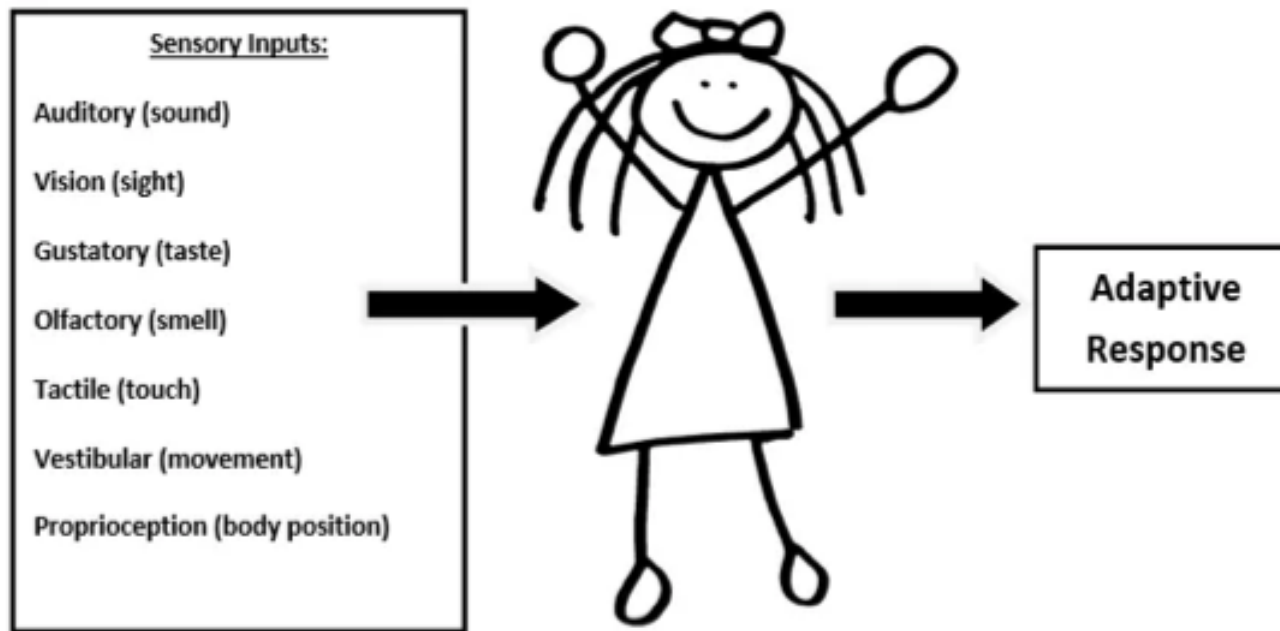
Smell (Olfactory Sense)

- Our sense of smell
- Information received through the nose

Strategies: Essential oils/lotions (calming or alerting),
Supporting increased awareness/advocacy
for olfactory sensitivities

Sensory Processing

(Dunn's Model Of Sensory Processing)



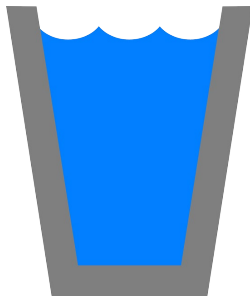
What is Sensory Processing Disorder?

- When a child has trouble receiving and adaptively responding to information that comes in through the senses, disrupting normal functioning and daily routines
- Symptoms exist on a spectrum and can affect multiple senses or just one
- Child exhibits over or under responsiveness to certain sensory inputs from the environment or from within their own body
- Not currently recognized as a stand-alone disorder, however commonly observed in developmental differences

Characteristics of Sensory Processing Disorder

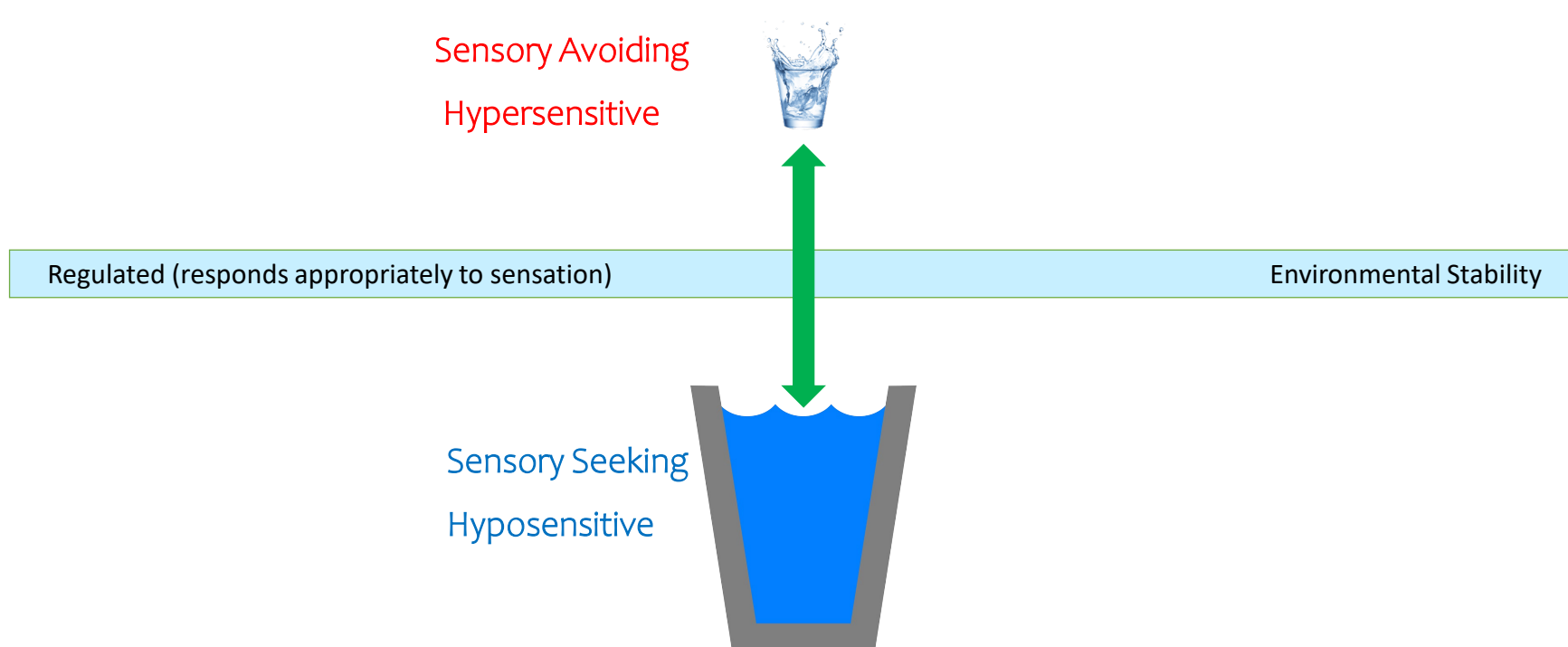


- Sensory Over Responsive (Hypersensitive)
 - Low threshold for sensory input
 - Observe more **Sensory Avoiding/Sensitive**



- Sensory Under Responsive (Hyposensitive)
 - High threshold for sensory input
 - Observe more **Sensory Seeking** or Low Registration

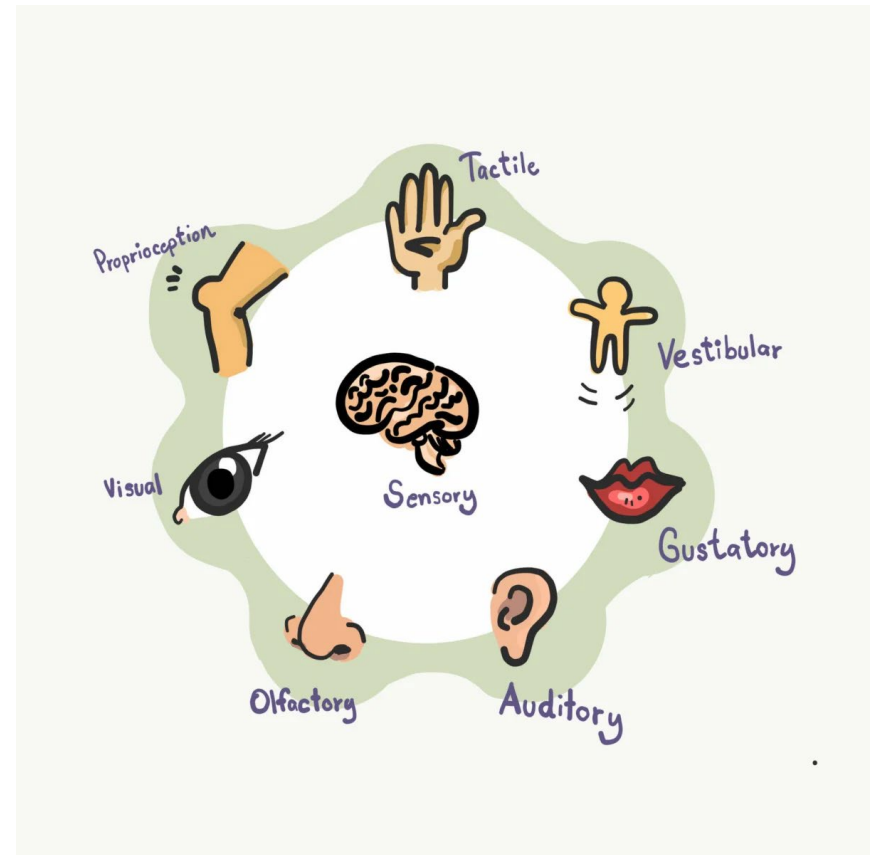
Sensory Processing Disorder



Adapted from Dunn's Model Of Sensory Processing (1997)

Sensory Processing Disorder

- Sensory Processing Difficulties
- Sensory Modulation Dysfunction
- SPD is not currently a recognized medical disorder
- Sensory issues are considered a symptom
- Prevalence 5%–16%



Become a Sensory Detective



- Complete a sensory checklist
- Ask and Observe:
 - What sensation does the child seek/avoid?
 - What inputs tend to calm and organize?
 - What sensations improve alertness and focus?
- Evaluation with an Occupational Therapist
 - Sensory Profile Caregiver Questionnaire
 - Sensory Processing Measure

Do you know me?



- Can't tolerate getting hands or other body parts messy
- Very selective and limited diet repertoire
- Resists tags in clothing
- Shield their eyes from the sun and other bright lights
- Cover ears, cry or withdraw in noisy environments
- Very cautious and/or avoid movement when feet are off the ground
- Avoid social interactions with peers due to worry about being bumped or touched by other kids

Do you know me?



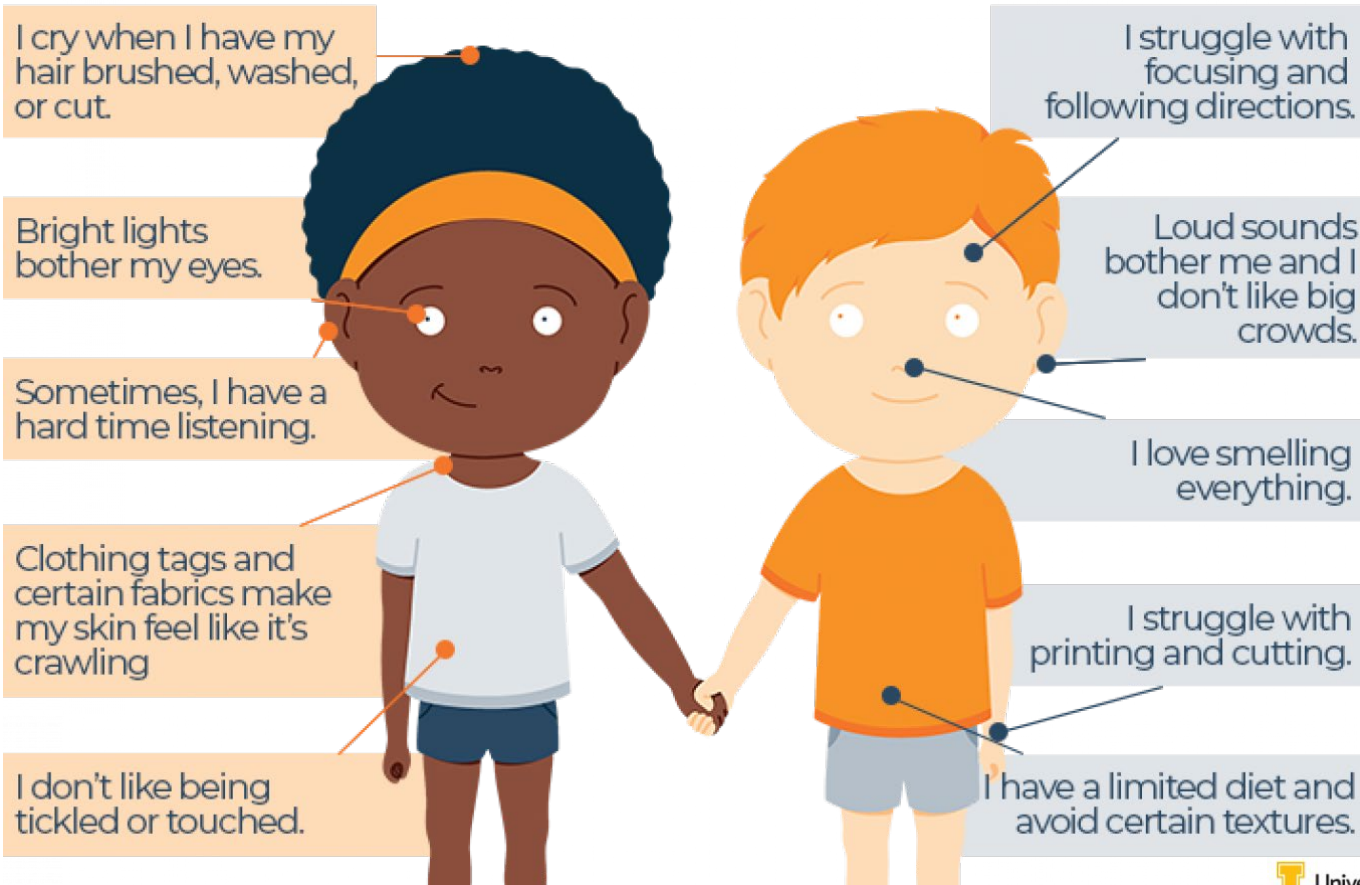
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Hypersensitive, Hyperresponsive, Over Responsive, Often Overstimulated, Sensory Avoidant

SENSORY AVOIDER: DO YOU KNOW ME?

It's hard for me to fall asleep at night and I am often the first one up.



Do you Know Me?

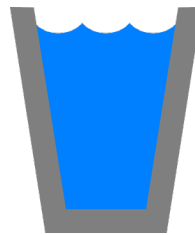


- Appear clumsy and often tripping
- Doesn't notice when hands and face are messy
- Poor fine motor and handwriting skills
- Crave spicy or highly flavored foods
- Often don't respond to their name when called
- Show decreased attention to tasks
- Low energy and appear “lazy”
- May be uncoordinated and avoid sports

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Hyposensitive, Hyporesponsive, Under Responsive, Often under-stimulated, Low Registration, Sensory Seeking

Sensory Seeker: Do you Know Me?



Sensory Seeking Behaviour

Eating crunchy foods; crackers
Chewing on inedible items
Walking on 'tippy' toes

Pushing
Pinching

Hitting
Biting



Hands on/off ears
Smelling items
Rubbing eyes
Hair twirling
Teeth grinding

Bouncing
Rocking
Spinning
Jumping
Rolling
Fidgeting
Shaking

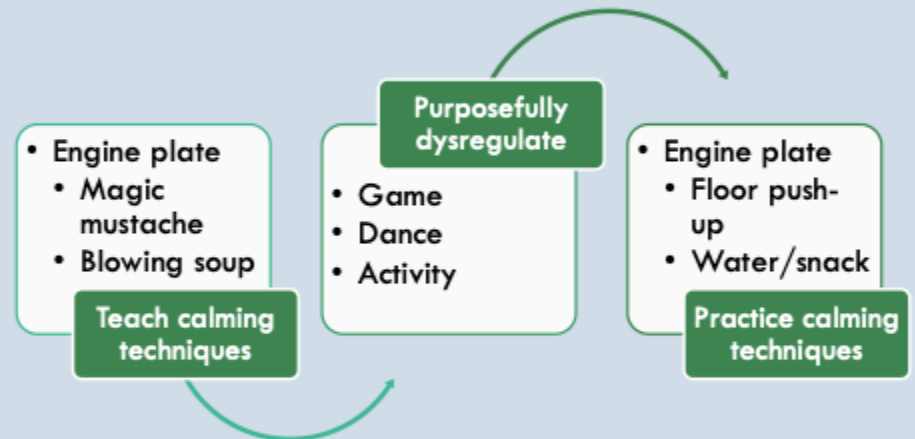


Flapping
Rough & active
High energy levels
Switching lights on and off
Making lots of **LOUD** noise

steph_theteacher

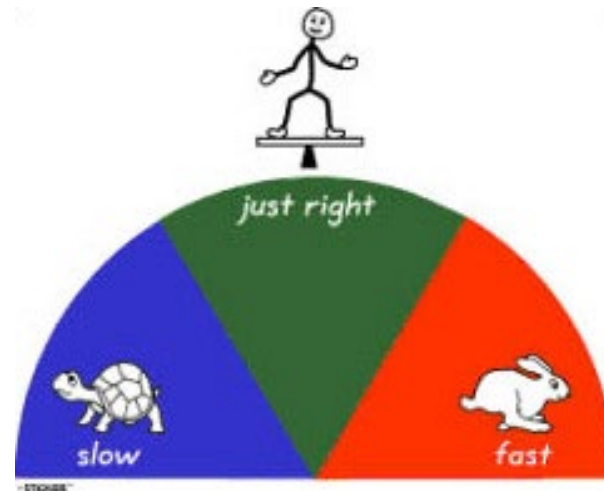
PURPOSEFUL DYSREGULATION

Great practice when coming from natural transitions that can cause dysregulation






Self-Regulation is the GOAL!

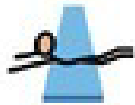
- Learn
- Focus
- Follow instructions
- Manage emotions
- Control impulses
- Access motor skills
- Move safely
- Make friends
- Build self-esteem



Choosing Appropriate Sensory Strategies

Over Responsive		Calming Strategies Organizing Strategies
Under responsive		Alerting Strategies Organizing Strategies
Varied		Combination of Strategies

Ways to Give Pressure to Your Body



Log Rolls



Bear Crawl



Crawl through Tunnel



Wheelbarrow Walk



Crawling



Somersault



Scoterboard on Stomach



Jump on Trampoline



Bounce on Ball



Crash Pad



Stomach on Ball



Army Crawl

Heavy Work Strategies for Regulation

- Carry, push, pull heavy objects
- Chewing gum
- Chewy necklace
- Resistive foods
- Drinking from a straw (smoothie)
- Wall or chair push-ups
- Bear crawl or wheel barrel walk

CALMING STRATEGIES

Fidgets (Stress ball, silly putty)

Sensory bins (dry textures, Kinetic sand)

Hugs from parent or self-hugs

Body socks; tunnels

Yoga poses

Swinging (slow linear)

Wearing headphones

Classical or soft music, nature sounds

Retreat to quiet space or enclosed space

Limit visual distractions

Calming jar

Dim Lights



ALERTING STRATEGIES



- “Fidget” items (Koosh ball)
- Sensory bins (wet textures, water Beads, shaving cream)
- Jump on trampoline
- Swinging (variety of directions)

Sit on move and sit cushion, balance disk or therapy ball

Go Noodle

Yoga

Upbeat music



Appropriate time to use these strategies

- Before less preferred tasks or those requiring more focus and attention
- Transitions
- During scheduled breaks or when observe any avoidance behaviors
- Sensory Routine/Lifestyle – specific sensory inputs/activities completed at scheduled times throughout the day to support regulation, created by OT

Environmental Supports

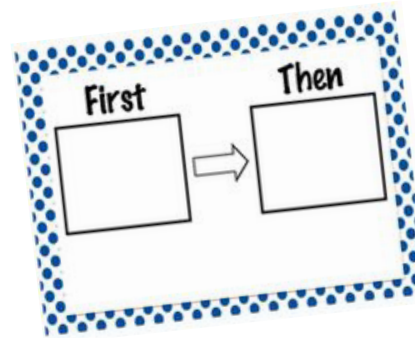


- Creating a quiet space (a break area)
- Weighted lap pad
- Wiggle cushion
- Minimize visual distractions

Support Strategies for Regulation

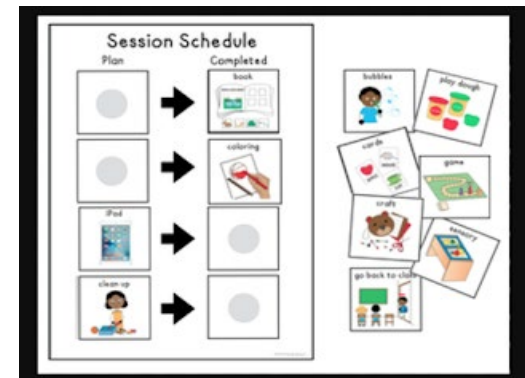
Structure + Consistency

- Visual schedule
- First/then boards
- Visual timer for transitions



Positive reinforcement

- Visual reward chart
- Other tangible rewards



Support Strategies for Regulation

- Practice Relaxation Breathing
 - Blowing out candles, Zones- lazy 8 and square breathing
 - Smiling Minds App
- Practice co-regulation breathing, (own coping strategies)



Sensory Checklist Resource for Parents

- sensorysmartparent.com/checklist
- familyeducation.com/printables/learning-disabilities-printables/your-childs-sensory-portrait-checklist
- <https://sensationalbrain.com/free-resources/>

REFERENCES

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- Raising a Sensory Smart Child: The Definitive Handbook for Helping Your Child with Sensory Integration Issues (2005) Self-regulation is the ability to remain calm, cope with big emotions, adapt, and respond appropriately to our environment
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- Winnie Dunn's Sensory Profile Caregiver Questionnaire Manual (1997)
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Thank You!